

Product Catalogue

ESSENTIAL COMPONENTS FOR EVERY STAGE OF CONSTRUCTION

Welcome to SDG.

Your essential construction partner.



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CALALUGUE	
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TECHNICAL INNOVATION

Stronger, together.

At SDG we are trusted suppliers, and experts in construction solutions. We are planners, collaborators and designers; fixers, thinkers and expert problem solvers. We are an end-to-end construction project partner, bespoke and best in class. By working closely with our customers; by adding value at every stage; by doing everything they expect and so much more, we share their success and become stronger, together.

Our partners are experts in their field so we can assist you with the design, planning, sourcing and delivery of the most effective solutions for your construction project. We are not just a supplier, but a partner, that will ease the pressure when selecting, implementing and installing specialist products including post-install support.

We work with engineers from the design phase to onsite support. SDG is the link pin to ensure the correct product is selected for your specific application.

Contact our sales team: wearesdg.com +44 (0) 28 3752 8999

recostal[®] Standard type RSH Starter Packs

recostal[®] Starter Packs type RSH meet the requirements of DIN EN 1992-1-1 for the highest surface category "key profiled" in the case of transverse loads.

The deciding factor for the designer

recostal[®] Starter Packs type RSH meet the requirements of the DBV Bulletin "Rückbiegen von Betonstahl und Anforderungen an Verwahrkästen nach Eurocode 2" ["Rebending of reinforcement steel and requirements for continuity strips according to Eurocode 2"] (issue January 2011) for the highest joint category "key profiled" in the case of transverse stresses. No national approval required.

Technical data – RSH Starter Packs

- Trapezoidally profiled starter packs, joint category "key profiled" according to DIN EN 1992-1-1, highest shear force bearing capacity
- Concrete reinforcement steel according to BS EN ISO 17660 and BS8548

- 6 standard profiles, bar widths 12 cm 22 cm, smaller or larger bar widths on request
- Standard unit length L = 1.25 m, fixed lengths up to 2.50 m on request

Application

recostal® Starter Packs ensure time-saving installation of secure connections between steel reinforced concrete construction parts that are created with different pour sequences. Therefore, floor slabs, walls or staircases can be installed subsequently with rigid connections corresponding to the highest joint category "key profiled".

The large variety of shapes offers the perfect connection for many different design situations; special types for specific solutions are also available. The standard range includes starter packs with 12 mm and 16 mm diameter and L = 1.25 m unit lengths. Unit lengths exceeding 1.25 m, the production of special types and the combination with waterproofing systems as well as solutions for entire projects are possible on request.





Increased corrosion protection

Type RSH is installed with a planned 25 mm recess.



Key Profile







RSH active - Starter Pack with active waterproofing

bentonite coating on both sides for the application in construction joints exposed to water.



- Strong, robust galvanised sheet metal starter packs, dimensionally stable
- Cost and time effective installation, starter packs are simply nailed to the formwork
- Easy removal of the sheet metal covers due to their special design
- Trapezoidally profiled box for excellent bond
- Various possible combinations provide a solution for all common installation details

recostal® Standard Type RSH Starter Packs

Reinforcement steel: Cares Approved





D	IMENSIONS	PRODUCT CODE	TYPE	BAR Ø (MM)	CENTRES	LAP LENGTH (MM) LA	WIDTH OF STIRRUP (MM) B	WIDTH OF CASING (MM) D
T12		EUR008	RSH 100	12	150	500	100	120
112		EUR009		12	200	500	100	
T10		EUR010	RSH 120	12	150	500	120	140
112		EUR011		12	200	500	120	140
T12	2 10	EUR012		12	150	500	140	170
112		EUR013	кон 140	12	200	500	140	170

	DI	MENSIONS	PRODUCT CODE	TYPE	BAR Ø (MM)	CENTRES	LAP LENGTH (MM) LA	WIDTH OF STIRRUP (MM) B	WIDTH OF CASING (MM) D
-	T12	100	EUR014		12	150	500	160	190
_	112		EUR015		12	200	500	160	190
	т16	140	EUR040	11311100	16	150	650	160	190
	110		EUR041		16	200	650	160	190
	T12	110 +	EUR016		12	150	500	180	210
_	112		EUR017	PCH 180	12	200	500	180	210
	т14		EUR042	1.311 100	16	150	650	180	210
_	110		EUR043		16	200	650	180	210
	T12	2	EUR018	- RSH 200	12	150	500	200	230
_	112	, man	EUR019		12	200	500	200	230
	т14		EUR044	11311 200	16	150	650	200	230
_	110		EUR045		16	200	650	200	230
	T12	- 720	EUR020		12	150	500	220	250
_	112	· /	EUR021	DOLL 202	12	200	500	220	250
1	т14	1	EUR046	11311220	16	150	650	220	250
	110	· funning =	EUR047		16	200	650	220	250

recostal[®] Standard Type VHQ Starter Packs



STANDARD	PRODUCT CODE	Ø (MM)/ S (CM)	LAP LENGTH LO (CM)	CENTRES S (CM)
h	EUR001	- 12/15	50	15
	EUR002	- 12/20	50	20
	EUR003	- 16/15	65	15
	EUR004	- 16/20	65	20

Graph for the determination of the production-related required box widths and max. producible L0-lengths.





SPECIAL SHAPE CODES AVAILABLE. CONTACT OUR TECHNICAL DEPARTMENT FOR MORE INFORMATION.



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SDG are the agent for GUMBA Bridge Bearings in UK and Ireland. Along with SDG Technical Department and GUMBA engineers, we support our customers, as well as design engineers, authorities and construction companies in the theoretical and practical selection of the correct bridge bearing. We provide a service beyond that of the design and manufacturing of elastomeric bearings and can support onsite during install.



Reinforced Elastomeric Bearings

Acc EN1337 – 3

Reinforced elastomeric bearings are made of a special rubber blend and are equipped with reinforcement steel sheets during the manufacturing process, the so-called vulcanisation. The steel sheets provide the necessary stiffness. Reinforced elastomeric bearings stand out through their low maintenance and durability. Besides that, some types can be used under certain conditions without any additional steel structure (restraining). The elastomeric part of the bearing is elastically deformable. The deformation rate in vertical direction (deflection) under permanent load is calculable and stays constant. The influences of live loads are generally small, and the additional temporary deflections caused by live loads are of a minor degree and won't cause any problems for most structures.

Reinforced Elastomeric Bearing Types



Pot Bearings

Acc EN1337 - 5

Pot bearings have been used for many years and are a well proven bearing type. Through the combination of a non-reinforced elastomeric bearing (natural rubber) in a steel housing, which is closed on all sides (pot), it is possible to transmit high vertical loads on a relatively small area. The dimensions of the pot bearing depend on the permissible elastomer pressure as well as especially on the permissible concrete pressure.

Pot bearings are designed and manufactured according to EN 1337-5 and are labelled with the relevant CE marking.



Pot Bearing Types

TGa Sliding in all directions TGe Unidirectionally fixed TF Fixed in all directions







Spherical Bearings

Spherical bearings are made of a steel, hard chrome plated spherical segment, the so-called calotte (convex), a corresponding, with PTFE equipped calotte receiver (concave) and a sliding unit on the plane side of the calotte, consisting of embedded PTFE and austenitic steel grade 1.4404. This design is capable

to take horizontal displacements as well as rotation through two independent sliding motions. This fulfils the requirement, that the support of a structure should result in limited restrains particularly well. With additional guides or a stop ring it is then possible to transfer horizontal loads.

Spherical Bearing Types



Guided Bearings & Horizontal Load Bearings

Acc EN1337 - 8

Combined vertical loads and horizontal forces can be transmitted with restraining structures. When horizontal forces are high, it is often more economically efficient to direct the horizontal forces into the substructure by means of horizontal-load bearings and guide bearings. Horizontal-load bearings transmit longitudinal and/or transverse forces. Guide bearings permit both the bearing of horizontal loads in one axis and horizontal movement in the other axis.

In addition, vertical movements can be optionally absorbed by both bearings to meet specific structural requirements. One substantial advantage is that horizontal-load bearings absorb the horizontal forces even under changing load conditions, dispensing with additional structural measures (position stabilisation with wedges etc.). Horizontal-load bearings and guide bearings are manufactured according to EN 1337-8.

Guided Bearing Types

H1 – GUIDE BEARINGS Fixed on one axis



H - HORIZONTAL LOAD BEARINGS Fixed on all sides



SDG together with Calenberg Ingenieure are dedicated to the refinement of building construction with the production of structural and sliding bearings.

Permanent loads, such as a structure's dead load, variable influences, such as wind, and constraining forces due to factors such as temperature changes, creep, component tolerances or settling cause deformations in structural components. The aforementioned influences inflict damage to

structures if no suitable elastomeric bearings are used. In addition to cracks and spalling, they can also cause major permanent damage to adjacent components, which will then need to be repaired at considerable expense in terms of time and cost.

The elastic effect of the structural bearings transfers forces centrally in structural connections while also compensating for deviations in plane parallelism. Elastomeric bearings systematically absorb shear deformations from non-permanent horizontal impacts.

Advantages for our customers:

The bearings' extremely high load capacities allow cost-effective, filigree structural designs to be built. Elastomeric bearings do not require maintenance and do not need to be replaced if correctly dimensioned and installed. The designers also ensure there is extra capacity in the material to absorb unforeseen loads. The service life of construction bearings is

equal to the service life of adjacent components as a minimum. Our elastomeric bearings increase the value of the building by avoiding structural damage and eliminating renovation and maintenance costs. Static elastomeric bearings permanently transmit forces, twists and displacements into adjacent components without causing damage.



GOBBINS COSTAL PATH. CO ANTRIM

NON REINFORCED ELASTOMERIC BEARINGS

Compact Bearing S 65

The Compact Bearing S 65 is a deformation bearing and is used in all areas of construction as a permanently elastic articulating connection element. The unreinforced elastomeric bearing has a load capacity of up to 14 N/mm² depending on shape and is available in various thicknesses. The main component is an ageing resistant EPDM elastomer material with a hardness of 65 ± 5 Shore A. The material is weather and ozone resistant and is quality controlled.



Approval no. Z-16.32-474, issued by DIBt Berlin.

Compact Bearing S 70

The Compact Bearing S 70 is a deformation bearing and is used in all areas of construction as a permanently elastic articulating connection element. The unreinforced elastomeric bearing has a load capacity of up to 21 N/mm² depending on shape and is available in various thicknesses. The main component is an ageing resistant EPDM elastomer material with a hardness of 70 ± 5 Shore A. The material is weather and ozone resistant and is quality controlled.

Approval no. Z-16.32-477, issued by DIBt Berlin.



bi-Trapez Bearing®

The bi-Trapez Bearing® provides highly effective insulation against impact sound and vibrations and is permanently elastic in case of component rotation. This bearing is primarily used for structural members of all types and for impact sound mitigation in stair and landing components. It is a non-reinforced elastomeric bearing with trapezoidal profiling on both sides and a shape dependent load capacity of up to 17.4 N/mm². The main component is an ageing resistant EPDM elastomer material with a hardness of 65 ± 5 Shore A. The material is weather and ozone resistant and is quality controlled.



Approval no. Z-16.32-455, issued by DIBt Berlin.

THERMAL SEPARATION

Compact Core Bearing

The unreinforced heavy-duty bearing for thermal separation of steel structures is shape dependent loadable up to 30 N/mm². The bearing can be provided in different thicknesses. Compact Core Bearings are made of NBR. They are used in all fields of metal construction to provide thermal separation, such as in the installation of building facades, solar energy equipment on roofs or the connection of balconies and canopies to the main loadbearing structure.



REINFORCED ELASTOMERIC BEARINGS

Sandwich Bearing Q

The Sandwich Bearing Q is used in all areas of construction as a permanently elastic articulating connection element. It is also used for highly loaded components in the bearing area. The steel-reinforced deformation bearing can be loaded up to max. 28 N/ mm², regardless of shape. The bearing is available in various thicknesses. The main component is an ageing resistant CR material with a hardness of 70 ± 5 Shore A. The material is weather and ozone resistant and is quality controlled.

Approval no. Z-16.33-480, issued by DIBt Berlin.



Civalit® Sliding Bearing

Civalit[®] sliding bearings are used in standard sizes as single pad bearing or as strip supported bearing. The number of modules determines the size of the bearing. The bearing has transverse tensile reinforcement and consists of an elastomer based on chloroprene with a vulcanized PTFE sliding layer and a sliding plate made of grp. These two components guarantee a dimensionally stable sliding surface. The total thickness of the bearing is 11 mm. Average bearing capacity up to 15 N/mm².



The approval is applied.

The approval is applied.

Perforated Sliding Bearing Type Z

The steel-reinforced elastomeric bearing is loadable up to a compressive stress of 25 N/mm². The bearing can be provided in different thicknesses and is able to take up even large horizontal displacements by sliding on each other and angles of distortion. Restoring forces are minimized.

SLIDING BEARINGS

Ciparall[®] Sliding Bearing

The reinforced point sliding bearing is loadable up to a compressive stress of 15 N/mm². Ciparall[®] Sliding Bearings combine sliding and deformation properties of the bearing where the sliding action is independent from the deformation. Depending on the requirements, bearings of different thicknesses can be selected.

The approval is applied.



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OIL-EX Absorption Mat

OIL-EX consists of elastomeric materials, an absorption layer of bound pelleted rubber and a high proportion of recycled material. An impermeable barrier layer on the underside of the mat prevents contamination of the substrate.

The 20 mm thick mat with a width of 1480 mm and a length of up to 50m has an absorption capacity of approx. 10 l / m2 and a weight of 16 kg / m2.

Possible areas of application could be maintenance and parking areas for road and rail vehicles, storage and intermediate storage for machines, protecting hydraulic machines, storage and transport securing of hydrocarbon-filled drums, containers and packages, filling stations or loading areas.



Cisilent[®] Flexible Noise Control: Flexible Acoustic Sound Barriers

Noise control – the easy way

Flexible Sound Barrier for various purposes.

Rising environmental awareness and the knowledge of health damaging effects caused by intensive noise demand efficient countermeasures. In those cases where common products can only be used restrictedly, the CISILENT[®] sound barrier reveals its great advantages. This applies to indoor and outdoor locations, where spatial, technical, weight or other restrictions do not allow other options than CISILENT[®].



Applications:

- Near busy main roads
- Sport facilities
- Open-air concerts
- Shunting yards
- Building sites
- Airports
- Indoors, e.g. in production halls etc.

Benefits:

- With CISILENT® sound-proofing problems can be solved efficiently
- Little space needed for installation
- Low transport weight
- Simple assembling also allows mobile applications
- The flexible CISILENT[®] sound barrier reaches a sound insulating value of Rw = 25 dB despite being a fraction of the weight compared with other noise barriers
- Massive elements of the same area weight as CISILENT[®] insulate noise less, because they are more rigid and radiate sound themselves again from their outer surface
- The flexible CISILENT® however, fully uses the noise insulating effect of the area related mass
- CISILENT® is good for the well-being and fitness



KRAIBURG PuraSys vibrafoam

Offers effective protection against vibration and shock

This high-tech PUR elastomer can be placed as an isolating, area mat between the structural components, as cut sections matching the relative structural component geometry, and also as a tailormade moulded part. Offered in a wide program of 13 standard materials and the facilities for the production of special types in various colours and thicknesses according to your requirements.



KRAIBURG PuraSys vibradyn HL

Elastic bearings for high loads made from polyurethane

Perfect for when high weights are acting on a small area and there is no possibility of reducing the load by constructive changes. These include e.g. heavy machinery or point bearings in the form of supports like in buildings.

For such cases with increased requirements, KRAIBURG PuraSys offers the two newly developed bearings PURASYS **vibra**dyn HL 3000 and HL 6000. They can take loads of up to 3.0 N/mm² or 6.0 N/mm².



KRAIBURG PuraSys vibradyn

Elastic bearings of buildings, whose foundations come into contact with groundwater

A closed-cell PUR product for highly effective vibration isolation, can be used in application areas such as building isolation, including in groundwater – in a static load range from 0.075 – 1.5 N/mm². PURASYS **vibra**dyn has nearly no damping effect, and functions like a technical spring. Ideal for use in situations where vibration isolation is subject to stringent dynamic specifications.



Shearail[®] Punching Shear Reinforcement



Shearail® is a certified prefabricated punching shear reinforcement system for flat, piled and post-tensioned slabs. It is designed to increase construction speed, improve build quality and reduce dependency on skilled labour – significantly reducing on-site costs. It is the only proven punching shear solution with both CARES Technical Approval and BBA Certification. Shearail® punching shear reinforcement system, which is BS 8110 and EC2 compliant, enables site work to be carried out far more effectively and efficiently than traditional loose links, making it ideal for complex project management.

Advantages:

- Easy to position & fix
- Designed to BS 8110 & Eurocode 2
- Free design service, including link conversions
- Fast install and saves labour costs





Shear Force Dowel Systems For Expansion Joints

Egcodorn[®] and Egcodubel are a range of shear dowel systems which can accommodate most static and dynamic loads. The Egcodubel dowel system guarantees that transverse forces at expansion joints are transmitted without impeding the horizontal movement of each component.

Egcodorn[®] Taransverse Force Dowel

Egcodorn® is a high-performance, corrosion-proof transverse shear force dowel which transfers maximum loads whilst having a minimal component thickness. When using Egcodorn® it is not necessary to use extensive formwork for expansion joints. The unique corrosion protection system and the use of high-quality materials guarantee the highest safety and reliability.



Egcodubel

Egcodubel for expansion joints is a system for transmission of the transverse forces in joints of plate-shaped structural elements dowels are mainly used for subordinate structural elements (e.g ground bearing slabs), in which expansion joints must only allow for transverse forces.

- High steel quality
- Optimum corrosion protection
- Egcodubel available with or without sleeve

Expansion joints allow for movement between adjacent concrete elements caused by physical changes (thermal expansion, shrinking, material creep). The primary application of the Egcodorn® stainless steel dowel system is to carry loads across expansion joints in which shear forces occur.

Features include:

- Optimum load transmission into the concrete
- Transfers maximum loads whilst having a minimum component thickness
- Easy, rapid and cost-efficient joint production
- Allows for transmission of static and dynamic loads
- Highest corrosion protection due to use of high-quality stainless steel
- Fire resistance Class R120
- Custom designs available upon request



Ecgobox[®] Thermal Balcony Connectors

Egcobox[®] is an approved certificated system for preventing thermal bridging between buildings and cantilevered components such as balconies, consoles, walls etc, and has been awarded BBA certification.

The Egcobox[®] system is impressive in its versatility. Benefits include:

- Reduces thermal bridging in accordance with building regulations
- Provides continuity of reinforcement and reinforcement properties between building components
- Reduces vertical deflection of the cantilever
- Non-standard sizes, elements with special loading or static calculations are available
- Elements are produced to order and supplied direct to site with short lead times

It is possible to design and produce Egcobox[®] special element in-line with the individual static and geometrical requirements of your site. Cantilever connectors are manufactured according to the needs of each construction project and elements are supplied directly to the construction site.



Pecafil[®] Permanent Formwork

Pecafil[®] permanent formwork is ideal for the construction of ground beams, box-out shutters, floor-edge forms, pile caps and bases. Pecafil[®] can be used as a separation material between the concrete face and steel sheet piles or contiguous concrete piles. It can be adapted for use as weather, dust and privacy protection screens.

Pecafil[®] is simple to install and comes with all units clearly marked. It is environmentally friendly, has no impact groundwater and is recyclable. Pecafil[®] is a fast, cost-effective and convenient formwork material that you can rely upon.

Pecafil[®] can be used in conjunction with Pecavoid ground heave solution.



Pecavoid® Ground Heave Solution

Piled foundations, rafts and slabs can be affected by ground movement caused by volume changes in swelling clays due to clay type and moisture variation. Changes in the weather and vegetation also often affect ground moisture levels.

Pecavoid[®] is the BBA approved cellular void former from Max Frank, designed to combat the effects of clay heave on foundations.

Widely used in the construction of commercial buildings, Pecavoid[®] is certified by the BBA, meets NHBC technical requirements and is accepted by major warranty schemes for residential housing developments.



Advantages:

- Certified & proven solution
- Creates a void beneath suspended slabs and beams
- Does not degrade and contains no CFC's or HCFC's
- Insulation can be incorporated
- Can be installed with Pecafil® Permanent Formwork

recostal[®] Speed Edge Formwork

recostal[®] Speed Edge Formwork made from galvanised sheet metal is used for the installation of permanent lateral formwork for reinforced concrete base and floor slabs in structural and civil engineering.

Benefits include:

- Self-supporting up to h = 50 cm
- No additional support necessary
- No stripping
- Fast installation
- Corners are simply bent into shape
- Low transport costs
- Installation without crane

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK370	recostal® Speed edge Formwork: 180 x 2250 mm	Per Meter
FWK371	recostal® Speed edge Formwork: 200 x 2250 mm	Per Meter
FWK372	recostal® Speed edge Formwork: 250 x 2250 mm	Per Meter
FWK373	recostal® Speed edge Formwork: 300 x 2250 mm	Per Meter



recostal[®] Permanent Formwork System

recostal[®] shuttering units are comprised of finely meshed, trapezoidally-profiled, expanded metal. They are designed for creating construction joints in concrete base slabs.

Shuttering units comprised of finely meshed, trapezoidallyprofiled, expanded metal, designed for creating construction joints in concrete base slabs. Units are supplied to specific project-heights on site. recostal® shuttering is also available with anti-leakage material and clamps to eliminate the need to weld rebars.



Product range

- 1. recostal[®] 1000 for concrete slabs up to 300 mm of wet concrete
- 2. recostal® 2000 for concrete slabs up to 900 mm of wet concrete
- 3. recostal® 2000 GT for concrete slabs up to 1500 mm of wet concrete
- 4. recostal® 2000 GTZ for concrete slabs over 1500 mm of wet concrete
- recostal[®] 2000 GT Fabric Web units have a removable fabric material and solid foam insert, which is cut away after pouring and curing to reveal smooth concrete

Benefits include:

- Ready to use
- Perfect fit
- Single rib or key profiled
- Self-supporting in one or two axial directions

LIGHTWEIGHT VOID FORMER FOR CONCRETE SLABS

Shuttering Strips

With shuttering strips openings of all sizes in base slabs and concrete floors are quickly and easily installed. Shuttering strips are perforated crosswise every 50 mm, and the scaled profile ensures a proper bond to the concrete.





U-Boot Beton®

Disposable formwork for two-way lightened voided slabs in reinforced concrete cast on site.

U-Boot Beton[®] is a recycled polypropylene formwork designed to create lightened slabs and rafts.

The use of U-Boot Beton[®] formwork makes it possible to create mushroom pillars, with the possibility to have the mushroom in the thickness of the slab.

Thanks to the conic elevator foot, immerging the U-Boot Beton[®] formworks in the concrete casting will create a gridwork of mutually perpendicular beams



closed from the bottom and the top by a flat plate created with a single casting. This results in considerable reduction in the use of concrete and steel.

U-Boot Beton[®] is used to create slabs with large span or that are able to support large loads without beams.

Light, quick and easy to position, the designer can vary the geometric parameters as needed to adapt to all situations with great architectural freedom.

















lglu'®

Disposable formwork for ventilated under-floor cavities. Iglu'® is a market leading product that was created and patented for the realisation of sanitary spaces, ventilated cavities, under-floor cavities, ventilated floors and roofs during the construction and restructuring of civil and industrial buildings.

The modular, plastic lglu'® formworks, placed side by side in sequence according to a predefined direction. This makes it easy to quickly create a self-supporting pedestrian platform above which a layer is cast in order to easily and economically create a ventilated slab placed on pillars with the below cavity area available for the passage of systems but above all ventilated to counteract rising humidity and radioactive gases.











Atlantis System

Atlantis is an advanced system for creating cavities in general, under-floor cavities and ventilated floors in newly constructed or restructured civil and industrial buildings, accumulation tanks, dispersion tanks, honeycomb rafts, low temperature cold rooms.

The Atlantis System is used when the depth of the under-floor cavity or cavity is such that the classic Iglu[®] formworks cannot be used, with the advantage that the constant diameter of the elevator pipes makes it possible to minimise the use of concrete for filling. The main system features are speed, simplicity and cost performance.

With Atlantis, a sanitary space is obtained with a suitable humidity barrier and, if properly ventilated through piping connected outdoors, it is a tool for the disposal of the Radon gas present in the ground.



Deflex Movement Joints

SDG are the partner of movement joints manufactured by Deflex Fugensysteme GmbH – they are one of the key global names when it comes to the production of joint profiles. They have developed an innovative range of all-metal, metal and Nitriflex units, and specialise in finding solutions for individual customised projects.

The Deflex Fugensysteme GmbH is one of the key global names when it comes to the production and sale of joint profiles. Deflex completes all kinds of construction joints and offers solutions in the following fields: Joint profile, Wall profile, Floor profile, Ceiling profile, Roof profile, Design joint covering, Building sealing, Flat roof sealing and structural sealing of all kinds.

We can supply all kinds of construction joints and offer solutions in the following fields:

- Expansion Joint profiles
- Floor Profiles

DEFLEX*

Wall Profiles

Insitex[®] Formwork Liners

Insitex[®] formliners provide a low-cost means applying appealing textured finishes to a wide variety of concrete structures. Manufactured from PVC, the formliners are lightweight and easy to install – improving construction speed and reducing man-hours. Insitex[®] is ideal for use on smaller applications and individual structures.

Insitex[®] formliners from Max Frank offer a diverse range of textures and finishes, including abstract, masonry & brick, timber or vertical-ribbed profile.

600 mm and heights of up to 7 m.

Insitex® panels are supplied in standard widths of

Pieri® Formliners

Pieri® formliners enable you to create an artistic, permanent impression providing a unique multidimensional aspect to your concrete. Alternatively, formliners can be used to effectively reproduce masonry or other traditional finishes to blend new construction with existing surroundings.

Whatever your design requirement, Grace Pieri elastomeric formliners provide practical economic and aesthetic solutions for building facades, internal walls, bridges, sea walls and other areas of exposed concrete.

















FLEX

Zemdrain[®] Controlled Permeability Formliner

The primary cause of concrete degradation is the poor quality of the outer 20 mm of the surface due to the use of oiled impermeable formwork. The resulting surface has increased porosity and numerous blowholes and reduced durability.

Zemdrain® controlled permeability formwork (CPF) liners can be used as an additional protective measure (APM). Zemdrain CPF liners are attached to the formwork face and during the concreting process remove excess air and water from the formwork/concrete interface. The resulting high-quality concrete surface has significantly increased durability properties.



Zemdrain[®] non-woven liner lends concrete the following properties:

- Greater surface hardness
- Blowhole-free, low-pore surface
- Reduced growth of microorganisms and algae
- Better freeze-deicing salt resistance
- Increased abrasion resistance

Advantages:

- Increased service life of the concrete surface
- Value retention of the concrete surface
- Proven cost savings over the total service life of the structure
- No concrete release agent required

Murfor[®] Compact

Murfor[®] Compact is the next generation of masonry reinforcement on a roll. Available in stainless steel and galvanised it can be used on internal and external walls; it is easily rolled out onto masonry joints reducing install time making the building process quicker. It is CE and ETA approved due to its design it is the first product to market which is used for both structural and crack control.

Key Benefits:

- Structural and crack control
- Colour coded for ease of install
- Fast and simple to install
- CE compliant and ETA Approved
- Ease of transport
- Accommodates any wall width



BEKAERT

Туре	Suitable For
Murfor® Compact I - Red (galvanized)	Masonry (clay bricks, concrete blocks) exposed to a dry environment (exposure class MX1, compliant with Eurocode 6/EN845-3) All types of mortar joints
Murfor® Compact E - Blue	Made of class R1, EN 845-3 compliant austenitic stainless steel (Molybdene - chrome - nickel alloys). This type of reinforcement has been specifically designed for exterior masonry that is exposed to the elements (exposure class MX2, MX3 and MX4, compliant with Eurocode 6/EN 845-3) All mortar joints between 3 mm & 12 mm



Stucanet®

Render Carrier

Stucanet is a purpose designed plater and render carrier which is manufactured from heavy galvanised steel welded wire mesh into moisture absorbent chip paper. It is used specifically for exterior façade applications and is protected with a breather membrane to prevent moisture penetration.

Applications:

Stucanet[®] is used specifically for exterior facade applications.

Stucanet[®] can be used on a Masonry wall or Timber frame.

Available in Stainless Steel or Galvanised.





Key Benefits:

- CE Compliant

- Quick and easy install

- Durable plasterwork and rendering

- Can be used as a dry wall alternative

- No need to remove existing render

TECHNICAL INNOVATION

Still looking for something?

A full index of our product catalogue can be found on page 362.



Accessories

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Contact our sales team: wearesdg.com +44 (0) 28 3752 8999

Precast

PRECAST MAGNET SYSTEMS

SDG are BT Innovation GmbH distribution partner for the UK and Ireland. Together we provide a range of specialist shuttering magnets, formwork and connecting systems for the Precast Industry.



Magnetic Formwork Systems

Multi Form

MultiForm is a robust and flexible shuttering support system for producing various precast elements including:

- Manufacturing solid and sandwich walls
- Manufacturing landing slabs, beams and joists
- Use on tilting table, formwork table, circulation palettes and wooden surfaces

Using MagFly[®] magnets, MulitForm can be moved easily on the formwork table and positioned precisely. As the MagFly[®] AP presses the MultiForm onto the formwork table, the joints are sealed as soon as the magnets are activated when a PE chamfer profile is used. Additional sealing with silicone is therefore unnecessary.

A window and door opening suitable for MultiForm offers a clever solution for enclosed openings in concrete elements. Using elements that can be taken out from the inside of the structure, the shuttering can be removed non-destructively for reuse. The builtin socket for the MagFly[®] magnets enables fast and precise assembly and disassembly of the shuttering.

Advantages of the MultiForm formwork include:

- Can be used quickly and ergonomically
- No sealing with silicone between the formwork shell and the formwork table
- Stable and robust system designed for use in precast plants
- The window and door openings can be disassembled from the inside

MULTIFORM TYPE 1

small column for short shuttering e.g. recesses



MULTIFORM TYPE 2

column for long shuttering Up to 80 cm tall & 3,025 m long



WINDOW & DOOR OPENING

reusable for window and door openings



MULTIFORM MFE (CORNER JOINT)

shuttering element for window and door corners



OVERVIEW TABLE OVERLEAF

Multi Form

	DESCRIPTION	WEIGHT [KG]	DIMENSIONS (MM)		
PRODUCT CODE	DESCRIPTION		L	В	н
8101050	MultiForm Type 1 – formwork angle H70	1.39	280	110	70
8101139	MultiForm Type 1 – formwork angle H90	1.75	280	110	90
8101155	MultiForm Type 1 – formwork angle H148	1.83	280	115	148
8101144	MultiForm Type 1 – formwork angle H190	2.11	280	115	190
8101165	MultiForm Type 1 – formwork angle H248	2.47	280	115	248
8101207	MultiForm Type 1 – formwork angle H290	3.43	280	205	290
8101471	MultiForm Type 1 – formwork angle H350	4.06	280	255	350
8101208	MultiForm Type 1 – formwork angle H390	4.35	280	266	390
8101470	MultiForm Type 1 – formwork angle H440	6.36	280	255	440
8101469	MultiForm Type 1 – formwork angle H490	6.96	280	255	490
8101468	MultiForm Type 1 – formwork angle H540	7.4	280	255	540
8101467	MultiForm Type 1 – formwork angle H590	7.96	280	255	590
8101466	MultiForm Type 1 – formwork angle H640	8.58	280	255	640
8101451	MultiForm Type 1 – formwork angle H690	9.56	280	255	690
8101063	MultiForm Type 2 – 98/3025	12.2	3,025	150	98
8101085	MultiForm Type 2 – 148/3025	16.4	3,025	150	148
8101096	MultiForm Type 2 – 198/3025	19.4	3,025	150	198
8101107	MultiForm Type 2 – 248/3025	23.3	3,025	200	248
8101118	MultiForm Type 2 – 298/3025	25	3,025	200	298
8101122	MultiForm Type 2 – 348/3025	30	3,025	200	348
8101123	MultiForm Type 2 – 398/3025	34.1	3,025	250	398
8101125	MutliForm Type 2 – 448/3025	36.1	3,025	250	448
8101127	MultiForm Type 2 – 498/3025	38	3,025	250	498
8101379	MultiForm Type 2 – 548/3025	44.5	3,025	250	548
8101290	MultiForm Type 2 – 598/3025	47	3,025	250	598
8101205	MultiForm Type 2 – 698/3025	51.6	3,025	300	698
8101063100	MultiForm Type 2 – 98/3000 double	25.5	3,000	350	98
8101085200	MultiForm Type 2 – 148/3000 double	33	3,000	350	148
8101096200	MultiForm Type 2 – 198/3000 double	43	3,000	400	198
8101107200	MultiForm Type 2 – 248/3000 double	46	3,000	400	248
8101118200	MultiForm Type 2 – 298/3000 double	49.83	3,000	400	298
8101118300	MultiForm Type 2 – 298/3000 double	49.7	3,000	350	298
8101122300	MultiForm Type 2 – 348/3000 double	56.22	3,000	350	348

Magfly[®] AP

Shuttering magnets featuring patented foot/spring system for positioning and detaching

The MagFly[®] AP is a patented shuttering magnet and a component of the BT shuttering formwork system. Unique features include the magnetic force-to-weight ratio, plus the unique foot/spring system, which allows the magnet to slide easily over the formwork table.

The magnet is activated by a firm pressure from above and adheres to the formwork table by its magnetic force. The MagFly® AP can be detached and realigned simply and quickly using the integrated lever. It does not require any additional tools or adapters.

The ultra-light aluminium casing makes ergonomic work with the magnets possible and saves effort by the user. In combination with the MultiForm formwork girders and an additional plastic chamfer profile, the formwork girder and chamfer profile are pressed firmly to the formwork table when the magnets are activated. An additional sealing for the edge is not neccessary. These effective technologies are matched perfectly to each other and substantially speed up the production of precast concrete elements.



Applications:

- Shuttering magnets for pallet circulation systems and tilting tables
- Shuttering for walls, beams, etc.

Benefits:

- Patented shuttering fastening provides increased retention pressure for shuttering at the formwork table
- No silicone sealant required
- Light and ergonomic handling thanks to the foot/spring system
- Magnet and formwork girder perfectly matched
- Unbeatable adhesive force-to-weight ratio

PRODUCT CODE	DESCRIPTION	SIZE
BT1055	Magfly AP (Adhesive Power) 2200 Kg	Each

KU Magnetic Steel Formers

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, an 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 protecting 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.



Benefits:

- Combined recess former with magnet
- Internal thread for releasing the magnet
- Solid and stable construction due to steel base body; long service life
- Environmentally friendly and cost-effective due to reusability

PRODUCT CODE	DESCRIPTION	SIZE
BTI001	Magnetic Former 2.5T KU25 Complete With 0 Ring	Each
BT1002	Magnetic Former 5T KU50 Complete with 0 Ring	Each
BT1005	Magnetic Former 10T KU100	Each
BT1003	0 Ring for Magnetic Former 2.5T KU25	Each
BT1004	0 Ring for Magnetic Former 5T KU50	Each

GB Magnetic Nailing Plate

The GB magnet is used for fixing threaded sleeves, wavytail 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, guaranteeing a long working life. The associated threaded rods are available in thread sizes from M10 to M36 and can be combined with all designs of the GB magnet. Other thread sizes are available on request.



Benefits:

- 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

PRODUCT CODE	DESCRIPTION	SIZE
BT1024	GB54 Magnetic Nailing Plate 30 mm (64 mm Dia)	Each
BT1020	GB64 Magnetic Nailing Plate 12 mm (64 mm Dia)	Each
BTI021	GB64 Magnetic Nailing Plate 16 mm (64 mm Dia)	Each
BT1022	GB64 Magnetic Nailing Plate 20 mm (64 mm Dia)	Each
BT1023	GB64 Magnetic Nailing Plate 24 mm (64 mm Dia)	Each
BT1025	GB64 Magnetic Nailing Plate 36 mm (64 mm Dia)	Each
BT1026	GB80 Magnetic Nailing Plate 24 mm (80 mm Dia)	Each
BT1030	GB106 Magnetic Nailing Plate 30mm (106 mm Dia)	Each
BTI030B	GB106 Magnetic Nailing Plate 36 mm (106 mm Dia)	Each

PRECAST ACCESSORIES > PRECAST MAGNET SYSTEMS

Magnetic Chamfer

Steel chamfer profiles are outstanding for manufacturing chamfers. The profiles are available with or without magnets.

Sizes available on request.





Double Wall Anchor

Double Wall Anchors are used for transporting and relocating precast concrete sandwich panels.



PRODUCT CODE	DESCRIPTION	SIZE
DWA050	Double Wall Anchor 130 mm	Each – 500 / Pallet
DWA051	Double Wall Anchor 150 mm	Each – 500 / Pallet
DWA053	Double Wall Anchor 180 mm	Each – 500 / Pallet
DWA055	Double Wall Anchor 230 mm	Each – 500 / Pallet
DWA056	Double Wall Anchor 250 mm	Each – 250 / Pallet
DWA059	Double Wall Anchor 270 mm	Each – 250 / Pallet
DWA060	Double Wall Anchor 280 mm	Each – 250 / Pallet
DWA061	Double Wall Anchor 300 mm	Each – 250 / Pallet

ThermoPin[®]

The ThermoPin[®] securing anchor system is a glass fibre reinforced plastic (GFRP) connecting anchor for sandwich walls and core-insulated double walls.

The ThermoPin® securing anchor system is used to connect facing and load-bearing layers for coreinsulated concrete parts. The GFRP material is suitable for use in narrow structural elements. Thanks to the attached cap, the bar slides smoothly into the fresh concrete, enabling particularly fast assembly. The fixed plastic ring guarantees correct installation and ensures that the fastening point in the insulation is sealed and concrete cannot flow into the opening. As a result, the bar ultimately disappears in the concrete and is not visible on the surface.

The result is perfect surfaces without visible flaws. ThermoPins® feature conical openings at the ends to increase resistance to pulling out. A particularly high tensile strength is achieved by using exclusively complete and intact glass fibres along the axis rod.

The ThermoPin[®] securing anchor system is available in 2 designs: horizontal or diagonal anchor type.



Applications:

- Sandwich walls
- Core-insulated double walls

- Cost-effective low installation costs due to quick and easy installation
- Durable tested resistance, even in alkaline media
- Slim constructions with low layer thicknesses possible

DESCRIPTION	SIZE
ThermoPin® H180_60	Ll: 180 mm; L2: 60 mm; horizontal
ThermoPin® HlB0_B0	Ll: 180 mm; L2: 80 mm; horizontal
ThermoPin® H190_80	Ll: 190 mm; L2: 80 mm; horizontal
ThermoPin [®] H210_80	Ll: 210 mm; L2: 80 mm; horizontal
ThermoPin [®] H230_80	Ll: 230 mm; L2: 80 mm; horizontal
ThermoPin® H240_80	Ll: 240 mm; L2: 80 mm; horizontal
ThermoPin [®] H250_80	Ll: 250 mm; L2: 80 mm; horizontal
ThermoPin [®] H270_80	Ll: 270 mm; L2: 80 mm; horizontal
ThermoPin® H280_140	Ll: 280 mm; L2: 140 mm; horizontal
ThermoPin® H280_160	Ll: 280 mm; L2: 160 mm; horizontal
ThermoPin® H290_80	Ll: 290 mm; L2: 80 mm; horizontal
ThermoPin® H310_80	Ll: 310 mm; L2: 80 mm; horizontal
ThermoPin® H340_160	Ll: 340 mm; L2: 160 mm; horizontal
ThermoPin® H340_180	Ll: 340 mm; L2: 180 mm; horizontal
ThermoPin® H340_200	Ll: 340 mm; L2: 200 mm; horizontal
ThermoPin® H340_220	Ll: 340 mm; L2: 220 mm; horizontal
ThermoPin® H340_80	Ll: 340 mm; L2: 80 mm; horizontal
ThermoPin® H380_180	Ll: 380 mm; L2: 180 mm; horizontal
ThermoPin® H380_200	Ll: 380 mm; L2: 200 mm; horizontal
ThermoPin® H380_220	Ll: 380 mm; L2: 220 mm; horizontal
ThermoPin® H380_240	Ll: 380 mm; L2: 240 mm; horizontal
ThermoPin® D250_110	Ll: 250 mm; L2: 110 mm; diagonal
ThermoPin® D295_110	Ll: 295 mm; L2: 110 mm; diagonal
ThermoPin® D325_110	Ll: 325 mm; L2: 110 mm; diagonal
ThermoPin® D340_110	Ll: 340 mm; L2: 110 mm; diagonal
ThermoPin® D350_110	Ll: 350 mm; L2: 110 mm; diagonal
ThermoPin® D410_110	Ll: 410 mm; L2: 110 mm; diagonal
ThermoPin® D445_225	Ll: 445 mm; L2: 225 mm; diagonal
ThermoPin® D465_100	Ll: 465 mm; L2: 100 mm; diagonal
ThermoPin [®] D485_80	Ll: 485 mm; L2: 80 mm; diagonal

DWAK Rocket

A stable steel spacer used in the production of precast double walls.



PRODUCT CODE	DESCRIPTION	SIZE
DWA001	200-08 DWA K Rocket	100 No
DWA001A	220-08 DWA K Rocket	100 No
DWA002	225-08 DWA K Rocket	100 No
DWA003	250-08 DWA K Rocket	100 No
DWA004	300-08 DWA K Rocket	100 No
DWA009	325-08 DWA K Rocket	100 No
DWA005	350-08 DWA K Rocket	100 No
DWA006	400-08 DWA K Rocket	100 No

ONNECTION SYSTEMS

PVL Loopbox

Single-wire loops for connecting precast wall panels to each other or to a column. Connecting Loops make wall installation easy: just remove the tape and bend the loop to the operating position.

Wire loop boxes are installed to the formwork according to the spacing needed to bear the shear loads, before the panel is cast. After removing the formwork, the protective tape is removed and the loop is opened with a hammer or a pin. Wall panels are installed and supported according to plans. A vertical rebar is installed into a joint through the loops, and the horizontal position of the loops is checked. After completion of the formwork, concrete grout is poured or pumped into the joint.



PRODUCT CODE DESCRIPTION SIZE LFT198 PVL80 Loopbox 300 / Box LFT197 PVL100 Loopbox 300 / Box LFT199 PVL120 Loopbox 300 / Box

Double Wall Dowel

Double-wall dowel for attaching braces to precast concrete during construction. Made from high quality plastic. The double-wall dowel will be glued on the formwork. A screw with diameter 12x70 mm is needed for fixation of the braces on the double-wall dowel.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK204	Double Wall Dowel	250 per Bag

Turnbuckle

BT-Spannschloss[®]

The BT-Spannschloss[®] turnbuckle is part of an easy to use connection system – without additional materials and tools.

The BT-Spannschloss® turnbuckle enables efficient and precise assembly and durable connections for precast concrete elements. By using BT-Spannschloss® turnbuckle and corresponding connection materials, precast elements can be joined together without using mineral grouting. This means no curing or standstill times due to low temperatures. The BT-Spannschloss® turnbuckle can be fully loaded straight away. You can view the application of BT-Spannschloss® in our product video.

The building inspection approval (Z-14.4-599) certifies the reliability of the product. The BT-Spannschloss®



turnbuckle is offered in three sizes – M12, M16 and M20. Available in galvanised or stainless steel.

Applications:

- Angle support walls in flood protection
- Residential and commercial construction
- Agricultural systems
- Sewer and civil engineering
- Temporary structures

Benefits:

- Dry screw connection
- No joint grouting, no special tools
- Can be loaded immediately, no curing times
- Assembly regardless of weather, even in low temperatures or precipitation
- Able to be disassembled removal of temporarily installed structures
- Three-point connection possible

PRODUCT CODE	DESCRIPTION	SIZE
BT1099	BT Turnbuckle Spannschloss M12 Set Galv	Each
BTI100	BT Turnbuckle Spannschloss M16 Set Galv	Each
BTI101	BT Turnbuckle Spannchloss M20 Set Galv	Each
BTI149	Magnetic Former for BT Turnbuckle Spannschloss M12	Each
BTI150	Magnetic Former for BT Turnbuckle Spannschloss M16	Each
BTI151	Magnetic Former for BT Turnbuckle Spannschloss M20	Each



Lifting Sockets Systems

List of lifting sockets products

1. Design Method

- Calculation assumptions
 Drawing of the precast element and foreseen lifting method
- **1.3** Weight of the Element (P)
- **1.4** Formwork adhesion at the removal from the mould (A)
- 1.5 Position and determination of the number of efficient lifting points (n) 76
- **1.6** Sling angle and multiplication coefficient (Ce)
- 1.7 Lifting and handling dynamic coefficient (Ψdyn)
- Resultant load by lifting point (F)
 Concrete strength (f_c)

Lifting Sockets Tubular Socket: Lifting Socket with Cross Hole

2.2 Flat End Lifting Socket Lifting Socket with Straight Rebar 2.3 Wavy Tail Lifting Anchor: 2.4 Lifting Socket with Short Wavy Tail 2.5 Wavy Tail Lifting Anchor: Lifting Socket with Long Wavy Tail Flat Plate Socket 2.6 2.7 Crown Foot Anchor Crown Foot Anchor Bolt Type 2.8 Lifting Socket with Foot 2.9

Lifting Loop and Swivel Eye Lifting Loop

- 3.1.1 Lifting Loop
- **3.1.2** Articulated Lifting Loop**3.1.3** Lateral Lifting Loop

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SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T	8.0T
TUBULAR LIFTING SOCKET		RD 12MM	RD 16MM	RD 20MM	RD 24MM	RD 30MM	RD 36MM	RD 42MM
- ØD -	D (MM)	15	21	27	31	39.5	47	54
	н (мм)	40	54	69	78	103	125	145
	F (MM)	8	13	15.5	18	22.5	27.5	32
	E (MM)	22	27	35	43	56	68	80

The lifting sockets are provided electro zinc plated.

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T
STAINLESS STEEL TUBULAR SOCKET		RD 121MM	RD 161MM	RD 201MM	RD 241MM	RD 301MM
= Ø D - Rd -	D (MM)	15	21	27	31	39.5
	н (мм)	40	54	59	78	103
	F (MM)	8	13	15.5	18	22.5
	E (MM)	22	27	35	43	56

PRECAST ACCESSORIES > LIFTING SOCKETS SYSTEMS

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T
LIFTING INSERT		RD 12MM	RD 16MM	RD 20MM	RD 24MM	RD 30MM
	D (MM)	15	21	27	31	39.5
	н (мм)	60	80	95	100	135
	F (MM)	10	13	15	18	22.5
	E (MM)	22	27	35	43	56

The lifting sockets are provided electro zinc plated.

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T
STRAIGHT REBAR ANCHOR		RD 12x190	RD 16x250	RD 20x350	RD 24x400	RD 30x500	RD 36x650
	D (MM)	15	21	27	31	39.5	47
	Н (ММ)	190	250	350	400	500	650
	HA (MM)	10	12	16	16	20	25
	E (MM)	22	27	35	43	56	68

The lifting sockets are provided electro zinc plated, the rebar is black.

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T	8.0T
WAVY TAIL ANCHOR		12x108	16x167	20x187	24x250	30x300	36x380	42x450
Ø D	D (MM)	15	21	27	31	39.5	47	54
	н (мм)	108	167	187	250	300	380	450
	HA (MM)	8	12	16	16	20	25	28
	E (MM)	22	27	35	43	56	68	80
T T		12x137	16x216	20x257	24x360	30x450	36x570	
	D (MM)	15	21	27	31	39.5	47	
	н (мм)	137	216	257	360	450	570	
	HA (MM)	10	12	16	16	20	25	
	E (MM)	22	27	35	43	56	68	

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T
FLAT PLATE SOCKET		RD12	RD16	RD20	RD24	RD30
	D (MM)	15	21	27	31	39.5
	н (мм)	30	35	47	54	72
	A (MM)	35	50	60	80	100
	в (мм)	25	35	60	60	80

The lifting sockets are provided electro zinc plated.

SAFE WORKING LOAD		0.5T	1.2T
LIFTING SOCKET WITH FOOT		RD12060	RD16080
	D (MM)	15	21
	H (MM)	60	80
	E (MM)	22	27

The lifting sockets are provided electro zinc plated, the foot is black.

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T	8.0T
LIFTING LOOP		RD/ M12	RD/ M16	RD/ M20	RD/ M24	RD/ M30	RD/ M36	RD/ M42
	A (MM)	6	8	10	11	14	16	20
	С (ММ)	155	155	215	255	303	340	425
	E (MM)	22	27	35	43	56	68	80

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T	8.0T
ARTICULATED LIFTING LOOP		RD/ M12	RD/ M16	RD/ M20	RD/ M24	RD/ M30	RD/ M36	RD/ M42
	н (мм)	335	385	470	550	590	780	860

SAFE WORKING LOAD		0.5T	1.2T	2.0T	2.5T	4.0T	6.3T	8.0T
SWIVEL EYE			16MM	20MM	24MM	30MM	36MM	42MM
	B (MM)		36	49.5	57	66	80	80
	E (MM)		20	30	30	35	50	50
	G (MM)		52	68	78	96.5	109	109

SAFE WORKING LOAD		0.8T	1.2T	1.6T	2.0T	2.5T	4.0T	5.2T	6.3T	10T
CAST IN LOOPS	D (MM)	6	7	8	9	10	12	14	16	20
T D D D T	н (мм)	210	225	235	280	315	340	360	390	510

Other sizes on request.

THREAD		M6	M8	M10	M12	M16	M20	M24	M30
FLAT END FIXING SOCKET		6x35 MM	8x40 MM	10x45 MM	12x60 MM	16x70 MM	20x100 MM	24x120 MM	30x150 MM
- M	н (мм)	35	40	45	60	70	100	120	150
	G (MM)	6	8	8	10	12	14	14	17
	E (MM)	8	8	10	12	16	20	24	30
	A (MM)	11	15	12	23	20	40	40	65
			8x50 MM	10x50 MM	12x70 MM	16x80 MM	20x120 MM		
	н (мм)		50	50	70	80	120		
	G (MM)		8	8	10	12	14		
	E (MM)		8	10	12	16	20		
	A (MM)		25	17	33	30	60		
						16x100 MM			
	н (мм)					100			
	G (MM)					12			
	E (MM)					16			
	A (MM)					50			

Sockets provided electro zinc plated.

THREAD		M6	M8	M10	M12	M16	M20
STAINLESS FLAT END FIXING SOCKET		6x35 MM	8x40 MM	10x451 MM	12x601 MM	16x801 MM	20x1001 MM
- M -	н (мм)	35	40	45	60	80	100
	G (MM)	6	8	8	10	12	14
	E (MM)	8	8	10	12	16	20
	A (MM)	11	15	12	23	30	40
			8x501 MM	10x501 MM			
	н (мм)		50	50			
	G (MM)		8	8			
	E (MM)		8	10			
	A (MM)		25	17			

THREAD		M6	M8	M10	M12	M16	M20	M24
FIXING SOCKET WITH NAILING PLATE				10x50C MM	12x70C MM	16x100C MM	20x100C MM	24x120C MM
	н (мм)			50	70	100	100	120
	G (MM)			8	10	12	14	14
	E (MM)			10	12	16	20	24
	A (MM)			20	30	32	40	50
000	D (MM)			40	40	50	60	60

Sockets provided electro zinc plated.

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THREAD		M8	M10	M12	M16	M20
BENDED FIXING SOCKET		8X30 MM	10X35 MM	12X45 MM	16X60 MM	20X100 MM
	H(MM)	30	35	45	60	100
	E(MM)	8	10	12	16	20
	A(MM)	15	13	18	20	60
			10X60 MM	12X70 MM	16X100 MM	
	H(MM)		60	70	100	
	E(MM)		10	12	16	
	A(MM)		35	40	60	

Sockets	provided	electro	zinc	plated
JUCKCIJ	provided	CICCIIO	21110	platea

THREAD		M6	M8	M10	M12	M16	M20	M24	M30
STAINLESS BENDED FIXING SOCKET					12x701 MM	16x1001 MM			
	H (MM)				70	100			
	E (MM)				12	16			
	A (MM)				40	60			

THREAD		M10	M12	M16
BENDED FIXING SOCKET WITH NAILING PLATE		10X60C MM	12X70C MM	16X100C MM
	H (MM)	60	70	100
	E (MM)	10	12	16
	A (MM)	35	40	60
	D (MM)	40	40	50

Sockets provided electro zinc plated.
PRECAST ACCESSORIES > LIFTING SOCKETS SYSTEMS

THREAD		M8	M10
WAVED FIXING SOCKET		8x40MM	10x40MM
	Н (ММ)	40	40
	E (MM)	10	10
	A (MM)	15	15
			10x60MM
	Н (ММ)		60
	E (MM)		10
	A (MM)		30

Sockets provided electro zinc plated.

THREAD		M16	
FIXING SOCKET WITH CROSSPIN		16x70MM	
	H (MM)	70	
	E (MM)	16	
	A (MM)	26	
<u>└</u> <u></u> - <u></u> - <u></u>	AXE		
	D (MM)	10	
	I (MM)	50	

Sockets provided electro zinc plated.

FIXING SOCKET WITH PLATE		16x45MM	
	Н (ММ)	45	
	E (MM)	16	
	A (MM)	42	
	P (MM)	50	

Sockets provided electro zinc plated.

THREAD		M10	M/ RD12	M/ RD16	M/ RD20	M/ RD24	M/ RD30	M/ RD36	M/ RD42
PLASTIC NAILING PLATE	REF	10MM	12MM	16MM	20MM	24MM	30MM	36MM	42MM
	D(MM)	40	40	55	55	55	70	70	96
MAGNETIC NAILING PLATE			12MM	16MM	20MM	24MM	30MM		
	D(MM)		65	65	65	65	65		

PRECAST ACCESSORIES > LIFTING SOCKETS SYSTEMS

THREAD			M 10	M/ RD 12	M/ RD 16	M/ RD 20	M/ RD 24	M/ RD 30	M/ RD 36	M/ RD 42
FIXING STUD		TC08	TC10	TC12	TC16					
	D (MM)	11	11	11	17					
	L (MM)	23	23	23	23					
	COLOUR	Light Blue	Yellow							

THREAD		M/RD12	M/RD16	M/RD20	M/RD24	M/RD30
SEALING CAP		BP12	BP16	BP20	BP24	BP30
DATA CLIP		BI12	BI16	B120	B124	
Ød1 Ød2 Ød2 Rd16 Ovy Rd16	D1 (MM)	26	31	37	41	
	D2 (MM)	15	21	27	31	
	Н (ММ)	15	15	15	15	
DATA CLIP WITH EARS		BI012	BI016	B1020	B1024	
	D (MM)	26	32	36	44	
	B (MM)	8	10	12	15	
	DS (MM)	8	8	10	12	

1. Design Method

The aim of this design method is to evaluate the load on cemented sockets of a reinforced precast concrete element in order to select the appropriate socket.

This method is based on the most common applications. If you have any queries on the application, the assumptions or any point mentioned in this document, you should contact our Precast Technical Department.

1.1 Calculation assumptions

In order to define the force on the lifting sockets, all the following points must be taken into account:

- The technical drawing of the precast element and the kinetics of handling
- The weight of the element (and of the formwork and other accessories lifted with the element)
- The formwork adhesion at the removal from the mould
- The number of efficient lifting points (and not the number of actual lifting points)
- The sling angle
- The dynamic coefficient (lifting machinery)

1.2 Drawing of the precast element and foreseen lifting method

At first, the technical drawing of the element has to be considered, then the means by which it is to be handled. It is necessary to distinguish between the handling in the precast factory and on site. To define the correct anchor to use (type, length, size) it is also necessary to know:

It is important that the assumptions are clearly

communicated to the companies in charge of the

handling and lifting operations, in order to ensure

handling and lifting conditions.

that the assumptions are corresponding to the actual

- The concrete strength when the element is lifted

It is necessary to distinguish between the handling of the element in the precast factory and on the construction site. All calculations have to be undertaken in both cases. 1.3 Weight of the Element (P)

The actual weight of the element must be considered. It includes in particular:

- The weight of the concrete element (volume x density). The reinforced concrete density is equal to 2500 daN/m³ (or 25 kN/m³) in general.
- The weight of the formwork and accessories lifted with the element.

1.4 Formwork adhesion at the removal from the mould (A)

The adhesion will depend on 2 factors:

 The surface area of the element in contact with the formwork (S in m²). All the surfaces in contact with the formwork need to be considered, including inclined surfaces.

 $A = q_{adb} \times S$

 The surface condition of the mould. This surface condition is defined by an adhesion factor (q_{adh} in daN/m²)

This force is to be considered at the removal of the element from the mould.

Type of mould	Adhesion factor \mathbf{q}_{adh}
Oiled steel mould, Plywood coated with oiled plastic	100 daN/m²
Varnished oiled wooden mould	200 daN/m²
Oiled rough wooden mould	300 daN/m²
Polyurethane matrix	Consult the matrix supplier

The adhesion force is:

This adhesion force must be added to the weight of the element in order to calculate the force required to lift it.

In some cases, the adhesion force can be zero if the concrete is not in contact with the mould (pre-stressed beam for example).

1.5 Position and determination of the number of efficient lifting points (n)

Set up the lifting points symmetrically to the center of gravity.

Here are some examples of lifting point positions:



In the case of asymmetric loads relative to the centre of gravity, traction efforts must be calculated for each lifting point taking into account distances to the centre of gravity.





Depending on the type of socket required (see §2), the position of some lifting points may not be suitable. It is essential to take into account in particular the minimum distances between lifting points, and the minimum distances at the concrete edge. A minimum coating may also be required.

Based on the number of apparent lifting points and the use or not of a balanced lifting system (such as a lifting beam), the number of efficient lifting points is defined below:

	EFFICIENT LIFTING POINTS NUMBER (N)				
APPARENT LIFTING POINTS	WITH A BALANCED SYSTEM	OTHERS LIFTING MEANS			
4	4	2			
3	3	2			
2	2	2			

Some examples:



Unbalanced System

Apparent lifting points = 4 Efficient lifting points = 2



1.6 Sling angle and multiplication coefficient (Ce)

A multiplication coefficient Ce is generated by vertical forces (weight) on the slings. For the calculation, angle β is to be considered as the angle between the vertical and the most inclined sling.







β	0	15°	22,5°	30°	45°	60°
α = 2β	0	30°	45°	60°	90°	120°
Ce	1	1,035	1,082	1,155	1,414	2
L	-	2 D	1,3 D	D	0,7 D	0,6 D



 $\label{eq:between the vertical and the most inclined sling.}$ It is necessary to consider the worst-case scenario with the largest angle $\beta.$

1.7 Lifting and handling dynamic coefficient (Ψ_{dyn})

The values given in the table below are derived from the "Design and use of inserts for lifting and handling of precast concrete - Elements", CEN/TR 15728:2008.

The foreseen lifting system and the estimated values must be notified to the users (factory and site).

LIFTING AND HANDLING MACHINE	DYNAMIC COEFFICIENT Ψ_{DYN}
Tower crane, overhead crane and portal crane	1,2
Mobile crane	1,4
Lifting and moving on flat terrain	2-2,5
Lifting and moving on rough terrain	3-4

Dynamic coefficient required by type of element:

TYPE OF ELEMENT	DYNAMIC COEFFICIENT Ψ_{DYN}
Pipe and sewer	2
Frame below 12T	1,6
Frame between 12 and 20T	1,4
Frame above 20T	1,2
Wall	1,4
Beam below 12T	1,6
Beam between 12 and 20T	1,4
Beam above 20T	1,2

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1.8 Resultant load by lifting point (F)

The resultant load for each lifting point is equal to:



This calculation must be undertaken for the lifting activity in the precast factory, on site, and for any other handling activity of the precast element.

NOTE: Sockets used more than 10 times, must not to be subject to a force more than 0.6 times their safety working load (SWL). It is necessary to check in this case that F < 0.6* SWL (Anchor).

1.9 Concrete strength (f_{ck})

The concrete strength has to be determined:

- When lifting the element from the mould in the Precast factory
- When transporting and installing on site

The minimum allowed resistance of the concrete is 10 MPa.

2. Lifting Sockets

This choice can be made according to the resultant load values by lifting point at the factory (Fu), and on site (Fc), and from the concrete strength during the first lifting at the precast factory and on site. The worst calculation (worst case scenario) should be used to ensure the socket is suitable for all uses.

If you have any queries about your calculation, you should contact our Technical Department.

The socket load capacity must be at least equal to the highest calculated load value (Fu and Fc).

Various socket types are available, and the choice of type of socket to be used is made according to each individual set up.

Be careful during installation of the socket: Never weld the socket.

There are 8 different types of lifting sockets:



2.1 Tubular Socket: Lifting Socket with Cross Hole



REFERENCE	THREAD	SAFE WORKING LOAD [KG]			WEIGHT			
	RD	0° - 45°	45° - 90°	ØD	н	E	ØF	[KG]
DT 12	12	500	250	15	40	22	8	0,025
DT 16	16	1200	600	21	54	27	13	0,070
DT 20	20	2000	1000	27	69	35	15,5	0,155
DT 24	24	2500	1250	31	78	43	18	0,206
DT 30	30	4000	2000	39,5	103	56	22,5	0,450
DT 36	36	6300	3150	47	125	68	27,5	0,725
DT 42	42	8000	4000	54	145	80	32	1,100
DT 52	52	12500	6250	67	195	100	40	2,255

Sockets are provided electro zinc plated. They can also be made in stainless steel.

A bent reinforced ribbed steel has to be put into the hole of the lifting socket.

Total length of the reinforced ribbed steel, depending of the concrete strength.

DEFEDENCE	ØHA	BENDING	CONCRETE STRENGTH (MPA)								
REFERENCE	[MM]	ØB	10	15	20	25	30	35	40	45	
DT 12	6	60	510	430	380	340	310	290	270	250	
DT 16	10	100	760	640	560	510	470	430	410	390	
DT 20	12	120	1020	850	750	670	610	570	530	500	
DT 24	14	140	1110	940	820	740	680	630	590	560	
DT 30	16	160	1490	1250	1080	970	880	820	760	720	
DT 36	20	200	1870	1560	1360	1220	1110	1030	960	900	
DT 42	25	250	1980	1670	1460	1320	1210	1120	1050	1000	
DT 52	28	280	2640	2210	1920	1720	1560	1440	1350	1270	

Minimum edge distances have to be respected.



REFERENCE	THICKNESS MINI E [MM]	A MINI [MM]	B MINI [MM]
DT 12	60	150	300
DT 16	80	200	400
DT 20	100	275	550
DT 24	120	300	600
DT 30	140	350	650
DT 36	200	400	800
DT 42	240	500	1000
DT 52	275	600	1200

In case of an inclined tension $b \ge 15^\circ$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]		
RD 12	6	150	24		
RD 16	8	200	32		
RD 20	8	300	32		
RD 24	10	300	40		
RD 30	12	400	48		
RD 36	14	550	56		
RD 42	16	600	64		
RD 52	20	750	140		



2.2 Flat End Lifting Socket



In case of a transversal pull (till up) with an inclination $\gamma \ge 15^{\circ}$, additional reinforcements have to be added.

Dimension of the additional transversal pull reinforced ribbed steel.





The rebar HA1 can be fixed to the socket with the data clips with ears (see §7.3)

DEEEDENOE	THREAD	SAFE V	WORKING LOA	D [KG]	DI	WEIGHT			
REFERENCE RD	RD	0°- 45°	45° - 90°	ØD	н	E	ØF	[KG]	
DTP 12	12	500	250	15	60	22	10	0,031	
DTP 16	16	1200	600	21	80	27	13	0,110	
DTP 20	20	2000	1000	27	95	35	15	0,200	
DTP 24	24	2500	1250	31	100	43	18	0,270	
DTP 30	30	4000	2000	39,5	135	56	22,5	0,600	

Sockets are provided electro zinc plated.

The reinforced ribbed steel are the same than for the lifting socket with cross hole (see § 2.1):

- Bent reinforced ribbed steel must be put into the hole of the lifting socket
- Additional shear pull stirrup, In case of an inclined tension b $\ge 15^{\circ}$
- Additional transversal pull reinforced ribbed steels, in case of a transversal pull (till up) with an inclination $\gamma \ge 15^\circ$

2.3 Lifting Socket with Straight Rebar



Dimension of the lifting sockets with straight rebar.

REFERENCE	THREAD	SAFE WORKING LOAD [KG]			WEIGHT			
REFERENCE	RD	0° - 45°	45° - 90°	ØD	н	E	ØF	[KG]
DA 12 190	12	500	250	15	190	22	10	0,102
DA 16 250	16	1200	600	21	250	27	12	0,280
DA 16 270	16	1200	600	21	270	27	10	0,350
DA 20 350	20	2000	1000	27	350	35	16	0,540
DA 24 400	24	2500	1250	31	400	43	16	0,830
DA 24 720	24	2500	1250	31	720	43	16	1,225
DA 30 500	30	4000	2000	39,5	500	56	20	1,520
DA 36 650	36	6300	3150	47	650	68	25	3,120
DA 42 800	42	8000	4000	54	800	80	28	4,77
DA 52 900	52	12500	6250	67	900	100	32	7,30

Sockets are provided electro zinc plated; rebar is black.

The Safe Working Load is given for a minimum concrete strength of 15 MPa.



REFERENCE	THICKNESS MINI E [MM]	A MINI [MM]	B MINI [MM]
DA 12 190	60	150	300
DA 16 250	80	200	400
DA 16 270	80	200	400
DA 20 350	100	275	550
DA 24 400	120	300	600
DA 24 720	120	300	600
DA 30 500	140	350	650
DA 36 650	200	400	800
DA 42 800	240	500	1000
DA 52 900	275	600	1200

In case of an inclined tension $b \geq 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]	
RD 12	6	150	24	
RD 16	8	200	32	
RD 20	8	300	32	
RD 24	10	300	40	
RD 30	12	400	48	
RD 36	14	550	56	
RD 42	16	600	64	
RD 52	20	750	140	



In case of a transversal pull (till up) with an inclination $\gamma \ge 15^{\circ}$, additional reinforcements have to be added. See § 2.1 for more information concerning the additional reinforcements.

2.4 Wavy Tail Lifting Anchor: Lifting Socket with Short Wavy Tail



	Dim	nension	of the	lifting	sockets	with	short	wavy	tail	
--	-----	---------	--------	---------	---------	------	-------	------	------	--

REFERENCE THREAD RD	THREAD	SAFE WORKING LOAD [KG]			WEIGHT			
	RD	0° - 45°	45° - 90°	ØD	н	E	HA	[KG]
DAS 12 108	12	500	250	15	108	22	8	0,058
DAS 16 167	16	1200	600	21	167	27	12	0,210
DAS 20 187	20	2000	1000	27	187	35	16	0,340
DAS 24 250	24	2500	1250	31	250	43	16	0,532
DAS 30 300	30	4000	2000	39,5	300	56	20	1,004
DAS 36 380	36	6300	3150	47	380	68	25	2,120
DAS 42 450	42	8000	4000	54	450	80	28	3,000

Sockets are provided electro zinc plated; rebar is black.

The Safe Working Load is given for a minimum concrete strength of 15 MPa.



REFERENCE	A MINI [MM]
DAS 12 108	95
DAS 16 167	135
DAS 20 187	170
DAS 24 250	220
DAS 30 300	275
DAS 36 380	300
DAS 42 450	400

In case of an inclined tension b $\geq 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]	
RD 12	6	150	24	
RD 16	8	200	32	
RD 20	8	300	32	
RD 24	10	300	40	
RD 30	12	400	48	
RD 36	14	550	56	
RD 42	16	600	64	



2.5 Wavy Tail Lifting Anchor: Lifting socket with Long Wavy Tail



Dimension of the lifting sockets with long wavy tail.

REFERENCE	THREAD	SAFE WORKING LOAD [KG]			WEIGHT			
REFERENCE	RD	0° - 45°	45° - 90°	ØD	н	E	НА	[KG]
DAS 12 137	12	500	250	15	137	22	10	0,076
DAS 12 300	12	500	250	15	300	22	8	0,151
DAS 16 216	16	1200	600	21	216	27	12	0,250
DAS 20 257	20	2000	1000	27	257	35	16	0,520
DAS 20 300	20	2000	1000	27	300	35	16	0,550
DAS 24 360	24	2500	1250	31	360	43	16	0,740
DAS 30 450	30	4000	2000	39,5	450	56	20	1,470
DAS 36 570	36	6300	3150	47	570	68	25	2,850
DAS 42 620	42	8000	4000	54	620	80	28	3,870
DAS 52 880	52	12500	6250	67	880	100	32	7,200

Sockets are provided electro zinc plated; rebar is black.

The Safe Working Load is given for a minimum concrete strength of 15 MPa.



REFERENCE	THICKNESS MINI E [MM]	A MINI [MM]	B MINI [MM]
DAS 12 137	60	150	300
DAS 12 300	60	150	300
DAS 16 216	80	200	400
DAS 20 257	100	275	550
DAS 20 300	100	275	550
DAS 24 360	120	300	600
DAS 30 450	140	350	650
DAS 36 570	200	400	800
DAS 42 620	240	500	1000
DAS 52 880	275	600	1200

In case of an inclined tension $b \ge 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]
RD 12	6	150	24
RD 16	8	200	32
RD 20	8	300	32
RD 24	10	300	40
RD 30	12	400	48
RD 36	14	550	56
RD 42	16	600	64
RD 52	20	750	140



In case of a transversal pull (till up) with an inclination $\gamma \ge 15^{\circ}$, additional reinforcements have to be added. See § 2.1 for more information concerning the additional reinforcements.

2.6 Flat Plate Socket



Dimension of the flat plate socket.

DEFEDENCE	THREAD	SAFE WORKING LOAD [KG]		DIMENSI	ONS [MM]		WEIGHT
REFERENCE	RD	0° - 45°	ØD	Н	А	В	[KG]
DAP 12	12	500	15	30	35	25	0,045
DAP 16	16	1200	21	35	50	35	0,110
DAP 20	20	2000	27	47	60	60	0,250
DAP 24	24	2500	31	54	80	60	0,350
DAP 30	30	4000	39,5	72	100	80	0,690
DAP 36	36	6300	47	84	130	100	1,290
DAP 42	42	8000	54	98	130	130	1,780
DAP 52	52	12500	67	120	150	130	2,880
Sockets are provided electro zinc plated.							

The Safe Working Load is given for a minimum concrete strength of 15 MPa.

Required reinforcement steel

The flat plate socket have to be used with the required reinforcement ribbed steel.



Dimensions of the required reinforcement ribbed steel.

REFERENCE	THREAD	REBAR HA	DI	MENSIONS [M	IM]
SOCKET	RD	QTY X Ø	L	А	В
DAP 12	12	2 x Ø 6	250	60	60
DAP 16	16	2 x Ø 8	420	90	70
DAP 20	20	2 x Ø 8	640	90	80
DAP 24	24	2 x Ø 10	640	90	100
DAP 30	30	2 x Ø 12	830	90	110
DAP 36	36	2 x Ø 14	1140	140	120
DAP 42	42	2 x Ø 16	1250	140	120
DAP 52	52	2 x Ø 20	1530	140	150



Minimum edge distance and minimum distance between sockets



REFERENCE SOCKET	A MINI [MM]	B MINI [MM]	E MINI [MM]
DAP 12	180	350	75
DAP 16	250	500	85
DAP 20	300	600	100
DAP 24	400	800	115
DAP 30	500	1000	140
DAP 36	650	1300	160
DAP 42	650	1300	175
DAP 52	750	1500	215



In case of an inclined tension $b \ge 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]
RD 12	6	150	24
RD 16	8	200	32
RD 20	8	300	32
RD 24	10	300	40
RD 30	12	400	48
RD 36	14	550	56
RD 42	16	600	64
RD 52	20	750	140



2.7 Crown Foot Anchor



Dimensions of the lifting socket with machined foot.

DEEEDENOE	THREAD	SAFE WORKING LOAD [KG]		DIMENSIONS [MM]			WEIGHT
REFERENCE	RD	0° - 45°	45° - 90°	ØD	н	E	[KG]
DPU 12 060	12	500	250	17	60	22	0,06
DPU 16 080	16	1200	600	21	80	27	0,14
DPU 20 100	20	2000	1000	27	100	35	0,20
DPU 24 115	24	2500	1250	31	115	43	0,40
DPU 30 150	30	4000	2000	40	150	56	0,70

Sockets are provided electro zinc plated.



REFERENCE	A MINI [MM]	B MINI [MM]
DPU 12 060	180	360
DPU 16 080	240	480
DPU 20 100	300	600
DPU 24 115	345	690
DPU 30 150	450	900

In case of an inclined tension $b \ge 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]		L
RD 12	6	150	24	Η	100000000000000000000000000000000000000
RD 16	8	200	32	Ø	
RD 20	8	300	32	1	000000000000000000000000000000000000000
RD 24	10	300	40	ł	
RD 30	12	400	48		

2.8 Crown Foot Anchor Bolt Type



Dimensions of the lifting socket with bolt.

DEFEDENCE	THREAD	SAFE WORKI	NG LOAD [KG]	DIN	IENSIONS [M	1M]	WEIGHT
REFERENCE	RD	0° - 45°	45° - 90°	ØD	н	E	[KG]
DP 12 060	12	500	250	15	60	22	0,060
DP 12 070	12	500	250	15	70	22	0,080
DP 16 080	16	1200	600	21	80	27	0,140
DP 20 100	20	2000	1000	27	100	35	0,200
DP 20 127	20	2000	1000	27	127	35	0,266
DP 24 140	24	2500	1250	31	140	43	0,440
DP 30 170	30	4000	2000	39,5	170	56	0,750

Sockets are provided electro zinc plated.



REFERENCE	A MINI [MM]	B MINI [MM]
DP 12 060	180	360
DP 12 070	210	420
DP 16 080	240	480
DP 20 100	300	600
DP 20 127	380	760
DP 24 140	420	840
DP 30 170	510	1020

In case of an inclined tension $b \ge 15^{\circ}$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]
RD 12	6	150	24
RD 16	8	200	32
RD 20	8	300	32
RD 24	10	300	40
RD 30	12	400	48



2.9 Lifting Socket with Foot



Dimensions of the lifting socket with foot.

DEFEDENCE	THREAD	SAFE WORKI	NG LOAD [KG]	DIN	WEIGHT		
REFERENCE	RD	0° - 45°	45° - 90°	ØD	н	E	[KG]
DP 12 100	12	500	250	15	100	22	0,050
DP 12 150	12	500	250	15	150	22	0,074
DP 16 130	16	1200	600	21	130	27	0,160
DP 16 175	16	1200	600	21	175	27	0,160
DP 20 185	20	2000	1000	27	185	35	0,335
DP 20 250	20	2000	1000	27	250	35	0,410
DP 24 200	24	2500	1250	31	200	43	0,474
DP 24 250	24	2500	1250	31	250	43	0,550
DP 24 275	24	2500	1250	31	275	43	0,580
DP 30 275	30	4000	2000	39,5	275	56	0,923
DP 30 350	30	4000	2000	39,5	350	56	1,251
DP 36 335	36	6300	3150	47	335	68	1,860
DP 36 450	36	6300	3150	47	450	68	2,330

Sockets are provided electro zinc plated.

Depending on the manufacture, the foot may be smooth steel or crenellated steel.



REFERENCE	THICKNESS MINI E [MM]	A MINI [MM]	B MINI [MM]
DP 12 100	120	150	300
DP 12 150	110	150	300
DP 16 130	220	200	400
DP 16 175	200	200	400
DP 20 185	240	300	600
DP 20 250	220	300	600
DP 24 200	260	350	700
DP 24 250	240	350	700
DP 24 275	240	350	700
DP 30 275	300	500	1000
DP 30 350	280	500	1000
DP 36 335	320	770	1540
DP 36 450	300	720	1440

In case of an inclined tension $b \ge 15^\circ$, an additional stirrup has to be added.

Dimension of the additional shear pull stirrup.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]
RD 12	6	150	24
RD 16	8	200	32
RD 20	8	300	32
RD 24	10	300	40
RD 30	12	400	48
RD 36	14	550	56



3. Lifting Loop and Swivel Eye

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4 types of lifting loops and lifting eyes are available:

LIFTING LOOP Range of use 0 Shear pull



LATERAL LIFTING LOOP



SWIVEL EYE



In case of a transversal pull (till up) with an inclination $\gamma \ge 15^{\circ}$, additional reinforcements have to be added. See § 2.1 for more information concerning the additional reinforcements.

3.1 Lifting Loop

3.1.1 Lifting Loop



REFERENCE	THREAD	SAFE WORKING LOAD [KG]	DIMENSIONS [MM]			LABEL COLOR	
	КD	0°- 45°	Н	ØD	E		
EL 12	Rd 12	500	155	6	22	Orange	
EL 16	Rd 16	1200	165	8	28	Red	
EL 20	Rd 20	2000	215	10	36	Light green	
EL 24	Rd 24	2500	255	12	42	Dark grey	
EL 30	Rd 30	4000	300	16	54	Dark green	
EL 36	Rd 36	6300	360	18	65	Light blue	
EL 42	Rd 42	8000	425	20	72	Light grey	
EL 52	Rd 52	12500	555	26	90	Sulphur yellow	

The lifting loops are supplied with a colored label. This label indicates:

- the manufacturer (ADC)
- the thread (example Rd24)
- the Safe Working Load (example 2500 kg)

On request, slings can also be provided in metric threading.

3.1 Lifting Loop





	REFERENCE	THREAD	SAFE WORKING LOAD [KG]	DIMENSIONS [MM]		LABEL COLOR		
		КD	0°- 45°	н	ØD	E	-	
I	EL 12	Rd 12	500	335	8	22	Orange	
	EL 16	Rd 16	1200	385	8	28	Red	
	EL 20	Rd 20	2000	470	10	36	Light green	
	EL 24	Rd 24	2500	550	12	42	Dark grey	
	EL 30	Rd 30	4000	590	16	54	Dark green	
	EL 36	Rd 36	6300	780	18	65	Light blue	
	EL 42	Rd 42	8000	860	20	72	Light grey	
	EL 52	Rd 52	12500	1080	26	70	Sulphur yellow	

The lifting loops are supplied with a colored label. This label indicates:

- the manufacturer (ADC)
- the thread (example Rd24)
- the Safe Working Load (example 2500 kg)

On request, slings can also be provided in metric threading.

3.1 Lifting Loop

3.1.3 Lateral Lifting Loop

Set consisting of a lateral lifting loop and a screw to lift on the sides an element of the type concrete tank.



LIFTING LOOP	FOR SCREW	SAFE WORKING LOAD [KG]	DIMENSI	ONS [MM]
REFERENCE	M/RD	75°- 90°	HIGHT	Ø HOLE
ELL16	16	2000	300	16.5
ELL24	24	4000	330	24.5
ELL30	30	5200	400	31.0

The Safe Working Load is given for a minimum concrete strength of 15 MPa.

Hexagon Head Screw DIN 933

SCREW REFERENCE	THREAD M	LENGTH UNDER HEAD [MM]	CLASS	ALLEN SCREWS [MM]
10VI16040-88	M 16	40	8.8	24
10VI24050-88	M 24	50	8.8	36
10VI30070-88	M 30	70	8.8	46

The sockets should be positioned at a sufficient distance from the top of the element to prevent the concrete from cracking above the socket. The sockets should be positioned at the level of the concrete. The use of a holding disc which would cause the socket withdrawal is strictly prohibited.

USAGE AND SAFETY CONDITIONS

Recommended:

- Make sure the screw is fully screwed into the socket.
- Make sure the threading of the socket is clean.
- Ensure that the concrete strength is at least equal to that provided in the sizing of the anchors. A concrete at 25 MPa is the bare minimum.
- Make sure the loop is free of defects such as welding trace, cable wire breakage, excessive corrosion.
- Make sure the screw thread is clean and undamaged.

Not recommended:

- Never use the lateral lifting loop with an angle of tilt to the vertical above 15 degrees.
- Never weld the lifting loop for any reason.

3.1 Lifting Loop

3.1.4 Periodic control of the Lifting Loops

Whatever the frequency of use, each lifting loops must be checked at least once a year by a competent person. For safety reasons any physical abnormality, deformation, any sign of welding, must lead to the immediate destruction of the lifting loop.

The points to control are:

- Absence of permanent deformation
- Absence of crushing of the wire rope
- Absence of bends or twists of the wire rope
- Absence of damage due to corrosionMaximum 4 broken wires on a rope
- Lifting loops cannot be repaired.

4.1.5 Usage and safety conditions of the Lifting Loops

BEFORE USE

Recommended:

- For lifting, always use sockets and lifting loops with a round thread (Rd).
- Ensure that the thread diameter of the lifting loop and that the Safe Working Load on the label of the lifting loop are the same as for the socket.
- Ensure that the thread of the lifting loop is fully engaged into the thread of the socket.
- Ensure that the thread of the socket is clean.
- Ensure that the length of the slings is at least twice the distance between the sockets, in order to have an angle of 30° between the slings. It is possible to have a bigger angle only if it has been considered in calculations. It is always better to use a lifting beam.
- Ensure that the concrete strength is at least equal to that used in the calculations. The minimum concrete strength is 15 MPa.
- Ensure that the lifting loop has no default, such as welding points, broken wires on a rope, clean thread without crushing.

Not recommended:

- Never screw a round thread lifting loop (Rd) into a metric thread socket (M). The lifting loop would never be able to screw on a sufficient length, and the load capacity will be dangerously reduced.
- Never use the lifting loops with an angle of more than 45° from the axe of the socket.
- You must not weld the socket nor the lifting loop, for whatever reason.
- Under no circumstances should the diameter of the hook or shackle D, attached to the loop, be less than 3.5 times the diameter of the cable of the lifting loop. If possible, we recommend a diameter greater than 5 times the diameter of the cable.



IN USE

- When precast concrete elements are transported by construction companies, they are subject to shocks and impact loads. This factor increases the load on the socket by several times the dead-weight. This should be taken into account in load calculations. Therefore, care should be taken in transporting the elements on site.
- When the sockets are used to lift a unit from a mould, the adhesion between the freshly cast concrete and the mould increase the forces on the sockets. This element needs also to be taken into consideration when calculating the required load.

All lifting loons must be con

MAINTENANCE

- All lifting loops must be controlled at least once a year by a competent person. The lifting loops must not show any sign of deformity.
- The lifting loops cannot be repaired.

GENERAL

- The lifting loops must be used only for lifting precast concrete elements.
- Users of the lifting loops must be familiar with the usage and safety instructions.
- All usage and safety instructions must be respected when lifting loops are used.

If you have any questions, do not hesitate to contact our Technical Department.

PRODUCT CATALOGUE

SDG

3.2 Swivel Eye



REFERENCE	SAFE WORKING THREAD LOAD [KG]		DIMENSIONS [MM]					
	Кb	0° - 90°	E	н	ØD	ØD1		
AL 16	Rd 16	1200	21	177	80	55		
AL 20	AL 20 Rd 20		26	193	80	55		
AL 24	Rd 24	2500	31	226	80	55		
AL 30	AL 30 Rd 30 4000		39	302	100	70		
AL 36	Rd 36	6300	47	322	110	70		

The lifting eyes are supplied with an identification label. This label indicates:

- The manufacturer (ADC)
- The thread (example Rd24)
- The Safe Working Load (example 2500 kg)
- The batch number (example 3F100)

The **removable ring** fixed with 4 screws enables the lifting eye to be fully sitting on the concrete, in both cases if the socket has been positioned flush with the concrete or offset in the concrete. When the socket has been positioned flush with the concrete, always use the adaptation ring. When the socket is positioned offset in the concrete, always use the plastic holding disc diameter ØD1. When the socket has been positioned offset in the concrete, always remove the adaptation ring. Be careful, all other combinations are dangerous, and therefore not compliant.



3.3 Swivel Eye

3.3.1 Periodic control of the Swivel Eyes

Whatever the frequency of use, each lifting eye must be controlled at least once a year by a competent person. Any physical abnormality, deformation, any sign of welding, must lead to the immediate destruction of the lifting eye. The points to control are:

- Absence of permanent deformation
- Absence of crushing
- Absence of bends or twists
- Absence of damage due to corrosion
- Correct hinge between the head and the handle

Lifting eyes cannot be repaired.

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3.3 Swivel Eye

3.3.2 Usage and safety conditions of the Swivel Eyes

BEFORE USE

IN USE

- **Recommended:**
- For lifting, always use sockets and lifting eyes with a round thread (Rd)
- Make sure that the thread diameter of the lifting eye and that the Safe Working Load on the label of the lifting eye are the same as for the socket
- Make sure that the thread of the lifting eye is fully engaged into the thread of the socket. If the lifting eye is not engaged enough onto the socket, it reduces its load capacity.
- Make sure that the thread of the socket is clean.
- Make sure that the bottom surface of the lifting eye is fully sitting on the concrete:
- If the socket has been positioned flush with the concrete, use the adaptation ring
- If the socket has been positioned offset in the concrete with a recess holding disc diameter ØD1, remove the adaptation ring
- Make sure that the length of the slings is at least twice the distance between the sockets, in order to have an angle of 30° between the slings. It is possible to have a bigger angle only if it has been considered in calculations. It is always better to use a lifting beam.
- Make sure that the concrete strength is at least equal to that used in the calculations. The minimum concrete strength is 15 MPa.
- Make sure that the lifting eye has no default, such as welding points and clean thread without crushing.

Not recommended:

- Never screw a round thread lifting eye (Rd) into a metric thread socket (M). The lifting eye would never be able to screw on a sufficient length, and the load capacity will be dangerously reduced.
- You must not weld the socket nor the lifting eyes. for whatever reason.

- When precast concrete elements are transported by construction companies, they are subject to shocks and impact loads. This factor increases the load on the socket by several times the dead-weight. This should be taken into account in load calculations. Therefore, care should be taken in transporting the elements on site.
- When the sockets are used to lift a unit from a mould, the adhesion between the freshly cast concrete and the mould increase the forces on the sockets. This element needs also to be taken into consideration when calculating the required load.

MAINTENANCE

- All lifting eyes must be controlled at least once a year by a competent person. The lifting eyes must not show any sign of deformity.
- The lifting eyes cannot be repaired.

GENERAL

- The lifting eyes must be used only for lifting precast concrete elements.
- Users of the lifting eyes must be familiar with the usage and safety instructions.
- All usage and safety instructions must be respected when lifting eyes are used.

If you have any questions, do not hesitate to contact our Technical Department.

4. Cast in Loops

4.1 Steel Wire Concrete Loops



REFERENCE	SAFE WORKING LOAD [KG]	DIMENSIONS [MM]				LABEL COLOR		WEIGHT
	0°- 30°	ØD	н	F	Е			[K6]
BL 08	800	6	210	55	155	Pure white		0,085
BL 12	1200	7	225	60	165	Red		0,108
BL 12/400	1200	7	400	60	165	Red		0,120
BL 16	1600	8	235	60	175	Light Pink		0,143
BL 16/330	1600	8	330	60	270	Light Pink		0,195
BL 16/370	1600	8	370	60	310	Light Pink		0,240
BL 20	2000	9	280	70	210	Light Green		0,200
BL 20/360	2000	9	360	70	290	Light Green		0,300
BL 25	2500	10	315	80	235	Dark Grey		0,304
BL 40	4000	12	340	85	255	Dark Green		0,455
BL 52	5200	14	360	90	270	Curry		0,701
BL 63	6300	16	390	100	290	Light Blue		1,054
BL 80	8000	18	460	120	340	Silver Grey		1,600
BL 100	10000	20	510	130	380	Magenta		2,100



REFERENCE	THICKNESS MINI E [MM]	A MINI [MM]	B MINI [MM]
BL 08	70	270	540
BL 12	90	310	620
BL 16	120	350	700
BL 20	140	420	840
BL 25	160	450	900
BL 40	220	500	1000
BL 52	290	520	1040
BL 63	320	580	1160
BL 80	380	630	1260
BL 100	440	730	1460

The Safe Working Load is given for a minimum concrete strength of 15 MPa.



Under no circumstance, the diameter of the hook or the handle ØD, hanged to the loop, should be less than 3.5 times the diameter of the cable of the loop Ød. We recommend, if possible, a diameter ØD which is 5 times the size of the cable's diameter Ød.

A minimum reinforcement is mandatory around the lifting loops. Their minimal section and positioning are detailed in the table below:



REFERENCE	FERENCE LMINI HMINI RE [MM] [MM] MII		REINFORCEMENT MINIMAL SECTION [MM²/M]	POSITIONING OF THE REINFORCEMENT		
BL 08	BL 08 600 710		188	1 steel lattice in centre		
BL 12	640	720	188	1 steel lattice in centre		
BL 16	660	725	188	2 steel lattices		
BL 20	800 760		188	2 steel lattices		
BL 25	920	790	188	2 steel lattices		
BL 40	960	800	188	2 steel lattices		
BL 52	1040	820	188	2 steel lattices		
BL 63	1120	840	188	2 steel lattices		
BL 80	1280	880	188	2 steel lattices		
BL 100	1560	950	188	2 steel lattices		

4.2 Polypropylene Wire Cable Concrete Loops

REFERENCE	SWL [KG] DIMENSIONS [M		1]			PACKING	WEIGHT		
KEI EKENGE	0° - 30°	ØD	Н	F	Е	LABEL COLOUR		[U]	[KG]
BL 025	250	8	220	55	165	Magenta		100	0,030



The Polypropylene lifting loop, with its aluminium crimping pod, allows the absence of corrosion. The lifting loops come with a color label. This label indicates the Safe Working Load (example 0.25 Tonne) Lift loops must be linked to an additional reinforcement to ensure the right anchorage in concrete.

The Safe Working Loads are given for a minimum compression resistance concrete of 15MPa.



Inclined loads must not exceed an angle b of 30° to the lifting loop axis.

Under no circumstances should the diameter of the hook or shackle attached to the loop be less than 3.5 times the diameter of the rope of the lifting loop. If possible, we recommend a diameter greater than 5 times the diameter of the rope.

5. Fixing Sockets

The fixing sockets are designed exclusively for a fixing application. Under no circumstances can they be used for lifting.

The fixing sockets are electro zinc plated. They can also be provided in stainless steel.

The fixing sockets have to be used with a metric thread standard screw. It must be screwed on, at least 1 time its diameter.

The Safe Working Load is given for a minimum concrete strength of 25 MPa.

Bended Fixing Socket

Waved Fixing Socket

For the fixing sockets, a minimum edge distance of 3

times the length of the socket is required. A minimum

distance between the sockets of 6 times the length of

For any questions, you should contact our

There are different types of fixing sockets:

the socket is also required.

Technical Department.

Never weld the sockets.



Flat End Fixing Socket





Flat End Fixing Socket with Nailing Plate

Bended Fixing Socket with Nailing Plate

Fixing Socket with Plate







Fixing Socket With Cross Pin:

Round Fixing Socket with Bar



Flat End Fixing Socket



5.1 Tightening Torque

Optimal torque allows you to put the nets in pressure and cancel the tolerance caused by friction and the tolerance in the thread. Nevertheless, it is essential to avoid any extra effort in the socket created by overtightening. This may cause damage to the socket or failure. As a result, apply maximum torque below for all of the fixing Sockets.

BOLT	MAXIMAL TIGHTENING TORQUE [N.M]	DRIVING DEPTH [MM]
М6	1	9
M8	2	12
M10	4	15
M12	8	18
M16	17	24
M20	25	30
M24	53	36
M30	96	45

The maximum depth of the screwing must be less than the depth "a" of the socket.

5.2 Flat End Fixing Socket



REFERENCE	THREAD	SWI [KC]		DIMENSI	DNS [MM]		WEIGHT
REFERENCE	м	5WL [K0]	ØG	н	Е	А	KG/U
PAT 06 035	6	100	6	35	8	11	0,006
PAT 08 040	8	200	8	40	8	15	0,010
PAT 08 050	8	250	8	50	8	25	0,013
PAT 10 045	10	350	8	45	10	12	0,020
PAT 10 050	10	350	8	50	10	17	0,020
PAT 12 060	12	500	10	60	12	23	0,035
PAT 12 070	12	600	10	70	12	33	0,041
PAT 16 070	16	700	12	70	16	20	0,077
PAT 16 080	16	800	12	80	16	30	0,088
PAT 16 100	16	1000	12	100	16	50	0,120
PAT 20 100	20	1250	14	100	20	40	0,157
PAT 20 120	20	1250	14	120	20	60	0,188
PAT 24 120	24	1800	14	120	24	40	0,234
PAT 30 150	30	2750	17	150	30	65	0,660

The flat end fixing sockets are not self-anchored sockets, and must be used with a reinforcement ribbed steel B500B.



REFERENCE	Ø REINFORCEMENT HA B500B [MM]	LENGTH OF STIRRUP L [MM]	DIAMETER OF BENDING ØB [MM]
PAT 06 035	5	200	50
PAT 08 040	6	250	60
PAT 08 050	6	250	60
PAT 10 045	6	300	60
PAT 10 050	6	300	60
PAT 12 060	8	300	80
PAT 12 070	8	300	80
PAT 16 070	10	350	100
PAT 16 080	10	350	100
PAT 16 100	10	350	100
PAT 20 100	12	400	120
PAT 20 120	12	400	120
PAT 24 120	12	450	120
PAT 30 150	16	550	160

5.3 Flat End Fixing Socket with Nailing Pate



REFERENCE	THREAD	SWL [KG]		WEIGHT				
REFERENCE	М		ØG	Н	E	А	ØD	KG/U
PAT 10 050 C	10	350	8	50	10	20	40	0,031
PAT 12 070 C	12	600	10	70	12	30	40	0,058
PAT 16 100 C	16	1000	12	100	16	32	50	0,152
PAT 20 100 C	20	1250	14	100	20	40	60	0,200
PAT 24 120 C	24	1800	14	120	24	50	60	0,314

The nailing plate has 4 holes diameter 4 mm.

The flat end fixing sockets are not self-anchored sockets, and must be used with a reinforcement ribbed steel B500B.

5.4 Bended Fixing Socket



DEFEDENCE	THREAD	SWL	D	1]	WEIGHT	
REFERENCE	М	[KG]	Н	E	А	KG/U
DC 08 030	8	150	30	8	15	0,015
DC 08 050	8	300	50	8	30	0,021
DC 10 035	10	200	35	10	13	0,019
DC 10 060	10	400	60	10	35	0,024
DC 12 045	12	350	45	12	18	0,046
DC 12 070	12	600	70	12	40	0,051
DC 16 060	16	600	60	16	20	0,104
DC 16 100	16	1000	100	16	60	0,138
DC 20 100	20	1250	100	20	60	0,240
DC 24 080	24	1000	80	24	40	0,260

The bended fixing sockets are self-anchored sockets.

A minimum edge distance of 3 times the length of the socket is required.

A minimum distance between the sockets of 6 times the length of the socket is also required.

5.5 Bent Fixing Socket with Nailing Plate



DEEEDENCE	THREAD	SWL		WEIGHT			
REFERENCE	М	[KG]	Н	E	А	ØD	KG/U
DC 10 060 C	10	400	60	10	35	40	0,035
DC 12 070 C	12	600	70	12	40	40	0,058
DC 16 100 C	16	1000	100	16	60	50	0,152

The nailing plate has 4 holes diameter 4 mm.

The bended fixing sockets are self-anchored sockets.

A minimum edge distance of 3 times the length of the socket is required.

A minimum distance between the sockets of 6 times the length of the socket is also required.

5.6 Waved Fixing Socket



REFERENCE	THREAD	SWL	D]	WEIGHT	
REFERENCE	М	[KG]	Н	E	А	KG/U
OST 06 050	6	150	50	8	28	0,012
OST 08 040	8	200	40	10	15	0,012
OST 10 040	10	300	40	10	15	0,018
OST 10 050	10	350	50	10	20	0,025
OST 10 060	10	400	60	10	30	0,023
OST 12 065	12	500	65	12	25	0,045
OST 16 070	16	700	70	16	30	0,080
OST 16 100	16	1000	100	16	55	0,122
OST 20 100	20	1000	100	20	65	0,180

The waved fixing sockets are self-anchored sockets.

A minimum edge distance of 3 times the length of the socket is required.

A minimum distance between the sockets of 6 times the length of the socket is also required.

5.7 Fixing Socket with Crosspin



DEEEDENCE	THREAD	SWL	DIMENSIONS [MM]						
REFERENCE	м [н	[KG]	н	Е	А	ØD	L		
PAB 16 070	16	700	70	16	26	10	50		
PAB 16 080	16	800	80	16	30	12	50		

The fixing sockets with traverse bar are self-anchored sockets.

A minimum edge distance of 3 times the length of the socket is required.

A minimum distance between the sockets of 6 times the length of the socket is also required.

5.8 Fixing Socket with Plate



DEEEDENGE	THREAD	SWL*	SWL* CONCRETE		D	IMENSI		WEIGHT	TIGHTENING		
REFERENCE	М	[daN]	MIN MPa	Н	Е	А	ØP	D	SW	KG/U	MAX Nm
DFAP 16 040	16	320	C16/20	40	16	37	-	55	47.6	0.10	17
DFAP 16 040	16	360	C20/25	40	16	37	-	55	47.6	0.10	17
DFAP 16 045	16	390	C16/20	45	16	42	50	-	-	0.10	17

(*) The SWL of the DFAP 16 040 and DFAP 16 045 sockets were validated by the CERIB test reports 013469 / 013732 and 013414. THE SWL are defined for the minimum concrete resistance indicated and for their installation with a PP16 (see §6.1 or PM55/16 holding disc (see §6.2) to place with a 10mm withdrawal in concrete.

Steel = S235. Sockets are provided electro zinc plated.

Settings:

The fixing sockets with plate are self-anchored sockets.

A minimum edge distance of 3 times the length of the socket is required. A minimum distance between the sockets of 6 times the length of the socket is also required.

In order to reduce pressure in the socket, a maximum tightening torque of 17 Nm shouldn't be exceeded.

Use:

The fastening sockets are designed exclusively for fixing applications and should not be used for lifting under any circumstances.

Fixing sockets should be used with metric screws. These must be screwed to at least 1.5 times the diameter. Safe Working Loads are given for concrete with minimal concrete strength shown in the table. The sockets must never be welded.

5.9 Solid Rod Fixing Socket with Crosspin



REFERENCE	THREAD	SAFE WORKII 0°-		WEIGHT				
	м	F _{ск} ≥ 25 МРа	F _{ск} ≥ 45 MPa	ØD	н	L	ØF	[10]
DTB12M	12	700	900	15	75	75	6	0,068
DTB16M	16	700	950	21	75	75	10	0,150
DTB20M	20	700	950	27	75	90	12	0,377
DTB24M	24	1150	1550	31	100	100	16	0,687

Socket exclusively existing in metric thread.

A minimum concrete strength of 25 MPa is required for fixing.

A minimum edge distance of 3 times the length of the socket is required.

A minimum distance between the sockets of 6 times the length of the socket is also required.



REFERENCE	THREAD	SAFE WORKI	NG LOAD [KG]		WEIGHT			
REFERENCE	М	0°- 45°	45° - 90°	ØD	н	Е	ØF	[KG]
DTP 12M	12	500	250	15	60	22	10	0,031
DTP 16M	16	1200	600	21	80	27	13	0,110
DTP 20M	20	2000	1000	27	95	35	15	0,200
DTP 24M	24	2500	1250	31	100	38	18	0,270
DTP 30M	30	4000	2000	39,5	135	56	22,5	0,600

A minimum concrete strength of 25 MPa is required for fixing.



A stirrup must be placed in the hole of the socket.

SOCKET	Ø HA B500B [MM]	LENGTH OF THE STIRRUP L [MM]	BENDING ROLL ØB [MM]
DTP 12M	6	340	60
DTP 16M	10	510	100
DTP 20M	12	670	120
DTP 24M	14	740	140
DTP 30M	16	970	160

6. Holding Device

6.1 Plastic Nailing Plate

REFERENCE

PP 10 PP 12

PP 16 PP 20 PP 24 PP 30

PP 36

PP 42

PP 52



THREAD M	DIMENSION [MM] ØD	co	LOR
10	40	Blue	
12	40	Orange	
16	55	Red	
20	55	Light green	
24	55	Dark grey	
30	70	Dark green	

Light blue

Light grey

Yellow

70

96

96

The plastic holding discs are designed to be fixed to the mould with nails.

36

42

52

The plastic holding discs are convenient for:

- the lifting sockets (Round thread Rd)
- the fixing sockets (Metric thread M)
- They can be removed with a flat steel.

6.2 Fixing Stud



	THREAD	DIMENSI	ON [MM]			
REFERENCE	М	ØD	L	CU	LUR	
TC 06	6	11	23	Green		
TC 08	8	11	23	Light blue		
TC 10	10	11	23	Yellow		
TC 12	12	11	23	Red		
TC 16	16	11	23	Black		

рØ

24



6.3 Magnetic Nailing Plate



The magnetic holding discs are convenient for:

- the lifting sockets (Round thread Rd)
- the fixing sockets (Metric thread M)

The washer is available in 3 dimensions:

Diameter 40mm

REFERENCE	THREAD M / RD	Ø D [MM]	Ø d [MM]	INSTALLED MAGNETISM [KG]	WEIGHT [KG]
PM40/10	10	40	30	20	0,08
PM40/12	12	40	30	20	0,08
PM40/16	16	40	30	20	0,08

Diameter 55mm

REFERENCE	THREAD M / RD	Ø D [MM]	Ø d [MM]	INSTALLED MAGNETISM [KG]	WEIGHT [KG]
PM55/12	12	55	45	50	0,15
PM55/16	16	55	45	50	0,15
PM55/20	20	55	45	50	0,15
PM55/24	24	55	45	50	0,15

Diameter 70mm

REFERENCE	THREAD M / RD	Ø D [MM]	Ø d [MM]	INSTALLED MAGNETISM [KG]	WEIGHT [KG]
PM70/30	30	70	60	100	0,30
PM70/36	36	70	60	100	0,30

Smaller threads can be mounted on 70 mm Diameter washers to increase grip strength.

Removal key = 6mm BTR hexagonal male key

except for the PM40/10: 5 mm BTR hexagonal male key.

The dimensions of the Magnetic holding discs are identical to those of the Standard Plastic holding discs (PP reference) so as to fit perfectly in case of use of a lifting eye (AL reference).

130

7. Cap

7.1 Sealing Cap





DEFERENCE		D	IMENSIONS [MM			
REFERENCE	THREAD M/RD	Ød1	Ø d2	н	COLO	UK
BP 06	6	9	5	6	White	
BP 08	8	10	7	6	White	
BP 10GRIS	10	11,5	8	8,5	Grey	
BP 12GRIS	12	18,5	8,5	10	Grey	
BP 16GRIS	16	25,5	12	12,5	Grey	
BP 20GRIS	20	30,5	15,5	18	Grey	
BP 20GRIS	20	30,5	15,5	18	Grey	
BP 24GRIS	24	34,5	19	18	Grey	
BP 30GRIS	30	43,5	25	21	Grey	
BP 36GRIS	36	50	30	21.5	Grey	
BP 42	42	50	39	16	White	
BP 52	52	59	52	18	White	

The plastic caps prevent the dirt getting into the socket and create problem when screwing a lifting loops or a screw inside.

The grey colored caps can be screwed. A slot on top allows to screw or unscrew the cap.

7.2 Data Clip



	L A C C C
	A F C A

DEFEDENCE	ADAPTED TO THE SOCKETS	DII	MENSIONS [M				
REFERENCE	WITH A RD THREAD	Ød1	Ød2	н	COLC		
BI 12	12	26	15	15	Orange		
BI 16	16	31	21	15	Red		
BI 20	20	37	27	15	Light green		
BI 24	24	41	31	15	Dark grey		

The data clip is designed to enable a clear identification of the lifting socket already cast into the concrete because of its color and marking.

7.3 Data Clip with Ears



DEEEDENGE	ADAPTED TO THE SOCKETS	DIN	MENSIONS [M			
REFERENCE	WITH A RD THREAD	ØD	b	Øds	COLU	UK
BI0 12	12	26	8	8	Orange	
BIO 16	16	32	10	8	Red	
BIO 20	20	36	12	10	Light green	
BIO 24	24	44	15	12	Dark grey	
BIO 30	30	44	15	12	Dark green	

The data clip with ears is designed to enable a clear identification of the lifting socket already cast into the concrete because of its color and because of its marking. Its ears enable it to hold the additional transversal pull rebars when necessary.



Lifting with Spread Anchor Systems

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SPREAD ANCHOR		1.4T	2T	2.5T	4T	5T	7.5T	10T
ੀ ਕੀਤਿ	F (MM)	30	30	30	40	40	60	60
	G (MM)	6	10	10	12	15	16	20
	L (MM)	160	130	150	320	180	260	370
				200		240	420	520

The spread anchors can be provided in black or hot dip galvanized (G)

EYE ANCHOR		1.4T	2.5T	5T	7.5T	10T	7.5T	10T
	F (MM)	30	30	40	60	60	60	60
	G (MM)	6	10	15	15	20	16	20
	L (MM)	90	90	120	160	170	260	370
	G (KG)	0.11	0.18	0.49	1.04	1.40	420	520

The eye anchors can be provided in black or hot dip galvanized (G)

ERECTION ANCHOR		1.4T	2.5T	5T	7.5T	10T
		1.4 x 200	2.5 x 230	5 x 290	7.5 x 320	10 x 390
	F (MM)	55	55	70	95	95
0	G (MM)	6	10	15	15	20
1.1	L (MM)	200	230	290	320	390
	G (KG)	0.68	0.80	1.65	3.61	4.40

The erection anchors can be provided in black or hot dip galvanized (G)

PRECAST ACCESSORIES > LIFTING WITH SPREAD ANCHOR SYSTEMS

ERECTION ANCHOR ONE SIDE		2.5T
		2.5 x 230
	F (MM)	40
	G (MM)	10
	L (MM)	230
	G (KG)	0.75

The erection anchors can be provided in black or hot dip galvanized (G)

SPREAD ANCHOR RECESS FORMER		1.4T	2T	2.5T	4T	5T	7.5T	10T
			2.5T		5T		10T	
	A (MM)		43		55		78	
	B (MM)		106		1	34	18	38
	C (MM)		45		Ę	59	8	1
	м		M8		Ν	18	М	12
	G (KG)		0.07		0.	20	0.4	45

MAGNETIC FORMER		1.4T 2T	2.5T	4T	5T	7.5T	10T
	REF	RP025M	RP050M		RP100M		
U U	A (MM)	44		50	}	7	0
	B (MM)	90		11	5	16	50
	C (MM)	48		62		87	
	MAGNET (KG)	30		50		100	
	G (KG)	0.07		0.2	:0	0.4	45





1. Design Method

The aim of this design method is to evaluate the load on cemented anchors of a reinforced precast concrete element in order to select the appropriate anchor.

This method is based on the most common applications. If you have any queries on the application, the assumptions or any point mentioned in this document, you should contact our Technical Department.

1.1 Calculation assumptions

In order to define the force on the lifting anchors, all the following points have to be taken into account:

- The technical drawing of the precast element and the kinetics of handling
- The weight of the element (and of the formwork and other accessories lifted with the element)
- The formwork adhesion at the removal from the mould
- The number of efficient lifting points (and not the number of actual lifting points)
- The sling angle
- The dynamic coefficient (lifting machinery)

1.2 Drawing of the precast element and foreseen lifting method

In the first place, the technical drawing of the element has to be considered, then the means by which it is to be handled. It is necessary to distinguish between the handling in the precast factory and on site.

To define the correct anchor to use (type, length, size) it is also necessary to know:

It is also essential that the assumptions are clearly

communicated to the companies in charge of the

handling and lifting operations, in order to ensure

handling and lifting conditions.

that the assumptions are corresponding to the actual

- The concrete strength when the element is lifted

It is also necessary to distinguish between the handling of the element in the precast factory and on the construction site. All the calculations have to be done for both cases.

All these points are detailed in the following paragraphs.

1.3 Weight of the Element (P)

The actual weight of the element must be considered. It includes in particular:

- The weight of the concrete element (volume x density). The reinforced concrete density is equal to 2500 daN/m³ (or 25 kN/m³) in general.
- The weight of the formwork and accessories lifted with the element.

1.4 Formwork adhesion at the removal from the mould (A)

The adhesion will depend on 2 factors:

- The surface area of the element in contact with the formwork (S in m²). All the surfaces in contact with the formwork need to be considered. including inclined surfaces.
- The surface condition of the mould. This surface condition is defined by an adhesion factor $(q_{adb} in daN/m^2)$

This force is to be considered at the removal of the element from the mould.

Type of mould	Adhesion factor q _{adh}
Oiled steel mould, Plywood coated with oiled plastic	100 daN/m²
Varnished oiled wooden mould	200 daN/m²
Oiled rough wooden mould	300 daN/m²
Polyurethane matrix	Consult the matrix supplier

The adhesion force is:

This adhesion force must be added to the weight of the element in order to calculate the force required to lift it.

 $A = q_{adh} \times S$

In some cases, the adhesion force can be zero if the concrete is not in contact with the mould (pre-stressed beam for example).

1.5 Position and determination of the number of efficient lifting points (n)

Set up the lifting points symmetrically to the center of gravity.

Here are some examples of lifting point positions:



In the case of asymmetric loads relative to the centre of gravity, traction efforts must be calculated for each lifting point taking into account distances to the centre of gravity.

Example for a beam:	
$F1 = F \times \frac{B}{A + B}$	$F2 = F \times \frac{A}{A + B}$



It is possible that some lifting positions are not appropriate for selected anchor types (see § 2). In particular, minimum distances between lifting points and minimum distances from the edges of the concrete have to be maintained. A minimum coating may be required. Based on the number of apparent lifting points and the use or not of a balanced lifting system (such as a lifting beam). The number of efficient lifting points is defined below:

	EFFICIENT LIFTING POINTS NUMBER (N)				
APPARENT LIFTING POINTS	WITH A BALANCED SYSTEM	OTHERS LIFTING MEANS			
4	4	2			
3	3	2			
2	2	2			

Some examples:



Unbalanced System

Apparent lifting points = 4 Efficient lifting points = 2


1.6 Sling angle and multiplication coefficient (Ce)

A multiplication coefficient Ce is generated by vertical forces (weight) on the slings. For the calculation, angle β is to be considered as the angle between the vertical and the most inclined sling.







β	0	15°	22,5°	30°	45°	60°
α = 2β	0	30°	45°	60°	90°	120°
Ce	1	1,035	1,082	1,155	1,414	2
L	-	2 D	1,3 D	D	0,7 D	0,6 D



 $\label{eq:between the vertical and the most inclined sling.}$ It is necessary to consider the worst-case scenario with the largest angle $\beta.$

1.7 Lifting and handling dynamic coefficient (Ψ_{dyn})

The values given in the table below are derived from the "Design and use of inserts for lifting and handling of precast concrete - Elements", CEN/TR 15728:2008.

The foreseen lifting system and the estimated values must be notified to the users (factory and site).

LIFTING AND	HANDLING MACHINE	DYNAMIC COEFFICIENT Ψ_{DYN}
Tower crane, o	overhead crane and portal crane	1,2
Mobile crane		1,4
Lifting and mo	ving on flat terrain	2-2,5
Lifting and mo	ving on rough terrain	3-4

Dynamic coefficient required by type of element:

TYPE OF ELEMENT	dynamic coefficient Ψ_{dyn}
Pipe and sewer	2
Frame below 12T	1,6
Frame between 12 and 20T	1,4
Frame above 20T	1,2
Wall	1,4
Beam below 12T	1,6
Beam between 12 and 20T	1,4
Beam above 20T	1,2

1.8 Resultant load by lifting point (F)

The resultant load for each lifting point is equal to:

$$F = \frac{(P + A) \times Ce \times \Psi_{dyn}}{n}$$

This calculation must be done for the lifting activity in the precast factory, on site, and for any other handling activity of the precast element.

NOTE: Anchors used more than 10 times, must not to be subject to a force more than 0.6 times their safety working load (SWL). It is necessary to check in this case that F < 0.6* SWL (Anchor).

1.9 Concrete strength (f_{ck})

The concrete strength has to be determined:

- When lifting the element from the mould in the Precast factory
- When transporting and installing on site

The minimum allowed resistance of the concrete is 10 MPa.

2. Choice of Anchor

This choice can be made according to the resultant load values by lifting point at the factory (Fu), and on site (Fc), and from the concrete strength during the first lifting at the precast factory and on site. The worst calculation (worst case scenario) should be used to ensure the anchor is suitable for all applications.

If you have any queries about your calculation, you should contact our Technical Department.

The anchor load capacity must be at least equal to the highest calculated load value (Fu and Fc).

Various anchor types are available, and the choice of anchor type to be used is made according to each individual set up.

There are 7 major types of flat lifting anchors:



Flat Foot Anchor

Eye Anchor

Flat Plate Anchor





2.1 General consideration on Flat Anchors

PRECAUTIONS TO BE TAKEN WHEN SETTING UP THE ANCHORS

- Never weld the anchors

- Always use the appropriate former for each anchor type
- Anchors have to be slightly recessed from the surface of the concrete (the recess is generated by the appropriate former)
- The concrete element must have a minimum standard reinforcement with FeE500 reinforcing bars.

Angled Pull Reinforcement Stirrup

The Safe Working Load of the anchors is given for a In case of a pull load with an inclination $\beta > 30^{\circ}$, pulling load with a maximum inclination β of 30°. an angled pull reinforcement stirrup is necessary.

SWL

ANTI-CORROSION PROTECTION

Anchors are provided in black (plain steel).

On request, anchors can be zinc-plated or hot dip galvanized for additional anti-corrosion protection.

It must be placed as close as possible to the former.

ØHA BAR TOTAL LENGTH

+.4

L=Total Length

SHA

[]]	LIFTING EYE (T)	(MM)	L(MM)
1.4	25	6	900
2.5	2.5	General (1) (MM) 2.5 6 2.5 8 5 10 5 12 10 14 10 16 26 20	1200
4	F	10	1500
5	5	2.5 6 2.5 8 5 10 5 12 10 14 26 20	1550
7.5	10	14	2000
10	10	16	2300
14	26	20	2600
Reinforced ribbo	d stool B500B		

orced ribbed steel B500E

SWL ANCHOR

2.2 Spread Anchor



ANCHOR REFERENCE	SWL (T)	LIFTING EYE (T)	F	G	L	R	S
PC014160	1.4			6	160		
PC020130	2	25	20	8	130	(0	
PC025200	0.5	2.5	30	10	200	40	7
PC025250	2.0			10	250		
PC040320	4	5	40	12	320		
PC050180					180	- 56	11
PC050240	5			15	240		
PC050400				15	400		
PC075260					260		
PC075300	7.5			16	300		
PC075420	-	10	(0		420	- 85	15
PC100300		IU	00		300		15
PC100370	10			20	370		
PC100520					520		

The anchorage in the concrete is produced by the foot of the spread anchor creating a wrenching cone. The anchorage resistance depends on:

- The concrete strength ($f_{_{ck}}$)
- The length of the spread anchor (L)
- Distances to the edge of the concrete $[T_N]$
- Distances between each anchor $(T_{_N})$

The larger the wrenching cone, the more resistant the anchorage. It is at its maximum when the distance between the 2 anchors is greater than 3.5 times the anchoring length (L) and the distance to the edge of the concrete greater than 1.75 times L.



The following tables indicate minimum spacing between 2 anchors and minimum thickness (Ep) of a beam.



DEFEDENCE	SWL	LENGTH	MINI SPACING	MINI	MINI THICKNESS EP (MM)				
REFERENCE	(TONS)	(MM)	(MM)	AT 15 MPA	AT 25 MPA	AT 25 MPA			
PC0140160	1.4	160	560	80	60	60			
PC0200130	2	130	455	200	140	110			
PC0250150	2.5	150	525	220	160	120			
PC0250200	2.5	200	700	150	90	80			
PC0250250	2.5	250	875	120	90	80			
PC0400320	4	320	1120 150 120		150 120				
PC0500180	5	180	630	320 320		250			
PC0500240	5	240	840	230	220	170			
PC0500400	5	400	1400	140	140	120			
PC0750260	7.5	260	910	480	340	270			
PC0750300	7.5	300	1050	400	280	210			
PC0750420	7.5	420	1470	240	150	130			
PC1000300	10	300	1050	590	420	330			
PC1000370	10	370	1295	460	310	240			
PC1000520	10	520	1820	260	190	160			

The concrete element must have a minimum standard reinforcement with reinforced ribbed steel B500B.

2.3 Erection Anchor



ANCHOR REFERENCE	SWL AXIAL (T)	SWL LATERAL (T)	LIFTING EYE (T)	F	G	L	R	S
PR012120	1.25	0.625	1.25	30	6	120	32	
PR014200	1.4	0.7	25	55	6	200	(0	0
PR025230	2.5	1.25	2.5		10	230	40	7
PR050290	5	2.5	5	70	15	290	56	11
PR075320	7.5	3.75	10	0.5	15	320	05	15
PR100390	10	5		0 95	20	390	85	15

The Safe Working Load for tilting up (=lateral load) is 50% lower than the Safe Working Load for axial lifting.

Tilt Up Reinforcement Stirrup



ANCHOR REFERENCE	SWL AXIAL (T)	Ø HA (MM)	15 MPa	L (MM) 25 MPa	35 MPa
PR012120	1.25	8	750	600	600
PR014200	1.4	10	700	560	455
PR025230	2.5	12	800	640	520
PR050290	5	16	1000	800	650
PR075320	7.5	20	1200	960	780
PR100390	10	20	1500	1200	975

h = depends on the thickness of the concrete element

Reinforced ribbed steel B500B



ANCHOR REFERENCE	SWL AXIAL (T)	SWL LATERAL (T)	EP MINI (MM)
PR012120	1.25	0.625	
PR014200	1.4	0.7	115
PR025230	2.5	1.25	120
PR050290	5	2.5	155
PR075320	7.5	3.75	175
PR100390	10	5	200

In all cases, the concrete strength must be more than 15 MPa.

When tilting up one side only, one tilt up reinforcement stirrup is enough.

The tilt up reinforcement stirrup must be placed in the grove of the anchor.

Axial Load Reinforcement Stirrup

To be placed in the bottom hole of the anchor.



ANCHOR		6 HA (MAA)		L (MM)				
REFERENCE	SWL AXIAL (I)	Ø HA (MM)	15 MPa	25 MPa	35 MPa			
PR012120	1.25	8	750	570	480			
PR014200	1.4	10	720	560	480			
PR025230	2.5	12	1020	790	660			
PR050290	5	16	1490	1140	950			
PR075320	7.5	20	1800	1380	1150			
PR100390	10	25	1980	1540	1290			

Reinforced ribbed steel B500B

2.4 Erection Anchor One Side



ANCHOR REFERENCE	SWL AXIAL (T)	SWL LATERAL (T)	LIFTING EYE (T)	F	G	L	R	S
PS025230	2.5	1.25	2.5	40	10	230	40	9
PS050290	5	2.5	5	55	15	290	56	10
PS100390	10	5	10	80	20	390	85	15



The dimensions of the tilt up reinforcement stirrup and the axial reinforcement stirrup are the same as for the erection anchor PR (refer to §2.2).



2.5 Two Hole Anchor



ANCHOR REFERENCE	SWL (T)	LIFTING EYE (T)	F	G	L	R	S
P0014090	1.4	25	20	6	90	(0	0
P0025090	2.5	2.5	30	10	90	40	7
P0050120	5	5	40	15	120	56	11
P0075160	7.5	10	60 -	15	160	05	15
P0100170	10			20	170	80	
P0140240	14		80	20	240		
P0220300	22	26	90	25	300	120	15
P0260300	26		120	30	300		

With its complementary reinforced steel bar, the eye anchor has a universal use.

The anchorage resistance is transmitted to the concrete via the reinforced steel bar.

Thus, the anchorage capacity depends on the diameter and the length of the associated reinforced steel bar.

The longer the bar, the more resistant the anchorage (within the SWL limit of the anchor).

The following table indicates the diameter and the total length of the reinforced steel bar to use.

REINFORCED RIBBED STEEL E (ACCORDING TO NF A 35-080)	500B,	1,4 T	2,5 T	5 T	7.5 T	10 T	14 T	22 T	26 T
	DIAMETER OF THE REINFORCEMENT (MM)	10	12	16	20	25	28	28	2 x 28
L = total length 30° Ø HA	CONCRETE AT 10 MPa	850	1 220	1 790	2 160	2 360	2 900	4 280	4 960
	CONCRETE AT 15 MPa	720	1 020	1 490	1 800	1 980	2 420	3 520	4 070
	CONCRETE AT 20 MPa	630	880	1 290	1 560	1 720	2 100	3 010	3 470
	CONCRETE AT 25 MPa	560	790	1 140	1 380	1 540	1 870	2 650	3 050
	CONCRETE AT 30 MPa	520	710	1 030	1 250	1 400	1 690	2 380	2 730
	CONCRETE AT 35 MPa	480	660	950	1 150	1 290	1 560	2 170	2 480
	CONCRETE AT 40 MPa	450	610	880	1 070	1 210	1 450	2 000	2 280

The eye anchor cannot be used under any circumstances without reinforcing steel.

The eye anchor is particularly adapted to narrow panels.

It is important to respect the diameters of the bending mandrel indicated in the standards covering the reinforcing steel for reinforced concrete, in accordance to the Eurocode standard.

It is advisable to set up the reinforcing steel in a "V" form with a 30° angle. If the concrete element does not allow it, it is possible to set up the reinforcing steel horizontally and to tie it to the lower wire mesh.

2.6 Flat Foot Anchor



REFERENCE	SWL	LIFTING EYE	F	G	E	L	R	S
PP025075	2.5 T	2.5 T	30	10	94	75	40	10
PP050125	5 T	5 T	40	15	105	125	56	10



The flat foot anchor is particularly suitable for thin elements. It is used with the additional reinforcement shown in the table below. The anchor's foot and its complementary reinforcing steel must be located under the upper reinforcement layer and ligated to the lower one. In use, the strength of the concrete must be at least 25 MPa. For lower concrete strength, the SWL must be reduced by 20%. However, a minimum resistance of 15 MPa is required. The following table gives the diameter and total length of the necessary complementary reinforcement:

REFERENCE	SWL	ADDITIONAL REINFORCEMENT
PP025075	2.5 T	4 HA Ø8 long 300mm
PP050125	5 T	4 HA Ø12 long 500mm
Reinforced ribbed steel B500B		

2.7 Flat Plate Anchor



REFERENCE	SWL	LIFTING EYE	F	G	A x A	L	R	S
PAP025080	2.5 T	2.5 T	30	10	80 x 80	80	40	10
PAP050120	5 T	5 T	40	15	100 x 100	120	56	10



The flat plate anchor is particularly suitable for thin elements. It is used with the additional reinforcement shown in the table below. The anchor's foot and its complementary reinforcing steel must be located under the upper reinforcement layer and ligated to the lower one. In use, the strength of the concrete must be at least 25 MPa. For lower concrete strength, the SWL must be reduced by 20%. However, a minimum resistance of 15MPa is required. The following table gives the diameter and total length of the necessary complementary reinforcement:

REFERENCE	SWL	ADDITIONAL REINFORCEMENT
PAP025080	2.5 T	4 HA Ø10 long 300mm
PAP050120	5 T	4 HA Ø12 long 450mm
Reinforced ribbed steel B500B		

2.8 Sandwich Panel Anchor



ANCHOR REFERENCE	SWL TENSION	SWL TILTING	LIFTING EYE	F	G	L	R	S
PPS025250	2.5 T	0.8 T	2.5 T	40	10	250	40	10
PPS050300	5 T	1.8 T	5 T	55	15	300	56	10

The shape of the anchor allows use in sandwich panels. The anchor is sealed in the load-bearing panel of the wall (the thickest) while its head is at the gravity axis of the panel allowing vertical lifting. Additional reinforcements are to be expected. A minimum concrete strength of 15 MPa is required.

Two additional reinforcing bars are required: a tension bar and a tilting stirrup.

1. Tension bar

To be placed in the inferior hole.



ANCHOR REFERENCE	SWL AXIAL (T)	Ø HA (MM)	L (MM)			
PPS025250	2.5 T	14	800			
PPS050300	5 T	16	1200			
Reinforced ribbed steel B500B						

2. Tilting stirrup

To be placed in the superior hole.



Minimal	thickness o	of the	load-bearing	panel.

ANCHOR REFERENCE	SWL AXIAL (T)	SWL LATERAL (T)	EP MINI (MM)
PPS025250	2.5 T	0.8 T	100
PPS050300	5 T	1.8 T	120



ANCHOR REFERENCE	SWL AXIAL (T)	Ø HA (MM)	L (MM)	H MINI (MM)
PPS025250	2.5 T	10	600	≥ 60
PPS050300	5 T	14	700	≥ 80

3. Formers and Accessories

When the anchors are placed on the side of the concrete element, the formers must be placed parallel to the panel.



3.1 Spread Anchor System

Rubber Former (ref RP)



REFERENCE	LOAD	FOR ANCHORS	А	В	С	М
RP0125	1.25 T	1.25 T	29	62	35	M8
RP025	2.5 T	1.4T – 2.5 T	43	106	45	M8
RP050	5 T	4 T – 5 T	55	134	59	M8
RP100	10 T	7.5 T – 10 T	78	188	81	M12
RP260	26T	12.5 T – 26 T	109	240	120	M16

This is the most common former range. Made of flexible elastomer, it can be used several times in normal operating conditions.

It can be fixed to the mould by different ways:

- It can be nailed to the wooden mould
- It can be screwed to the mould with the thread holding bolt (refer to §3.2) and the nut cast into the former
- It can be screwed to the mould with the bayonet holding bolt (refer to §3.2) and the special plate cast into the former
- It can be maintained with a holding plate (refer to §3.2)

The 2 holes will help open the former when released from the concrete.

Magnetic Former (ref RP...M)





REFERENCE	LOAD	FOR ANCHORS	А	В	С	MAGNETISM INSTALLED
RP025M	2.5 T	1.4T – 2.5 T	44	90	48	30 daN
RP050M	5 T	4 T – 5 T	53	115	62	50 daN
RP100M	10 T	7.5 T – 10 T	70	160	87	100 daN

Polyurethane former with cast in magnets.

This former is to be used on metallic moulds.

3.2 Additional Accessories for Formers

A. Holding Plate



REFERENCE	LOAD	А	В	ØD
PLM025	2.5 T	70	15	10
PLM050	5 T	85	30	10
PLM100	10 T	125	45	12

The holding plate can be nailed, screwed, welded and glued to the mould. It is designed to maintain the rubber former on the mould.

B. Magnetic Holding Plate



REFERENCE	LOAD	INSTALLED MAGNETISM	А	В	С	ØD
PLM025M	2.5 T	100 kg	70	15	12	10
PLM050M	5 T	100 kg	85	30	12	10
PLM100M	10 T	100 kg	125	45	12	12

The Magnetic holding plate allows the fixation on a metal mould without having to pierce it. Magnetism can be increased or decreased on demand by adding or removing some magnets. It allows the elastomer former to be maintained when the concrete is cast.

C. Thread Holding Bolt



LOAD	М	L
2.5 T	8	160
5 T	8	160
10 T	12	160

The thread holding bolt is designed to maintain the rubber former on the mould. It is screwed into the cap nut cast into the rubber former.

D. Bayonet Holding Bolt



REFERENCE	LOAD	М	L
BAIONETTEM8	2.5 T	8	160
BAIONETTEM8	5 T	8	160
BAIONETTEM10	10 T	12	180

The bayonet holding bolt is designed to maintain the rubber former on the mould. It is inserted into the bayonet connection of the rubber former and turned 90°.

4. Lifting Eye

Ring Clutch



REFERENCE	SWL	FOR ANCHORS	А	В	С	D	E	F	L
PA025	2.5 T	1.4T – 2.5 T	70	59	95	79	12	27	264
PA050	5 T	4 T – 5 T	85	66	117	102	17	37	333
PA100	10 T	7.5 T – 10 T	110	85	148	148	25	50	412
PA260	26 T	12.5 T – 26 T	160	120	210	209	30	72	605

The ring clutch must be chosen to match the anchor load. Under no circumstances should a lifting eye be used with a different capacity to that of the anchor, even if the load capacity of the lifting eye is superior to the load capacity of the anchor.

Combination Clutch



REFERENCE	SWL	FOR ANCHORS	D	ØD	F	L
PA0125C	1.25 T	1.25 T	52	8	20	360
PA025C	2.5 T	1.4T – 2.5 T	79	14	27	600
PA050C	5 T	4 T – 5 T	102	18	37	710
PA100C	10 T	7.5 T – 10 T	148	22	50	790

The lifting ring clutch with wire cable must be chosen to match the anchor load. Under no circumstances should a lifting eye be used with a different capacity to that of the anchor, even if the load capacity of the lifting eye is superior to the load capacity of the anchor.

4.1 Quality system

The dimensions of the Lifting eyes are 100% quality checked. For each batch, destructive testing is carried out to ensure quality standards are maintained. Each lifting eye is provided with a CE declaration of conformity. On the back of this declaration, the safety, usage and conditions are stated.

4.2 Periodic control

Whatever the frequency of use, each lifting eye must be controlled at least once a year by a competent person. Any physical abnormality, deformation, any sign of welding, must lead to the immediate destruction of the lifting eye. The lifting eyes cannot be repaired.

The points to control are:

(1) Visual control

- Absence of permanent deformation (elongated or twisted handle)
- Absence of welding signs (except the original weld)

(2) Control of the correct hinge operation between the nut and the handle

(3) Control of the lips spacing (using a gauge or a caliper) of the head:



REFERENCE	SWL	DIMENSION MAXI
PA0125C	1.25T	8.0
PA025 / PA025C	2.5 T	13.0
PA050 / PA050C	5 T	19.5
PA100 / PA100C	10 T	23.5
PA260	26T	37.0

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(4) Control of the diameter of the locking bolt:



REFERENCE	SWL	DIMENSION MINI
PA0125C	1.25T	7.0
PA025 / PA025C	2.5 T	12.0
PA050 / PA050C	5 T	15.5
PA100 / PA100C	10 T	22.5
PA260	26T	37.0

(5) Control of the diameter of the stirrup (U part) of the shackle:

	REFERE
	PA02
	PA05
	PA10
Diameter of stirrup	PA26

REFERENCE	SWL	DIMENSION MINI
PA025	2.5 T	13.0
PA050	5 T	19.0
PA100	10 T	25.0
PA260	26T	38.5

LIFTING WITH SPREAD ANCHOR SYSTEMS: USAGE AND SAFETY CONDITIONS

5. Usage and Safety Conditions

With each lifting eye, a summary note covering usage and safety conditions is provided.

Before use, the calculation assumptions must be checked, in particular:

- The mechanics of handling
- The expected lifting system (sling or lifting/spreader beam), the length of the slings (or the angle of the slings)
- The lifting means (stationary crane, bridge crane)
- The minimum concrete strength.

Use of the lifting eye



Lifting

The lifting eye can be used in any direction (up to the load limit of the anchor). However, the sling coefficient must be considered in calculations. Therefore, the front and behind angle should be limited to 60°.



Releasing The lifting eye can be released manually, just by puling back the locking bolt.



BEFORE USE

Recommended:

- Check that the safe working load of the anchor is the same as the safe working load of the lifting eye.
- The length of the slings should be at least twice the distance between the anchors, in order to have an angle of 30° between the slings. It is possible to have a bigger angle only if it has been considered in calculations. It is always better to use a lifting beam.
- 30° max. [except special calculation]
- The concrete strength should be at least equal to that used in the calculations.
 The minimum concrete strength is 15 MPa.
- The locking bolt must be fully closed and pushed to the limit position up to resting on the concrete.



 For cable rings, make sure that the diameter of the hook or shackle attached to the cable, is not less than 2.5 times the diameter of the cable of the lifting eye. We recommend, if possible, a diameter greater than 5 times the diameter of the cable.



Not Recommended:

- You must not break the concrete around the anchor.
 The lifting eye hooks onto the anchor without any other action.
- You must not weld the anchor nor the lifting eye, for whatever reason.





- Ensure it is not used in one of the three following dangerous positions:







If the shakle is under the head of the lifting ring at the time of application of the load, the stirrup may bend. If the lifting eye is pulled towards the top surface of the precast, the shackle may bend on the edge of the precast. On the left position, the shackle may lock within the clutch housing. A narrow lifting cable angle will cause the shackle to become bent. The problem can be overcome by turning the shackle through approximately 45° (left drawing).

IN USE

- When precast concrete elements are transported by a construction company, they are subject to shock and impact loads. This factor increases the load on the anchor by several times the dead-weight and should be taken into account in load calculations. Therefore, care should be taken in transporting the elements on site.
- When the anchors are used to lift a unit from a mould, the adhesion between the freshly cast concrete and the mould increase the forces on the anchors.

MAINTENANCE

- All lifting eyes must be controlled at least once a year by a competent person.
 The lifting eye must not show any sign of deformity.
- The lifting eye cannot be repaired.

GENERAL

- The lifting eye must be used only for lifting precast concrete elements.
- Users of the lifting eyes must be familiar with the usage and safety instructions.
- All usage and safety instructions must be respected when you lifting eyes are used.

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Lifting with Spherical Anchor Systems

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5.

Use and safety conditions

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ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T	20T	32T
LIFT HEAD ANCHOR	REF.	AP 013	AP 025	AP 050	AP 075	AP 100	AP 50	AP 200	A 320
ØT	т (мм)	18	25	36	46	46	69	69	88
	C (MM)	10	14	20	24	28	34	38	50
ØC	P (MM)	25	35	50	60	70	85	98	135
	L (MM)	40	45	75	100	115	140	200	280
		50	55	85	100	115	140	200	280
ØP		55	65	95	120	135	165	240	320
		65	75	120	140	150	200	250	500
		85	85	180	165	170	300	340	700
		120	120	240	200	200	400	500	
		170	140	340	240	250			
		240	170		300	340			
			210						
			240						
			280						

The lift head anchors can be provided in black, electro zinc plated (Z) or hot dip galvanised (G).

ACCESSORIES		1.3T	2.5T	5T
DOUBLE HEAD ANCHOR	REF.	AM 013	AM 025	AM 050
	T (MM)	18	25	36
	C (MM)	10	14	20
	P (MM)	25	35	50
	L (MM)	55	55	85
ØC		65	65	120
		75	85	180
Ø P		85	120	240
		120	170	
		240	240	

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T	20T	32T
EYE ANCHOR	REF.	A0 130065	A0 025090	A0 050120		A0 100180		A0 200250	A0 320200
ØT	т (мм)	18	25	36		46		69	88
	C (MM)	10	14	20		28		38	50
øc	L (MM)	65	90	120		180		250	300
	G (KG)	0.06	0.16	0.40		1.16		3.17	6.34
$\left(\circ \right)$	REF.			A0 050090		A0 100115			
	т (мм)			36		46			
	C (MM)			20		28			
	L (MM)			90		115			
	G (KG)			0.35		0.82			

The eye anchors can be provided in black, electro zinc plated (Z) or hot dip galvanised (G).

FOOT & EYE ANCHOR	REF.	AOP 013050	AOP 02565	AOP 050080			
ØT	т (мм)	18	25	36			
øc	С (ММ)	10	14	20			
	P (MM)	22	35	47			
	L (MM)	50	65	80			
ØP	G (KG)	0.06	0.17	0.38			

The foot & eye anchors can be provided in black, electro zinc plated (Z) or hot dip galvanised (G).

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T
REBAR ANCHOR	REF.		AA 025400	AA 05080		AA 100870	AA 1501080
ØT	т (мм)		25	36		46	69
	С (ММ		14	20		28	32
	L (MM)		400	580		870	1080
ØC	G (KG)		0.70	1.43		4.30	7.00
	REF.		AA 025520				
	т (мм)		25				
	С (ММ)		14				
	L (MM)		520				
	G (KG)		0.80				

The rebar anchors can be provided in black, electro zinc plated (Z) or hot dip galvanised (G).

		1	1	1	1	
PLATE ANCHOR	REF.		AS 025055	AS 050065	AS 100115	
	L (MM)		55	65	115	
	AXB (MM)		70x70	90x90	90x90	
	E (MM)		6	8	10	
	G (KG)		0.34	0.74	1.09	
	REF.		AS 025120	AS 050095		
	L (MM)		120	95		
	AXB (MM)		70x70	90x90		
	E (MM)		6	8		
	G (KG)		0.42	0.80		

The plate anchors can be provided in black, electro zinc plated (Z) or hot dip galvanised (G).

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T	20T	32T
ROUND RUBBER FORMER WITH STUD	REF.	REC 013	REC 025	REC 050	REC 075	REC 100	REC 150	REC 200	REC 320
	D (MM)	60	74	94	118	118	160	160	204
	т (мм)	6.5	6.5	8.5	10.5	10.5	10.5	10.5	10.5
	A (MM)	9	13	15.5	18	18	19	19	19
	М	M8	M10	M10	M12	M12	M12	M12	M12
	G (KG)	0.13	0.21	0.40	0.74	0.62	1.43	1.30	3.60
ROUND RUBBER FORMER	REF.	RE 013	RE 025	RE 050	RE 075	RE 100	RE 150	RE 200	RE 320
	D (MM)	60	74	94	118	118	160	160	204
	т (мм)	6.5	6.5	8.5	10.5	10.5	10.5	10.5	10.5
	A (MM)	6	10	11.5	14	14	16	16	14
<u>^-+ -</u> -	G (KG)	0.08	0.16	0.29	0.54	0.42	1.19	1.06	3.40
NARROW RUBBER FORMER WITH STUD	REF.	REEC 013	REEC 025	REEC 050	REEC 075	REEC 100	REEC 150	REEC 200	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM)	REEC 013	REEC 025 74	REEC 050 94	REEC 075	REEC 100 118	REEC 150	REEC 200 160	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM)	REEC 013 60 6.5	REEC 025 74 6.5	REEC 050 94 8.5	REEC 075	REEC 100 118 10.5	REEC 150	REEC 200 160 10.5	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM)	REEC 013 60 6.5 9 9	REEC 025 74 6.5 13 13	REEC 050 94 8.5 15.5 15.5	REEC 075	REEC 100 118 10.5 18	REEC 150	REEC 200 160 10.5 19 19	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M	REEC 013 60 6.5 9 M8	REEC 025 74 6.5 13 M10	REEC 050 94 8.5 15.5 M10	REEC 075	REEC 100 118 10.5 18 M12	REEC 150	REEC 200 160 10.5 19 M12	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M G (KG)	REEC 013 60 6.5 9 M8 0.11 11	REEC 025 74 6.5 13 M10 0.17 0.17	REEC 050 94 8.5 15.5 M10 0.35	REEC 075	REEC 100 118 10.5 18 M12 0.73	REEC 150	REEC 200 160 10.5 19 M12 1.58	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M G (KG) REF.	REEC 013 60 6.5 9 M8 0.11 REE 013 0.11	REEC 025 74 6.5 13 M10 0.17 REE 025 25	REEC 050 94 8.5 15.5 M10 0.35 REE 050	REEC 075	REEC 100 118 10.5 18 M12 0.73 REE 100	REEC 150 REE 150	REEC 200 160 10.5 19 M12 1.58 REE 200	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M G (KG) REF. D (MM)	REEC 013 60 6.5 9 M8 0.11 REE 013 60	REEC 025 74 6.5 13 M10 0.17 REE 025 74	REEC 050 94 8.5 15.5 M10 0.35 REE 050 94	REEC 075 REE 075	REEC 100 118 10.5 18 M12 0.73 REE 100 118	REEC 150 REE 150	REEC 200 160 10.5 19 M12 1.58 REE 200 160	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) G (KG) REF. D (MM) F (MM)	REEC 013 60 6.5 9 M8 0.11 REE 013 60 43 43	REEC 025 74 6.5 13 M10 0.17 REE 025 74 53	REEC 050 94 8.5 15.5 M10 0.35 REE 050 94 69	REEC 075	REEC 100 118 10.5 18 M12 0.73 REE 100 118 85	REEC 150 REE 150	REEC 200 160 10.5 19 M12 1.58 REE 200 160 124	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M G (KG) REF. D (MM) F (MM) T (MM)	REEC 013 60 6.5 9 M8 0.11 REE 013 60 43 6.5	REEC 025 74 6.5 13 M10 0.17 REE 025 74 53 6.5	REEC 050 94 8.5 15.5 M10 0.35 REE 050 94 69 8.5	REEC 075	REEC 100 118 10.5 18 M12 0.73 REE 100 118 85 10.5	REEC 150 REE 150	REEC 200 160 10.5 19 M12 1.58 REE 200 160 124 10.5	REEC 320
NARROW RUBBER FORMER WITH STUD	REF. D (MM) T (MM) A (MM) M G (KG) REF. D (MM) F (MM) T (MM) A (MM)	REEC 013 60 6.5 9 M8 0.111 REE 013 60 43 6.5 6	REEC 025 74 6.5 13 M10 0.17 REE 025 74 53 6.5 10	REEC 050 94 8.5 15.5 M10 0.35 REE 050 94 69 8.5 11.5	REEC 075	REEC 100 118 10.5 18 M12 0.73 REE 100 118 85 10.5 14	REEC 150 REE 150	REEC 200 160 10.5 19 M12 1.58 REE 200 160 124 10.5 16	REEC 320

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T
STEEL FORMER	REF.	RA013	RA025	RA050		RA100
	D (MM)	60	74	94		118
	A (MM)	8	10	12		14
	м	M8	M12	M12		M12
	G (KG)	0.32	0.61	1.30		2.60
MAGNETIC FORMER	REF.	RM013	RM025	RM050		RM100
	D (MM)	60	74	94		118
	A (MM)	6	9	12		12
	М	M8	M10	M10		M10
	MAGNET (KG)	60	75	100		150
	G(KG)	0.11	0.20	0.36		0.58
MAGNETIC STEEL FORMER	REF.	RAM013	RAM025	RAM050		RAM100
	D (MM)	60	74	94		118
	A (MM)	8	10	12		14
	м	M8	M12	M12		M12
	G (KG)	0.32	0.61	1.30		2.30
RUBBER RING	REF.	BC013	BC025	BC050		BC100
- _	D (MM)	22	32	39		49
	D (MM)	10	14	20		28
	A (MM)	11	12	14		20
	G (KG)	0.01	0.01	0.02		0.04

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T
ARTICULATED STEEL FORMER	REF.	RAA013	RAA025	RAA050		RAA100
	D (MM)	60	74	94		118
	т (мм)	7	7	10		9
	A (MM)	10	10	10		10
	М	M10	M10	M12		M12
	G (KG)	0.35	0.71	1.46		2.79
ARTICULATED STEEL FORMER	REF.	RAAE013	RAAE025			
	D (MM)	60	74			
	F (MM)	42	48			
	Т (ММ)	7	7			
	A (MM)	10	10			
	М	M12	M10			
	G (KG)	0.23	0.52			

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T	20T
FIXING SET	REF.	EF013	EF025	EF050	EF100	EF100	EF200	EF200
	М	M8	M10	M10	M12	M12	M12	M12
	L (MM)	80	80	100	100	100	100	100
	G (KG)	0.05	0.05	0.11	0.20	0.20	0.24	0.24
THREADED PLATE	REF.	PT013	PT025	PT050	PT100	PT100	PT200	PT200
	М	M8	M10	M10	M12	M12	M12	M12
	G (KG)	0.01	0.02	0.04	0.05	0.05		

ACCESSORIES		1.3T	2.5T	5T
TIGHTENING FORMER	REF.	RC013	RC025	RC050
	D(MM)	60	74	94
	A(MM)	9	11	14
	м	M8	M10	M10
	G(KG)	0.10	0.19	0.23
MAGNETIC TIGHTENING FORMER	REF.	RCM013	RCM025	RCM050
	D(MM)	60	74	94
	A(MM)	9	11	14
	м	M8	M10	M10
	MAGNET (KG)	60	60	100
	G(KG)	0.15	0.20	0.25

ACCESSORIES		1.3T	2.5T	5T
INTERNAL MAGNETIC FORMER	REF.	RI013	R1025	R1050
	D (MM)	60	74	94
	A (MM)	9	11	14
	М	M8	M10	M10
	G (KG)	0.45	0.88	1.60
INTERNAL & EXTERNAL MAGNETIC FORMER	REF.	RIM013	RIM025	
	D (MM)	60	74	
	A (MM)	9	11	
	М	M8	M10	
	MAGNET (KG)			
	G (KG)	0.45	0.88	
	G (KG)	0.45	0.88	

ACCESSORIES		1.3T	2.5T	5T	7.5T	10T	15T	20T	32T
LIFT HEAD SHACKLE	REF.	AN 013	AN 025	AN 050	AN 100		AN 200		AN 320
E B	A (MM)	70	85	88	112		150		189
	B(MM)	46	58	70	84		118		175
<	C(MM)	74	88	118	160		186		269
	D(MM)	20	25	37	50		75		100
	E(MM)	12	14	16	26		30		45
	G(KG)	0.89	1.62	3.18	9.70		26.20		45.80

1. Sizing Methods

1.1 Design process

The aim of this design process is the evaluation of the load on cemented anchors in reinforced Precast concrete in order to select the appropriate anchor.

This method is based on the most common applications. If you have any queries on the application, the assumptions or any points mentioned in this document, you should contact our Technical Department.

1.2 Calculation assumptions

To define the force on the lifting anchors, all of the following points must be considered:

- The technical drawing of the Precast element and the mechanics of handling
- The weight of the element (and of the formwork and other accessories lifted with the element)
- The formwork adhesion at the removal from the mould
- The number of efficient lifting points (and not the number of actual lifting points)
- The sling angle
- The dynamic coefficient (lifting machinery)

1.3 Drawing of the Precast element and expected lifting process

Firstly, the technical drawing of the element has to be considered, and the means by which it is to be handled. It is necessary to distinguish between the handling in the precast factory and on site. To define the correct anchor to use (type, length, size) it is also necessary to know:

- The concrete strength when the element is lifted.

It is also essential that the assumptions are clearly

communicated to the organisations tasked with the

handling and lifting operations, to ensure that the assumptions are representative of the actual handling

and lifting conditions.

It is also necessary to distinguish between the handling of the element in the precast factory and on the construction site. All the calculations have to be done for both cases. The actual weight of the element must be considered. It includes in particular:

- The weight of the concrete element (volume x density). The reinforced concrete density is equal to 2500 daN/m³ (or 25 kN/m³) in general.
- The weight of the formwork and accessories lifted with the element.

1.5 Formwork adhesion at the removal from the mould (A)

The adhesion will depend on 2 factors:

- The surface area of the element in contact with the formwork (S in m²). All the surfaces in contact with the formwork need to be considered, included inclined surfaces.
- The surface condition of the mould.
 This surface condition is defined by an adhesion factor (q_{adh} in daN/m²).

This force is to be considered at the removal of the element from the mould.

Type of mould	Adhesion factor q _{adh}
Oiled steel mould, Plywood coated with oiled plastic	100 daN/m²
Varnished oiled wooden mould	200 daN/m²
Oiled rough wooden mould	300 daN/m²
Polyurethane matrix	Consult the matrix supplier

The adhesion force is:

This adhesion force must be added to the weight of the element in order to calculate the force required to lift it.

 $A = q_{adh} \times S$

element in order to calculate the force required to lift it. In some cases, the adhesion force can be zero if the

concrete is not in contact with the mould (pre-stressed beam for example).

SDG

1.6 Location and determination of the number of efficient lifting points (n)

Set up the lifting points symmetrically to the center of gravity.

Here are some examples of lifting point positions:



ROTATION PIECE

120° 120°

It is possible that some lifting positions are not appropriate for selected anchor types (see § 2). In particular, minimum distances between lifting points and minimum distances from the edges of the concrete have to be maintained. A minimum coating may be required. Based on the number of apparent lifting points and the use or not of a balanced lifting system (such as a lifting beam), the number of efficient lifting points is defined as follows:

	EFFICIENT LIFTING POINTS NUMBER (N)					
APPARENT LIFTING PUINTS	WITH A BALANCED SYSTEM	OTHERS LIFTING MEANS				
4	4	2				
3	3	2				
2	2	2				

Some examples:



Unbalanced System

Apparent lifting points = 4 Efficient lifting points = 2



1.7 Sling angle and multiplication coefficient (Ce)

A multiplication coefficient Ce is generated by vertical forces (weight) on the slings. For the calculation, angle β is to be considered as the angle between the vertical and the most inclined sling.







β	0	15°	22,5°	30°	45°	60°
α = 2β	0	30°	45°	60°	90°	120°
Ce	1	1,035	1,082	1,155	1,414	2
L	-	2 D	1,3 D	D	0,7 D	0,6 D



 $\label{eq:between the vertical and the most inclined sling.}$ It is necessary to consider the worst-case scenario with the largest angle $\beta.$

1.8 Lifting and handling dynamic coefficient (Cd)

The values given in the table below are indicative only.

The expected lifting system and the values used must be notified to the users (factory and site).

LIF TING AND HANDLING MACHINE	LIFTING SPEED	DYNAMIC COEFFICIENT Cd
Stationary crane or rail-mounted	< 1 m/s	1,15
Stationary crane or rail-mounted	> 1 m/s	1,30
Bridge crane	< 1 m/s	1,15
Bridge crane	> 1 m/s	1,60
Lifting and handling on flat terrain		2
Lifting and handling on rough terrain		≥ 4

Dynamic coefficient required by type of element:

TYPE OF ELEMENT	DYNAMIC COEFFICIENT Cd					
Pipe and sewer	2					
Frame below 12T	1,60					
Frame between 12 and 20T	1,30					
Frame above 20T	1,15					
Wall	1,30					
Beam below 12T	1,60					
Beam between 12 and 20T	1,30					
Beam above 20T	1,215					

1.9 Resultant load by lifting point (F)

The resultant load for each lifting point is equal to:

$$F = \frac{(P + A) \times Ce \times Cd}{n}$$

This calculation must be done for the lifting activity in the Precast factory, on site, and for any other handling activity of the precast element.

NOTE: Anchors used more than 10 times, must not to be subject to a force more than 0.6 times their safety working load (SWL). It is necessary to check in this case that F < 0.6* SWL (Anchor).

1.10 Concrete resistance (f_{ck})

The concrete strength has to be determined:

- When lifting the element from the mould in the Precast factory
- When transporting and installing on site

The minimum permitted resistance of the concrete is 10 MPa.

2. Choice of Anchor

This choice can be made according to the resultant load values by lifting point in the factory (Fu), and on site (Fc), and from the concrete resistance at the first lifting or on site. The most unfavourable calculation (worst case scenario) is used to ensure the anchor is suitable for all applications. If you have any queries about your calculation, you should contact our Technical Department.

The anchor load capacity must be at least equal to the highest load value (Fu and Fc) calculated.

Various anchor types are available, and the choice of type of anchor to be used is made according to each individual set up.

There are 6 major types of lifting anchors:



Precautions to be taken when setting up the anchors:

- Do not weld the anchors
- Always use the appropriate former for each anchor type
- Anchors have to be slightly recessed from the surface of the concrete (the recess is generated by the appropriate former).

Anti-corrosion protection:

Anchors are provided in black (plain steel). On request, anchors can be zinc-plated or hot dip galvanized for additional anti-corrosion protection.

2.1 Lift Head Anchor



REFERENCE	CIVIL	DIMENSIONS [MM]										
REFERENCE	SWL	ØT	ØC	ØP	L	ØD	S					
AP013	1.3 T	18	10	25	40 à 240	60	8					
AP025	2.5 T	25	14	35	45 à 280	74	10					
AP050	5 T	36	20	50	75 à 340	94	12					
AP075	7.5 T	46	24	60	100 à 300	118	14					
AP100	10 T	46	28	70	115 à 340	118	14					
AP150	15 T	69	34	85	140 à 400	160	14					
AP200	20 T	69	38	98	200 à 500	160	14					
AP320	32 T	88	50	135	280 à 700	204	16					

The anchorage in the concrete is produced by the foot of the anchor creating a wrenching cone. The anchorage resistance depends on:

- The concrete resistance (f_{ck})
- The length of the foot anchor (L)
- Distances to the edge of the concrete (T_N)
- Distances between each anchor (T_N)

The larger the wrenching cone, the greater the anchorage resistance. It is at its maximum when the distance between fixing centers of the anchors is greater than 6 times the anchoring depth (h_{ef}) and the distance to the edge of the concrete is greater than 3 times h_{ef} .



The tables on the following pages indicate the resistance value (in Tons) for foot anchor in practical cases.

Case No. 1 : Complete wrenching cone

Distances to the edge > 3 h_{ef} Distances between anchors > 6 h_{ef}

> 3	nef	> 6 hef	
hef			

	LOAD	LENGTH	s			CONCRET	RESISTANC	E Fck (MPA)		
REFERENCE	(TONS)	(MM)	(MM)	10	15	20	25	30	35	40
AP013040	1,3	40	8	0,43	0,56	0,68	0,79	0,89	0,99	1,08
AP013050	1,3	50	8	0,62	0,82	0,99	1,15	1,30	1,30	1,30
AP013055	1,3	55	8	0,74	0,97	1,17	1,30	1,30	1,30	1,30
AP013065	1,3	65	8	0,99	1,30	1,30	1,30	1,30	1,30	1,30
AP013085	1,3	85	8	1,30	1,30	1,30	1,30	1,30	1,30	1,30
AP013120	1,3	120	8	1,30	1,30	1,30	1,30	1,30	1,30	1,30
AP013170	1,3	170	8	1,30	1,30	1,30	1,30	1,30	1,30	1,30
AP013240	1,3	240	8	1,30	1,30	1,30	1,30	1,30	1,30	1,30
AP025045	2,5	45	10	0,56	0,74	0,89	1,04	1,17	1,30	1,42
AP025055	2,5	55	10	0,78	1,03	1,25	1,45	1,64	1,81	1,98
AP025065	2,5	65	10	1,04	1,37	1,66	1,93	2,18	2,42	2,50
AP025075	2,5	75	10	1,34	1,76	2,13	2,48	2,50	2,50	2,50
AP025085	2,5	85	10	1,67	2,20	2,50	2,50	2,50	2,50	2,50
AP025120	2,5	120	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP025140	2,5	140	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP025170	2,5	170	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP025210	2,5	210	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP025240	2,5	240	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP025280	2,5	280	10	2,50	2,50	2,50	2,50	2,50	2,50	2,50
AP050075	5	75	12	1,40	1,84	2,23	2,60	2,93	3,25	3,56
AP050085	5	85	12	1,75	2,29	2,78	3,23	3,65	4,04	4,42
AP050095	5	95	12	2,12	2,79	3,38	3,93	4,44	4,92	5,00
AP050120	5	120	12	3,23	4,24	5,00	5,00	5,00	5,00	5,00
AP050180	5	180	12	5,00	5,00	5,00	5,00	5,00	5,00	5,00
AP050240	5	240	12	5,00	5,00	5,00	5,00	5,00	5,00	5,00
AP050340	5	340	12	5,00	5,00	5,00	5,00	5,00	5,00	5,00
AP075100	7,5	100	14	2,41	3,16	3,84	4,46	5,04	5,58	6,11
AP075120	7,5	120	14	3,33	4,37	5,30	6,16	6,96	7,50	7,50
AP075140	7,5	140	14	4,40	5,77	7,00	7,50	7,50	7,50	7,50
AP075165	7,5	165	14	5,95	7,50	7,50	7,50	7,50	7,50	7,50
AP075200	7,5	200	14	7,50	7,50	7,50	7,50	7,50	7,50	7,50
AP075240	7,5	240	14	7,50	7,50	7,50	7,50	7,50	7,50	7,50
AP075300	7,5	300	14	7,50	7,50	7,50	7,50	7,50	7,50	7,50
AP100115	10	115	14	3,09	4,05	4,91	5,71	6,45	7,15	7,82
AP100135	10	135	14	4,12	5,41	6,56	7,61	8,60	9,54	10,00
AP100150	10	150	14	4,99	6,55	7,94	9,22	10,00	10,00	10,00
AP100170	10	170	14	6,28	8,24	10,00	10,00	10,00	10,00	10,00
AP100200	10	200	14	8,50	10,00	10,00	10,00	10,00	10,00	10,00
AP100250	10	250	14	10,00	10,00	10,00	10,00	10,00	10,00	10,00
AP100340	10	340	14	10,00	10,00	10,00	10,00	10,00	10,00	10,00
AP150140	15	140	14	4,40	5,77	7,00	8,13	9,19	10,19	11,14
AP150165	15	165	14	5,95	7,80	9,46	10,99	12,41	13,76	15,00
AP150200	15	200	14	8,50	11,15	13,52	15,00	15,00	15,00	15,00
AP150300	15	300	14	15,00	15,00	15,00	15,00	15,00	15,00	15,00
AP150400	15	400	14	15,00	15,00	15,00	15,00	15,00	15,00	15,00
AP200200	20	200	14	8,50	11,15	13,52	15,70	17,74	19,67	20,00
AP200240	20	240	14	11,97	15,71	19,05	20,00	20,00	20,00	20,00
AP200250	20	250	14	12,93	16,97	20,00	20,00	20,00	20,00	20,00
AP200340	20	340	14	20,00	20,00	20,00	20,00	20,00	20,00	20,00
AP200500	20	500	14	20,00	20,00	20,00	20,00	20,00	20,00	20,00
AP320280	32	280	16	16,26	21,33	25,87	30,04	32,00	32,00	32,00
AP320320	32	320	16	20,95	27,49	32,00	32,00	32,00	32,00	32,00
AP320500	32	500	16	32,00	32,00	32,00	32,00	32,00	32,00	32,00
AP320700	32	700	16	32,00	32,00	32,00	32,00	32,00	32,00	32,00

Case No. 2 : Incomplete wrenching cone, cone at 45°

Distances to the edge $> h_{ef}$

Distances between anchors $> 2 h_{ef}$

REFERENCE	LOAD	LENGTH	S	CONCRETE RESISTANCE F _{CK} (MPA)							
	(TONS)	(MM)	(MM)	10	15	20	25	30	35	40	
AP013040	1,3	40	8	0,11	0,14	0,17	0,20	0,22	0,25	0,2	
AP013050	1,3	50	8	0,16	0,20	0,25	0,29	0,33	0,36	0,4	
AP013055	1,3	55	8	0,18	0,24	0,29	0,34	0,38	0,43	0,4	
AP013065	1,3	65	8	0,25	0,32	0,39	0,46	0,52	0,57	0,6	
AP013085	1,3	85	8	0,40	0,53	0,64	0,74	0,84	0,93	1,0	
AP013120	1,3	120	8	0,76	1,00	1,21	1,30	1,30	1,30	1,3	
AP013170	1,3	170	8	1,30	1,30	1,30	1,30	1,30	1,30	1,3	
AP013240	1,3	240	8	1,30	1,30	1,30	1,30	1,30	1,30	1,3	
AP025045	2,5	45	10	0,14	0,18	0,22	0,26	0,29	0,32	0,3	
AP025055	2,5	55	10	0,20	0,26	0,31	0,36	0,41	0,45	0,5	
AP025065	2,5	65	10	0,26	0,34	0,42	0,48	0,54	0,60	0,6	
AP025075	2,5	75	10	0,34	0,44	0,53	0,62	0,70	0,78	0,8	
AP025085	2,5	85	10	0,42	0,55	0,67	0,77	0,87	0,97	1,0	
AP025120	2,5	120	10	0,78	1,03	1,25	1,45	1,64	1,81	1,9	
AP025140	2,5	140	10	1,04	1,37	1,66	1,93	2,18	2,42	2,5	
AP025170	2,5	170	10	1,50	1,97	2,39	2,50	2,50	2,50	2,5	
AP025210	2,5	210	10	2,25	2,50	2,50	2,50	2,50	2,50	2,5	
AP025240	2,5	240	10	2,50	2,50	2,50	2,50	2,50	2,50	2,5	
AP025280	2,5	280	10	2,50	2,50	2,50	2,50	2,50	2,50	2,5	
AP050075	5	75	12	0.35	0.46	0.56	0.65	0.73	0.81	0.8	
AP050085	5	85	12	0.44	0.57	0.69	0.81	0.91	1.01	1.1	
AP050095	5	95	12	0.53	0.70	0.85	0.98	1.11	1.23	1.3	
AP050120	5	120	12	0.81	1.06	1.29	1.49	1.69	1.87	2.0	
AP050180	5	180	12	1.71	2.24	2.72	3.16	3.57	3.96	4.3	
AP050240	5	240	12	2.95	3.87	4.69	5.00	5.00	5.00	5.0	
AP050340	5	340	12	5.00	5.00	5.00	5.00	5.00	5.00	5.0	
AP075100	7.5	100	14	0.60	0.79	0.96	1 11	1.26	1 40	1.5	
AP075120	7.5	120	14	0.83	1.09	1.33	1.54	1 74	1.93	2.1	
AP075140	7.5	140	14	1 10	1 44	1 75	2.03	2.30	2 55	2.7	
AP075165	7.5	145	1.4	1 / 9	1.95	2 37	2,00	3 10	3.66	3.7	
AP075200	7,5	200	14	2 12	2 79	2,37	2,75	6.66	/, 92	5.3	
AD075260	7,5	260	14	2,12	2,77	6.76	5,73	4,44	4,72	7.5	
AP075200	7,5	240	14	2,77	4.00	7.29	7.50	7.50	7.50	7,5	
AP100115	10	115	14	4,37	1.01	1.22	1,30	1,50	1 70	1.0	
AP100113	10	125	14	1.02	1.01	1,23	1,45	2 15	2.29	2.6	
AP100155	10	150	14	1,05	1,55	1,04	2.21	2,13	2,30	2,0	
AP100130	10	170	14	1,25	2.04	2.50	2,31	2,01	2,07	2.0	
AP100170	10	200	14	2.12	2,00	2,30	2,70	5,20	6.02	5.2	
AP100200	10	200	14	2,12	4.24	5,30	5.07	4,44	7.0	9.1	
AP100250	10	2/0	14	5.91	7.42	0.25	10.00	10.00	10.00	10.0	
AP100340	15	140	14	1 10	1.4.6	1 75	2.02	2 20	2.55	2.7	
AP150140	15	1/5	14	1,10	1,44	1,73	2,05	2,30	2,55	2,7	
AP150165	15	100	14	1,47	1,70	2,37	2,75	3,10	3,44	3,7	
AP150200	15	200	14	2,12	2,19	3,38	3,73	4,44	4,72	2,3	
AP150300	15	300	14	4,37	6,00	7,28	8,40	9,00	10,39	11,5	
AP150400	10	400	14	7,75	10,43	12,65	14,67	10,00	10,00	10,0	
AP200200	20	200	14	2,12	2,17	3,38	3,73	4,44	4,72	5,3	
AP200240	20	240	14	2,99	3,93	4,76	5,53	6,25	6,93	7,5	
AP200250	20	250	14	3,23	4,24	5,14	5,97	6,75	7,49	8,1	
AP200340	20	340	14	5,81	7,63	9,25	10,74	12,14	13,46	14,7	
AP200500	20	500	14	12,26	16,08	19,50	20,00	20,00	20,00	20,0	
AP320280	32	280	16	4,06	5,33	6,47	7,51	8,49	9,41	10,2	

hef

> hef _ > 2 hef

Case No. 3 : Wrenching cone in a thin inner wall

Distances to the edge $> 3 h_{ef}$

Distances between anchors $> 6 h_{ef}$



		LENGTH	INNER WALL	s			CONCRETE	RESISTANO	E F _{ck} (MPA)	1	
REFERENCE	(TONS)	(MM)	THICKNESS (MM)	(мм)	10	15	20	25	30	35	40
AP013120	1,3	120	60	8	0,37	0,49	0,59	0,69	0,78	0,86	0,94
AP013120	1,3	120	70	8	0,43	0,57	0,69	0,80	0,91	1,00	1,10
AP013120	1,3	120	80	8	0,50	0,65	0,79	0,92	1,03	1,15	1,25
AP025170	2,5	170	80	10	0,70	0,92	1,11	1,29	1,46	1,62	1,77
AP025170	2,5	170	100	10	0,87	1,14	1,39	1,61	1,82	2,02	2,21
AP025170	2,5	170	120	10	1,04	1,37	1,66	1,93	2,18	2,42	2,50
AP050240	5	240	100	12	1,22	1,60	1,94	2,26	2,55	2,83	3,09
AP050240	5	240	120	12	1,47	1,92	2,33	2,71	3,06	3,39	3,71
AP050240	5	240	140	12	1,71	2,24	2,72	3,16	3,57	3,95	4,32
AP075300	7,5	300	120	14	1,83	2,40	2,91	3,38	3,82	4,23	4,63
AP075300	7,5	300	140	14	2,13	2,80	3,39	3,94	4,45	4,93	5,39
AP075300	7,5	300	160	14	2,43	3,19	3,87	4,50	5,08	5,63	6,16
AP0100340	10	340	140	14	2,40	3,15	3,82	4,44	5,02	5,56	6,08
AP0150400	15	400	160	14	3,21	4,22	5,11	5,94	6,71	7,44	8,13
AP0150400	15	400	180	14	3,61	4,74	5,75	6,67	7,54	8,36	9,15
AP0150400	15	400	200	14	4,01	5,26	6,38	7,41	8,38	9,29	10,16
AP0200500	20	500	160	14	3,99	5,24	6,35	7,37	8,33	9,24	10,10
AP0200500	20	500	180	14	4,49	5,89	7,14	8,29	9,37	10,39	11,36
AP0200500	20	500	200	14	4,99	6,54	7,93	9,21	10,41	11,54	12,62
AP0200500	20	500	220	14	5,48	7,19	8,72	10,13	11,45	12,69	13,88
AP0320700	32	700	200	16	6,95	9,12	11,06	12,84	14,51	16,09	17,60
AP0320700	32	700	220	16	7,64	10,03	12,16	14,12	15,96	17,70	19,35
AP0320700	32	700	240	16	8,34	10,94	13,27	15,41	17,41	19,30	21,11
AP0320700	32	700	260	16	9,03	11,85	14,37	16,69	18,85	20,90	22,86
AP0320700	32	700	280	16	9,72	12,76	15,47	17,96	20,30	22,51	24,61
AP0320700	32	700	300	16	10,41	13,67	16,57	19,24	21,74	24,11	26,37
AP0320700	32	700	320	16	11,11	14,57	17,67	20,52	23,19	25,71	28,12

Safety Working Load (SWL) in Tons.

Case No. 4 : Round surfaces (pipes)

In the longitudinal way: Distances at the edge > 3 $\rm h_{ef}$



INTERIOR Ø	THICKNESS	LENGTH	s	T1		CO	NCRETE F	RESISTAN	CE F _{ck} (M	PA)				
PIPE (MM)	PIPE (MM)	(MM)	(MM)	(MM)	10	15	20	25	30	35	40	45	50	55
600	62	40	8	101	0,38	0,50	0,61	0,70	0,80	0,88	0,97	1,05	1,12	1,20
700	70	40	8	105	0,39	0,51	0,62	0,72	0,81	0,90	0,98	1,06	1,14	1,22
800	80	45	10	120	0,51	0,67	0,81	0,94	1,06	1,18	1,29	1,40	1,50	1,60
800	80	55	10	136	0,70	0,92	1,11	1,29	1,46	1,61	1,77	1,91	2,05	2,19
900	90	55	10	140	0,71	0,93	1,13	1,31	1,48	1,64	1,79	1,94	2,08	2,22
900	90	65	10	156	0,93	1,21	1,47	1,71	1,93	2,14	2,34	2,54	2,72	2,90
1000	100	65	10	160	0,94	1,23	1,49	1,73	1,96	2,17	2,38	2,57	2,76	2,94
1000	100	75	10	176	1,19	1,56	1,89	2,19	2,47	2,74	3,00	3,25	3,49	3,71
1200	120	75	10	184	1,21	1,59	1,93	2,24	2,53	2,81	3,07	3,33	3,57	3,80
1200	120	85	10	200	1,50	1,96	2,38	2,76	3,12	3,46	3,79	4,10	4,40	4,69
1400	140	85	12	211	1,58	2,08	2,52	2,93	3,31	3,67	4,01	4,34	4,66	4,97
1400	140	95	12	227	1,91	2,50	3,03	3,52	3,98	4,41	4,82	5,22	5,60	5,97
1500	150	95	12	231	1,92	2,52	3,06	3,55	4,01	4,45	4,87	5,26	5,65	6,02
1500	150	120	12	271	2,84	3,73	4,53	5,26	5,94	6,59	7,20	7,79	8,36	8,91
1600	160	115	14	271	2,75	3,61	4,38	5,08	5,74	6,37	6,96	7,53	8,09	8,62
1600	160	135	14	302	3,59	4,72	5,72	6,64	7,50	8,32	9,10	9,85	10,57	11,26
1800	180	135	14	311	3,66	4,80	5,82	6,76	7,63	8,46	9,26	10,02	10,75	11,46
1800	180	150	14	334	4,37	5,73	6,95	8,07	9,12	10,11	11,06	11,97	12,84	13,69
2000	200	150	14	343	4,44	5,82	7,06	8,19	9,26	10,27	11,23	12,15	13,04	13,90
2000	200	170	14	374	5,49	7,21	8,74	10,15	11,46	12,71	13,90	15,04	16,14	17,21
2500	250	165	14	386	5,38	7,05	8,55	9,93	11,22	12,45	13,61	14,73	15,81	16,85
2500	250	200	14	443	7,51	9,85	11,94	13,87	15,67	17,38	19,00	20,56	22,07	23,52
2800	280	200	14	455	7,62	10,00	12,13	14,08	15,91	17,64	19,30	20,88	22,41	23,89
2800	280	240	14	518	10,49	13,76	16,69	19,38	21,89	24,28	26,55	28,73	30,83	32,86

General case

The following general formula defines the acceptable wrenching force F consistent with the concrete wrenching cone rupture:



With

- F (T) = Acceptable wrenching force
- h_{ef} (cm) = Casting depth of the anchor
- f_{ck} (T/cm²) = Concrete resistance during lifting
- T_N (cm) = Distance to the edge of the concrete or semi-distance between the anchors, limited to 3 x h_{ef}





ANCHOR LOAD	S (MM)
1.3 T	8
2.5 T	10
5 T	12
7.5 – 10 T	14
15 – 20 T	14
32 T	16

Safety Working Load (SWL) in Tons.

Case for rounded shapes (Pipes)

For rounded forms (like pipes for example), the transversal distances are reduced to take into account the exterior radius of the element.

So in this case:



With

- R (cm) = Bend radius of the concrete element
- h_{ef} (cm) = Casting depth of the anchor
- T_N (cm) = Distance to the edge of the concrete or semi-distance between the anchors, limited to 3 x h_{ef}



2.2 Double Head Anchor



REFERENCE	C 11/1	DIMENSIONS [MM]							
REFERENCE	SWL	ØТ	ØC	ØP	L	ØD	S		
AP013	1.3 T	18	10	25	55 à 240	60	8		
AP025	2.5 T	25	14	35	55 à 240	74	10		
AP050	5 T	36	20	50	120 à 180	94	12		

The resistance value of the double head anchor is the same as the equivalent lift head anchor (same SWL and same length). Indeed lift head anchors and double head anchors have the same body and foot diameter.

Like for the lift head anchor, the anchorage is produced in the concrete due to the foot of the anchor which generates a compression cone. So, the anchorage resistance depends on the concrete resistance (f_{ck}), the length of the anchor (L) and the distances to the edge of the concrete (T_N) and between each anchor (T_N).

The wrenching resistance values are shown in paragraph 2.1 relating to lift head anchors.

2.3 Eye Anchor



(2)	
Contractor	

REFERENCE	SWI		D	IMENSIONS [MM	1]	
REFERENCE	SWL	ØT	ØC	L	ØD	S
A0013065	1.3 T	18	10	65	60	8
A0025090	2.5 T	25	14	90	74	10
A0050120	5 T	36	20	120	94	12
A0050090	5 T	36	20	90	94	12
A0100180	10 T	46	28	180	118	14
A0100115	10 T	46	28	115	118	14
A0200250	20 T	69	38	250	160	14
A0320300	32 T	88	50	300	204	16

With its complementary reinforced steel bar, the eye anchor has a universal use.

The anchorage resistance is transmitted to the concrete via the reinforced steel bar.

The anchorage capacity depends on the diameter and the length of the associated reinforced steel bar.

The longer the bar, the more the anchorage in resistant (within the SWL limit of the anchor).

The following table indicates the diameter and the total length of the reinforced steel bar to use.

REINFORCED RIBBED STEEL FEE500, (ACCORDING TO THE NF A 35-016 NORM)		1,3 T	2,5 T	5 T	10 T	20 T	32 T
J.	REINFORCING STEEL DIAMETER (MM)	8	10	16	20	32	40
	CONCRETE AT 10 MPA	930	1380	1790	2760	3570	4550
	CONCRETE AT 15 MPA	770	1140	1490	2280	2970	3780
<u>30°</u> L = total length	CONCRETE AT 20 MPA	670	980	1290	1960	2570	3270
	CONCRETE AT 25 MPA	590	870	1140	1730	2280	2900
	CONCRETE AT 30 MPA	530	780	1030	1560	2060	2620
	CONCRETE AT 35 MPA	490	710	950	1420	1900	2410
	CONCRETE AT 40 MPA	460	660	880	1310	1760	2240

The eye anchor cannot be used under any circumstances without reinforcing steel.

The eye anchor is particularly adapted to the narrow panels.

It is important to respect the diameters of the bending mandrel indicated in the standards covering the reinforcing steel for reinforced concrete, and to conform to the Eurocode 2 standards.

It is advisable to set up the reinforcing steel in a "V" form with a 30° angle. If the concrete element does not allow, it is possible to set up the reinforcing steel horizontally and to tie it to the lower wire mesh.

2.4 Flat End Anchor



DECEDENCE	SWL	DIMENSIONS [MM]							
REFERENCE		ØT	ØC	ØP	L	ØD	S		
A0P013050	1.3 T	18	10	22	50	60	8		
A0P025065	2.5 T	25	14	35	65	74	10		
A0P050080	5 T	36	20	20	80	94	12		

The flat end anchor resistance is transmitted to the concrete via its reinforcing steel. The anchorage capacity depends on the diameter and the length of the reinforcing steel. The diameters and lengths of the reinforcing steels are the same as those used for the eye anchors.

The reinforcing steel to use is the same as the one used for the eye anchor with the same SWL. (Please check the paragraph 2.3).

The flat end anchor anchor cannot under any circumstances be used without reinforcing steel.

Smaller than the eye anchor, the flat end anchor allows the setting up of an anchorage in narrow elements.

It is important to respect the diameters of the bending mandrel indicated in the standards covering the reinforcing steel for reinforced concrete, and to conform to the Eurocode 2 standards.

2.5 Rebar Anchor



DEFEDENCE	C)1/1		D	IMENSIONS [MM	1]	
REFERENCE	SWL	ØT	ØC	L	ØD	S
AA020400	2.0 T	25	14	400	74	10
AA025400	2.5 T	25	14	400	74	10
AA025520	2.5 T	25	14	520	74	10
AA040510	4 T	36	20	510	94	12
AA040720	4 T	36	20	720	94	12
AA0401150	4 T	36	20	1150	94	12
AA050580	5 T	36	20	580	94	12
AA050900	5 T	36	20	900	94	12
AA075750	7.5 T	46	25	750	118	14
AA0751150	7.5 T	46	25	1150	118	14
AA100870	10 T	46	28	870	118	14
AA1001300	10 T	46	28	1300	118	14
AA1501080	10 T	69	32	1080	160	14



The anchorage resistance is transmitted to the concrete via the reinforcing steel of the anchor's body.

REFERENCE	LOAD	LENGTH	INNER WALL THICKNESS			CONCRETE	RESISTANCE	F _{ck} (MPA)		
	(TUNS)	(MM)	(MM)	10	15	20	25	30	35	40
AA020400	2	400	98	1.70	2.00	2.00	2.00	2.00	2.00	2.00
AA020400	2	400	70	1.40	1.84	2.00	2.00	2.00	2.00	2.00
AA025400	2.5	400	98	1.70	2.23	2.50	2.50	2.50	2.50	2.50
AA025400	2.5	400	70	1.40	1.84	2.22	2.50	2.50	2.50	2.50
AA025520	2.5	520	98	2.26	2.50	2.50	2.50	2.50	2.50	2.50
AA025520	2.5	520	70	1.86	2.44	2.50	2.50	2.50	2.50	2.50
AA040510	4	510	140	3.10	4.00	4.00	4.00	4.00	4.00	4.00
AA040510	4	510	100	2.55	3.35	4.00	4.00	4.00	4.00	4.00
AA040720	4	720	140	4.00	4.00	4.00	4.00	4.00	4.00	4.00
AA040720	4	720	100	3.71	4.00	4.00	4.00	4.00	4.00	4.00
AA0401150	4	1150	140	4.00	4.00	4.00	4.00	4.00	4.00	4.00
AA0401150	4	1150	100	4.00	4.00	4.00	4.00	4.00	4.00	4.00
AA050580	5	580	140	3.57	4.68	5.00	5.00	5.00	5.00	5.00
AA050580	5	580	100	2.94	3.85	4.67	5.00	5.00	5.00	5.00
AA050900	5	900	140	5.00	5.00	5.00	5.00	5.00	5.00	5.00
AA050900	5	900	100	4.70	5.00	5.00	5.00	5.00	5.00	5.00
AA075750	7.5	750	175	5.78	7.50	7.50	7.50	7.50	7.50	7.50
AA075750	7.5	750	125	4.76	6.24	7.50	7.50	7.50	7.50	7.50
AA0751150	7.5	1150	175	7.50	7.50	7.50	7.50	7.50	7.50	7.50
AA0751150	7.5	1150	125	7.50	7.50	7.50	7.50	7.50	7.50	7.50
AA100870	10	870	196	7.60	9.96	10.00	10.00	10.00	10.00	10.00
AA100870	10	870	140	6.26	8.20	9.94	10.00	10.00	10.00	10.00
AA1001300	10	1300	196	10.00	10.00	10.00	10.00	10.00	10.00	10.00
AA1001300	10	1300	140	9.58	10.00	10.00	10.00	10.00	10.00	10.00
AA1501080	15	1080	224	10.71	14.04	15.00	15.00	15.00	15.00	15.00
AA1501080	15	1080	160	8.82	11.56	14.01	15.00	15.00	15.00	15.00

Safety Working Load (SWL) in Tons.

2.6 Plate Anchor





DEFEDENCE	CWI		DIMENSIONS [MM]							
REFERENCE	SWL	ØТ	ØC	L	AxBxE	ØD	S			
AS025055	2.5 T	25	14	55	70x70x6	74	10			
AS025120	2.5 T	25	14	120	70x70x6	74	10			
AS050065	5 T	36	20	65	90x90x8	94	12			
AS050095	5 T	36	20	95	90x90x8	94	12			
AS100115	10 T	46	28	115	90x90x10	118	12			

The plate anchor is well adapted for thin elements.

It must be used with the reinforcing steel bars specified in the table here after.

The plate of the anchor and the additional reinforcing steel must be placed under the upper wire mesh and tied to the lower wire mesh.

When loading, the concrete resistance must be at least at 15 MPa.



The following table indicates the diameter and the total length of the reinforcing steel bars to use.

REFERENCE	SWL	REINFORCED RIBBED STEEL FEE500		
AS025055	2.5 T	4 rebars Ø10 length 650mm		
AS025120	2.5 T	4 rebars Ø10 length 650mm		
AS050065	5 T	4 rebars Ø14 length 900mm		
AS050095	5 T	4 rebars Ø14 length 900mm		
AS100115	AS100115 10 T 4 rebars Ø16 length 1520mm			

3. Choice of Former

There are various ranges of recess formers to match the application, the mould, and the number of times the formers are re-used.

Formers are available for lift head anchors / eye anchors / foot & eye anchors / plate anchor.









Steel Former

Magnetic Steel Former

Magnetic Former







Formers for double head anchors



Magnetic Tightening Former



Internal Magnetic Former





Internal and External Magnetic Former

3.1 Formers for Lift Head Anchors, Eye Anchors, and Foot & Eye Anchors



REFERENCE	REFERENCE	1015		0115		DIMENSI	ONS (MM)	
WITH FIXING SET	SET	LUAD	COLOOR		ØD	ØТ	А	М
REC013	RE013	1.3 T	Blue		60	6,5	9	M8
REC025	RE025	2.5 T	Yellow		74	6,5	13	M10
REC050	RE050	5 T	Blue		94	8,5	15,5	M10
REC075	RE075	7.5 T	Red		118	10,5	18	M12
REC100	RE100	10 T	Yellow		118	10,5	18	M12
REC150	RE150	15 T	Grey		160	10,5	19	M12
REC200	RE200	20 T	Black		160	10,5	19	M12
REC320	RE320	32 T	Black		204	10,5	19	M12

This is the most common former range. Made of flexible elastomer, it can be used up to 30 or 40 times in normal conditions of use.

The complete rubber former (ref REC) is composed of two parts: the rubber former (ref RE) and the fixing set (ref EF).



REFERENCE	REFERENCE	LOAD	COLOUR	DIMENSIONS (MM)				
WITH FIXING SET	WITHOUT FIXING SET			ØD	ØT	А	М	F
REC013	RE013	1.3 T	Black	60	6,5	9	M8	43
REC025	RE025	2.5 T	Black	74	6,5	13	M10	53
REC050	RE050	5 T	Black	94	8,5	15,5	M10	69
REC100	RE100	10 T	Black	118	10,5	18	M12	85
REC200	RE200	20 T	Black	160	10,5	19	M12	124

This is the narrow version of the rubber former.

The complete narrow rubber former (ref REEC) is composed of 2 parts: the narrow rubber former (ref REE) and the fixing set (ref EF).

Articulated steel former (ref RAA)





DEFEDENCE		DIMENSIONS (MM)					
REFERENCE	LUAD	ØD	ØT	А	М		
RAA013	1.3 T	60	7	10	M10		
RAA025	2.5 T	74	7	10	M10		
RAA050	5 T	94	10	10	M12		
RAA100	10 T	118	10	10	M12		

Narrow articulated steel former (ref RAAE)

Its shape is the same as the narrow rubber former. Made out of steel, it can be re-used indefinitely.



REFERENCE	LOAD	DIMENSIONS (MM)				
		ØD	ØT	А	М	F
RAAE013	1.3 T	60	7	10	M12	42
RAAE025	2.5 T	74	7	10	M10	48
PRECAST ACCESSORIES > LIFTING WITH SPHERICAL ANCHOR SYSTEMS > CHOICE OF FORMER



This former is suitable for welding or screwing onto the mould. It must be used with a rubber ring (ref BC) to retain the anchor.

Magnetic Former



This former is to be used on metallic moulds. It must be used with a rubber ring (ref BC) to retain the anchor.

DEFEDENCE		DIMENSIONS (MM)			
REFERENCE	LUAD	ØD	А	М	
RA013	1.3 T	60	10	M10	
RA025	2.5 T	74	10	M10	
RA050	5 T	94	10	M12	
RA100	10 T	118	10	M12	

DEEEDENAE		MAGNETISM	DI	M)	
REFERENCE	LUAD	INSTALLED	ØD	А	М
RM013	1.3 T	60 kg	60	6	M8
RM025	2.5 T	75 kg	74	9	M10
RM050	5 T	100 kg	94	12	M10
RM100	10 T	150 kg	118	12	M10

Magnetic steel former (ref RAM)



This former is to be used on metallic moulds. It must be used with a rubber ring (ref BC) to retain the anchor.

		MAGNETISM	DI	MENSIONS (M	M)
REFERENCE	LUAD		ØD	А	м
RAM013	1.3 T		60	8	M8
RAM025	2.5 T		74	10	M12
RAM050	5 T		94	12	M12
RAM100	10 T		118	14	M12

3.2 Additional Accessories for Formers



DEFEDENCE			DIMENSIONS (MM)	
REFERENCE	REFERENCE LOAD	ØD	Ød	А
BC013	1.3 T	22	10	11
BC025	2.5 T	32	14	12
BC050	5 T	39	20	14
BC100	10 T	49	28	20



DEFEDENCE		DIMENSIONS (MM)
REFERENCE	LUAD	М
PT013	1.3 T	M8
PT025	2.5 T	M10
PT050	5 T	M10
PT100	7.5 – 10 T	M12
PT200	15 – 20 T	M12



REFERENCE		DIMENSI	INS (MM)	
REFERENCE	LUAD	L	М	
EF013	1.3 T	80	M8	
EF025	2.5 T	80	M10	
EF050	5 T	100	M10	
EF100	7.5 – 10 T	100	M12	
EF200	15 – 20 T	100	M12	

3.3 Formers for Double Head Anchors



This former is made of elastomer. The double head anchor is forced lightly into the former held in place by pressure on the anchor head and collar.

The former is screwed into the mould.

Internal magnetic former (ref RI)



This former is made of steel. The double head anchor is set up into the former and held by a light internal magnet, allowing a rapid and easy removal from the mould.

The former can be screwed or welded onto the mould.

DEFEDENCE			DIMENSIONS (MM)	
REFERENCE	LUAD	ØD	А	м
RC013	1.3 T	60	9	M8
RC025	2.5 T	74	11	M10
RC050	5 T	94	14	M10

DEFEDENCE		DIMENSIONS (MM)		
REFERENCE	LUAD	ØD	А	М
RC013	1.3 T	60	9	M8
RC025	2.5 T	74	11	M10
RC050	5 T	94	14	M10

MAGNETISM

INSTALLED

60 kg

60 kg

100 kg

Magnetic tightening former (ref RCM)

LOAD

1.3 T

2.5 T

5 T

REFERENCE

RCM013

RCM025

RCM050

This is the magnetic version of the tightening former.

ØD

60

74

94

This former is made of polyurethane. The double head anchor is forced lightly into the former held in place by pressure on the anchor head and collar.

The former is held onto a metallic mould by its magnet.

DIMENSIONS (MM)

Α

9

11

14

М

M8

M10

M10

	This is the magnetic version of the internal
Internal and external magnetic former (ref RIM)	magnetic former.

The former is held onto a metallic mould by its magnet.



DEFEDENCE		MAGNETISM	D	IMENSIONS (M	ім)
REFERENCE	LUAD	INSTALLED	ØD	А	М
RIM013	1.3 T	75 kg	60	9	M8
RIM025	2.5 T	75 kg	74	11	M10

4. Lift Head Shackle



DEEEDENOE	C)WI			DIMENSI	ONS (MM)		
REFERENCE	SWL	А	В	С	D	E	L
AN013	1.3 T	70	46	74	20	12	190
AN025	2.5 T	85	58	88	25	14	235
AN050	5 T	88	70	118	37	16	280
AN100	10 T	112	84	160	50	26	390
AN200	20 T	150	118	186	75	30	500
AN320	32 T	189	175	269	100	45	

The lift head shackle must be chosen to match the anchor load. Under no circumstances should a lift head shackle be used with a different capacity to that of the anchor, even if the load capacity of the lift head shackle is superior to the load capacity of the anchor.

4.1 Quality system

The dimensions of the Lift Head Shackle are 100% quality checked.

For each batch, destructive testing is carried out to ensure quality standards are maintained.

Each Lift Head Shackle is provided with a CE declaration of conformity. On the back of this declaration, the safety, usage and conditions are stated.

4.2 Periodic control

Whatever the frequency of use, each Lift Head Shackle **must be tested once a year** by a competent person. Any physical abnormality, deformation, any sign of welding, must lead to the immediate destruction of the shackle. The Lift Head Shackles cannot be repaired.

The points to test are:

- 1. Visual test
 - Absence of permanent deformation (elongated or twisted handle)
 - Absence of welding signs (except the original weld)
- 2. Test of the correct hinge operation between the nut and the handle
- 3. Test of the nut lips spacing (using a gauge or a caliper) on the whole of its length:



4.3 Remote decoupling

A remote decoupling system can be provided to decouple the lift head shackle from the anchors when access to the anchor points is difficult.

5. Use and Safety Conditions

With each lift head shackle, a summary note covering usage and safety conditions is provided.

Before use, the calculation assumptions must be checked, including:

- The mechanics of handling
- The expected lifting system (sling or lifting/spreader beam), the length of the slings (or the angle of the slings)
- The lifting means (stationary crane, bridge crane)
- The minimum concrete strength

Lift head shackle - usage and safety conditions

BEFORE USE

Recommended:

- You must check that the safety working load of the anchor is the same as the safety working load of the Lift Head Shackle.
- The length of the slings should be at least twice the distance between the anchors, in order to have an angle of 30° between the slings. It is possible to have a bigger angle only if it has been considered in calculations. It is always better to use a lifting beam.



- The concrete strength should be at least equal to that used in the calculations. The minimum concrete strength is 10 MPa.
- You must check that the nose is resting on the concrete.
- The nose must be in the direction of the force. When tilted up, the nose must be in the upper position.

Put the nose on the concrete in the direction of the force position

Not Recommended:

- You must not break the concrete around the anchor. The lift head shackle hooks onto the anchor without any other action.
- You must not weld the anchor nor the lift head shackle, for whatever reason.





IN USE

- When Precast concrete is transported by a construction company, they are subject to shock and impact loads. This factor increases the load on the anchor by several times the dead-weight and should be taken into account in load calculations. Therefore, care should be taken in transporting the elements on site.
- When the anchors are used to lift a unit from a mould, the adhesion between the freshly cast concrete and the mould increase the forces on the anchors.

- All lift head shackles must be examined once a year by a competent person. The lifting eye must not
- The lift head shackle cannot be repaired.

GENERAL

MAINTENANCE

show any sign of deformity.

- The lift head shackle must be used only for lifting Precast concrete elements.
- Users of the lift head shackle must be familiar with the usage and safety instructions.
- All usage and safety instructions must be respected when lift head shackles are used.

Precast Plastic Spacers

Fence Post Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA080	Fence Post Spacer 75 x 75	1000 / Bag
PLA082	Fence Post Spacer 87 x 87	1000 / Bag
PLA083	Fence Post Spacer 100 x 100	1000 / Bag
PLA084	Fence Post Spacer 112 x 112	1000 / Bag
PLA085	Fence Post Spacer 125 x 125	1000 / Bag



Gate Post Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA086	Gate Post Spacer 7 x 7	500 / Bag



Sill Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA175	Plastic Sill Spacer	500 / Bag



Flag Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA070	Flag Spacer Double	1000 / Bag
PLA075	Flag Spacers 370 mm	2000 / Bag



Cattle Slot Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA001	Bar Spacer 6x3	1000 / Bag
PLA002	Bar Spacer 7x4	500 / Bag



SDG Spacers

PRODUCT CODE	DESCRIPTION	SIZE
PLA163	SDG 200	1000 / Bag
PLA164	SDG 300	1000 / Bag



Panel Packers

PRODUCT CODE	DESCRIPTION	SIZE
PLA105	Panel Packers	200 / Bag



Plastic Shim



Allow for alignment and levelling of heavy section steel plate and pre-cast concrete sections.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA170	Plastic Shim 2 mm: 70 x 70 mm	125 per Bag
PLA171	Plastic Shim 3 mm: 70 x 70 mm	125 per Bag
PLA172	Plastic Shim 5 mm: 70 x 70 mm	125 per Bag
PLA173	Plastic Shim 7 mm: 70 x 70 mm	125 per Bag
PLA174	Plastic Shim 9 mm: 70 x 70 mm	125 per Bag
PLA174B	Plastic Shim 20 mm: 70 x 70 mm	50 per Bag

Caps

Provide formwork cover and prevent rust staining.

Concrete End Caps

PRODUCT CODE	DESCRIPTION	SIZE		
PLA069	End Caps 7mm	5000 / Bag		
PLA071	End Caps 6mm	8000 / Bag		



HD End Caps

PRODUCT CODE	DESCRIPTION	SIZE
PLA051	HD End Cap 25mm / 4-8mm	500 / Bag
PLA051B	HD End Cap 25mm / 10-16mm	500 / Bag
PLA051A	HD End Cap 20mm / 4-8mm	2500 / Bag
PLA052	HD End Cap 30mm / 10-16mm	250 / Bag



CONCRETE STRUCTURAL FIBRES

Barchip 48

Synthetic fire concrete reinforcement

BarChip 48 is a high performance structural synthetic fibre concrete reinforcement, optimised for pavements, industrial floors and precast elements.



Benefits:

- Comprehensive design and technical support
- Redistributes load increased ductility / toughness
- Eliminates corrosion long term durability
- Eliminates set-up of steel mesh
- Improves precast production speeds up to 50%
- Increases abrasion and impact protection
- 70% reduction in carbon footprint compared to steel
- Safer and lighter to handle than steel
- Reduced wear on concrete pumps and hoses

Galvanised Spiral Tubes

The original well-void tube type FR/4C

Specification

- Galvanised mild steel to EN10346:2009
- Manufactured to any length
- Plastic caps supplied and fitted (if required)
- Grout saddles supplied and fitted (if required)
- Manufactured on site in UK
- Bulk delivery available

Description

We can offer a wide range of diameters starting from 40 mm - 1000 mm. Well-Void was designed specifically to be a versatile high strength-low cost bored pile liner for the construction industry. These tubes can be connected to a trail of pipes securing by using either a screwed or push coupler or one of our Well-Void reducers. All the above applications engage over the corrugation helix.

Applications

Well-Void Type tube have a unique profile designed for maximum strength to weight ratio and to provide an economical duct.

Applications include:

- **Permanent pile liners, wells and caissons.** Prevents seepage and fall-in, simplifies construction and reduces preparation time. Resists the distortions caused by the hydrostatic pressures of concrete.
- Void formers in concrete. Light weight and is economical to install in bridges and concrete structures, will not leach from surrounding concrete, grout proof end caps available.
- Column forming in buildings. Eliminates costly traditional methods of column forming. Precut lengths just position and pour.





Sizes

- Well-Void FR tube also available in ovalised:
 Diameters from 40 mm 120 mm (any length)
- 3C Type Tube: All diameters from 125 mm up to 1000mm are referred to as 3C Type tube.
- Rectangular Type Tube: Is supplied in one size only 165 x 65 mm

Features

- The unique deep roll-formed internal corrugations which guarantees the maximum strength to weight ratio.
- Resists the distortions caused by the hydrostatic pressures of concrete.
- Ensures a first class sure bond to concrete.
- Socketed lockseam which minimises any restriction in the annulus during pile case retrieval.
- Versatile high strength-low cost.
- Considerable material cost savings due to the reinforcing effect of the 4-ply lockseam.

PRECAST ACCESSORIES

Still looking for something?

A full index of our product catalogue can be found on page 362.



Construction Accessories



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recostal[®] Standard type RSH Starter Packs

recostal[®] Starter Packs type RSH meet the requirements of DIN EN 1992-1-1 for the highest surface category "key profiled" in the case of transverse loads.

The deciding factor for the designer

recostal[®] Starter Packs type RSH meet the requirements of the DBV Bulletin "Rückbiegen von Betonstahl und Anforderungen an Verwahrkästen nach Eurocode 2" ["Rebending of reinforcement steel and requirements for continuity strips according to Eurocode 2"] (issue January 2011) for the highest joint category "key profiled" in the case of transverse stresses. No national approval required.

Technical data – RSH Starter Packs

- Trapezoidally profiled starter packs, joint category "key profiled" according to DIN EN 1992-1-1, highest shear force bearing capacity
- Concrete reinforcement steel according to BS EN ISO 17660 and BS8548

- 6 standard profiles, bar widths 12 cm 22 cm, smaller or larger bar widths on request
- Standard unit length L = 1.25 m, fixed lengths up to 2.50 m on request

Application

recostal® Starter Packs ensure time-saving installation of secure connections between steel reinforced concrete construction parts that are created with different pour sequences. Therefore, floor slabs, walls or staircases can be installed subsequently with rigid connections corresponding to the highest joint category "key profiled".

The large variety of shapes offers the perfect connection for many different design situations; special types for specific solutions are also available. The standard range includes starter packs with 12 mm and 16 mm diameter and L = 1.25 m unit lengths. Unit lengths exceeding 1.25 m, the production of special types and the combination with waterproofing systems as well as solutions for entire projects are possible on request.



Increased corrosion protection

Type RSH is installed with a planned 25 mm recess.

RSH active - Starter Pack with active waterproofing



Key Profile





RSH Starter Packs can be manufactured with an active bentonite coating on both sides for the application in construction joints exposed to water.



Advantages:

- Strong, robust galvanised sheet metal starter packs, dimensionally stable
- Cost and time effective installation, starter packs are simply nailed to the formwork
- Easy removal of the sheet metal covers due to their special design
- Trapezoidally profiled box for excellent bond
- Various possible combinations provide a solution for all common installation details

recostal® Standard Type RSH Starter Packs

Reinforcement steel: Cares Approved





DI	MENSIONS	PRODUCT CODE	TYPE	BAR Ø (MM)	CENTRES	LAP LENGTH (MM) LA	WIDTH OF STIRRUP (MM) B	WIDTH OF CASING (MM) D
T12	+ 100 +	EUR008	DCU 100	12	150	500	100	120
112		EUR009	JR009	12	200	500	100	
T12	+ 120 +	EUR010	RSH 120	12	150	500	120	140
		EUR011		12	200	500	120	140
T12	100	EUR012		12	150	500	140	170
	-	EUR013	KSH 14U	12	200	500	140	170

	DIMENSIONS	PRODUCT CODE	TYPE	BAR Ø (MM)	CENTRES	LAP LENGTH (MM) LA	WIDTH OF STIRRUP (MM) B	WIDTH OF CASING (MM) D
	T12	EUR014		12	150	500	160	190
	112 100	EUR015	PCH 140	12	200	500	160	190
	T16	EUR040	11311100	16	150	650	160	190
	•	EUR041		16	200	650	160	190
	T12	EUR016		12	150	500	180	210
	112 00	EUR017	RSH 180	12	200	500	180	210
	T16	EUR042		16	150	650	180	210
		EUR043		16	200	650	180	210
	T12 Jun	EUR018	RSH 200	12	150	500	200	230
	, man	EUR019		12	200	500	200	230
	T14	EUR044	11311 200	16	150	650	200	230
		EUR045		16	200	650	200	230
	T12	EUR020		12	150	500	220	250
_	·	EUR021	RSH 220	12	200	500	220	250
	T16	EUR046	11311 220	16	150	650	220	250
	·	EUR047		16	200	650	220	250



recostal[®] Standard Type VHQ Starter Packs



STANDARD	PRODUCT CODE	Ø (MM)/ S (CM)	LAP LENGTH LO (CM)	CENTRES S (CM)
h	EUR001	- 12/15	50	15
	EUR002	- 12/20	50	20
	EUR003	- 16/15	65	15
	EUR004	- 16/20	65	20

Graph for the determination of the production-related required box widths and max. producible L0-lengths.





SPECIAL SHAPE CODES AVAILABLE. CONTACT OUR TECHNICAL DEPARTMENT FOR MORE INFORMATION.





2SH



SKG





SKR



SRG



Female Couplers

This is the cast in part of the system. It comprises a socket swaged onto a high yield reinforcement bar. The socket area is larger than the bar ensuring that the bar itself is the weakest part of the coupler. Also available in Stainless Steel.



PRODUCT		THR	READ	COU DIMEI	PLER		REINFOR	RCEMENT
CODE	(MM)	METRIC (M)	LENGTH (MM)	WIDTH (MM)	LENGTH (MM)	MM)	TENSILE FORCE (KN)	RATED SECTION (MM ²)
PSG120400	400	16	25	22	62	12	56.5	113.0
PSG120600	600	16	25	22	62	12	56.5	113.0
PSG120800	800	16	25	22	62	12	56.5	113.0
PSG121500	1500	16	25	22	62	12	56.5	113.0
PSG160400	400	20	38	27	86	16	100.5	201.0
PSG160550	550	20	38	27	86	16	100.5	201.0
PSG160800	800	20	38	27	86	16	100.5	201.0
PSG161020	1020	20	38	27	86	16	100.5	201.0
PSG161440	1440	20	38	27	86	16	100.5	201.0
PSG200700	700	24	42	34	99	20	157.0	314.0
PSG201000	1000	24	42	34	99	20	157.0	314.0
PSG201280	1280	24	42	34	99	20	157.0	314.0
PSG201800	1800	24	42	34	99	20	157.0	314.0
PSG202000	2000	24	42	34	99	20	157.0	314.0
PSG202200	2200	24	42	34	99	20	157.0	314.0
PSG250700	700	30	52	41	117	25	245.5	491.0
PSG251000	1000	30	52	41	117	25	245.5	491.0
PSG251500	1500	30	52	41	117	25	245.5	491.0
PSG252260	2260	30	52	41	117	25	245.5	491.0
PSG321400	1400	42	65	54	153	32	401.9	803.8
PSG322300	2300	42	65	54	153	32	401.9	803.8
PSG401000	1000	48	72	64	188	40	625.0	1250.0
PSG401500	1500	48	72	64	188	40	625.0	1250.0
PSG402000	2000	48	72	64	188	40	625.0	1250.0

Male Couplers

This is the screw in coupler. It has an enlarged threaded end to maximize the bar strength.



PRODUCT	LENGTH	THE	READ NSIONS		REINFO	RCEMENT
CODE	(MM)	METRIC (M)	LENGTH (MM)	(MM)	TENSILE FORCE (KN)	RATED SECTION (MM ²)
TSE120200	200	16	22	12	56.5	113.0
TSE120375	375	16	22	12	56.5	113.0
TSE120575	575	16	22	12	56.5	113.0
TSE120800	800	16	22	12	56.5	113.0
TSE121000	1000	16	22	12	56.5	113.0
TSE121500	1500	16	22	12	56.5	113.0
TSE122000	2000	16	22	12	56.5	113.0
TSE160520	520	20	28	16	100.5	201.0
TSE160770	770	20	28	16	100.5	201.0
TSE161020	1020	20	28	16	100.5	201.0
TSE161250	1250	20	28	16	100.5	201.0
TSE161440	1440	20	28	16	100.5	201.0
TSE162200	2200	20	28	16	100.5	201.0
TSE161250	1250	20	28	16	100.5	201.0
TSE200665	665	24	35	20	157.0	314.0
TSE200965	965	24	35	20	157.0	314.0
TSE201280	1280	24	35	20	157.0	314.0
TSE201800	1800	24	35	20	157.0	314.0
TSE202200	2200	24	35	20	157.0	314.0
TSE251000	1000	30	43	25	245.5	491.0
TSE251500	1500	30	43	25	245.5	491.0
TSE252260	2260	30	43	25	245.5	491.0
TSE321000	1000	42	45	32	401.9	803.9
TSE321400	1400	42	45	32	401.9	803.9
TSE322300	2300	42	45	32	401.9	803.9

Bespoke Couplers

Female Double Ended



Alligator Splice Off Couplers

The Alligator Couplers are used for splicing any grade or profile of reinforcing bar. These couplers are made for reinforcement steel with diameters in the range of 10 mm to 40 mm. Connection is made by inserting bars into both ends of the coupler. The breaking bolts

are then screwed by hand and tightened by ratchet wrench until bolts shear off. These couplers can be used in particular cases, to replace the damaged reinforcements with new ones and to connect to the old structure.

Male Double Ended

SDG PRODUCT CATALOGUE

- No need for threading or any other bar preparation
- These are fast (simple) easy to use
- No special skilled labor required
- No welded components
- Performs as a continuous piece of rebar
- Allows for easy visually inspection



PRODUCT CODE	BAR DIA. (MM)	NO. OF BOLTS	BOLT THREAD	L (MM)	D (MM)	D1 (MM)	Н (ММ)	H1 (MM)	H2 (MM)	Н (ММ)	H1 (MM)	H2 (MM)	SW (MM)	TORQUE BOLTS (NM)
ALC10	10	6	M12	160	35	33	48	35	13	36	23	13	13	90 - 99
ALC12	12	6	M12	180	35	33	51	35	16	40	24	16	13	90 - 99
ALC14	14	8	M12	230	40	36	57	39	18	45	27	18	13	90 - 99
ALC16	16	8	M12	230	40	36	57	39	18	45	27	18	13	90 - 99

PRODUCT CODE	BAR DIA. (MM)	NO. OF BOLTS	BOLT THREAD	L (MM)	D (MM)	D1 (MM)	H (MM)	H1 (MM)	H2 (MM)	H (MM)	H1 (MM)	H2 (MM)	SW (MM)	TORQUE BOLTS (NM)
ALC18	18	10	M12	260	44	42	60	40	20	49	29	20	13	90 - 99
ALC20	20	10	M16	260	47	44	65	44	21	54	33	21	17	90 - 99
ALC22	22	10	M16	330	53	50	68	42	26	58	32	26	17	175 - 192
ALC25	25	12	M16	390	56	52	75	45	30	63	33	30	17	175 - 192
ALC28	28	12	M20	420	66	62	90	60	30	75	45	30	22	355 - 405
ALC32	32	14	M20	480	73	68	91	60	31	77	46	31	22	355 - 405
ALC36	36	16	M20	540	79	73	99	64	35	85	50	35	22	355 - 405
ALC40	40	18	M20	580	79	73	103	67	36	85	49	36	22	355 - 405

Alligator Coupler with Plate

The plate is designed to ensure dead end SW embedment for reinforcement steel bars in concrete. This helps to reduce the congestion and simplify the placement of reinforcement bars by removing the need for hooked ends.



PRODUCT CODE	BAR DIA. (MM)	NO. OF BOLTS	TORQUE BOLTS(NM)	SW (MM)	L (MM)
BCS0P10	10	3	90 - 99	13	88
BCS0P12	12	3	90 - 99	13	98
BCS0P14	14	4	90 - 99	13	123
BCS0P16	16	4	90 - 99	13	123
BCS0P20	20	5	90 - 99	13	150
BCS0P22	22	5	175 - 192	17	175
BCS0P25	25	6	175 - 192	17	205
BCS0P32	32	7	355 - 405	22	255
BCS0P36	36	8	355 - 405	22	285
BCS0P40	40	9	355 - 405	22	305

Advantages:

Dywidag Bar

A highly effective system of high tensile steel bar designed for holding formwork panels in place. The original, high quality Dywidag Threadbar may not be welded due to its chemical composition and must be protected against all kinds of weld spatter.



PRODUCT CODE	PRODUCT DESCRIPTION	STEEL GRADE	MAX. LOAD	WORKING LOAD (KN)	PRODUCT SIZE
FWK075	Dywidag Bar 15mm – 6 Metre Bar	15/17 mm	St 900/1100	195	6 Metre Lengths
FWK074	Dywidag Bar 20mm – 6 Metre Bar	20/23 mm	St 900/1100	345	6 Metre Lengths

Dywidag Slope Plate

Features a wing nut that is undetachable from the plate. Both the plate and the nut are cast.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK078	Dywidag Slope Plate 15 mm	Each

Dywidag Hexagonal Weldable Nuts

Used as an alternative to the wing nut when access is restricted.

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PRODUCT CODE	PRODUCT DESCRIPTION	HEX	PRODUCT SIZE
FWK089	Hexagonal Nuts (Weldable) 15 mm x 50 mm	36 mm	Each
FWK088	Hexagonal Nuts (Weldable) 20 mm x 70 mm	36 mm	Each

Dywidag Wing Nuts

With different Waler Plates, Wing Nuts can be used as anchor nuts both for timber and steel walings, overcome by applying hammer strokes to the wings. They can be fixed and loosened using a hexagon wrench or threadbar. If necessary, a clamping effect can be attained or overcome by applying hammer strokes to the wings.

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PRODUCT CODE	PRODUCT DESCRIPTION	HEIGHT	HEX	PRODUCT SIZE
FWK077	Dywidag Wing Nut 15 mm	55 mm	27 mm	Each
FWK081	Dywidag Wing Nut 20 mm	60 mm	36 mm	Each

Dywidag Waler Plates

Waler Plates are used for timber or steel walings in conjunction with a winged nut or a hex nut for load transfer.



PRODUCT CODE	PRODUCT DESCRIPTION	HEX	PRODUCT SIZE
FWK082	Dywidag Waler Plate 15 mm x 105 mm	30 mm	Each / 25 per Bag
FWK083	Dywidag Waler Plate 20 mm x 130 mm	36 mm	Each / 25 per Bag

Dywidag Connectors



Couplers for the force-fit connection of two threadbars. A stop pin in the middle of the coupler ensures an equal screwing-in length of both bars.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK076	Dywidag Connector 15 mm	Each
FWK084	Dywidag Connector 20 mm	Each

End Cones



Plastic cones used for the support of shuttering pans at the end of tubing.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK005	Cones 22 mm x 10 mm	500 per Bag
FWK006	Cones 26 mm x 10 mm	500 per Bag
FWK011	Cones 22 mm x 50 mm	100 per Bag
FWK012	Cones 26 mm x 50 mm	100 per Bag

Tubing

Rough rigid tube used as a spacer between formwork which allows tie bar to be removed for re-use.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK003	Tubing 22 mm	100 metre Bundle
FWK004	Tubing 26 mm	50 metre Bundle

Expansion Shells

Expansion shells are used for fixing single-sided shuttering or similar structures in rock, concrete or comparable load-bearing ground. When installing expansion shells, please consult the separate installations instructions available on demand.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK086	Dywidag Expansion Shell 15 mm	Each

Threaded End Cones

Plastic cones used for support of shuttering pans at the end of tubing.

Robusta Drop in Anchor

A drop-in anchor specifically designed for use with 15 mm

formwork Tie Rod Bars. It is ideal for low load applications, such as fixings for handrails into existing concrete. For safety reasons we recommend that admissible loads for a low concrete strength of 15 M/mm. This means in practice that the anchors are often installed the next day after

concreting and are already loaded.

PRODUCT CODE

FWK085



PRODUCT SIZE

Each

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK014	22 mm x 30 mm Threaded End Cone	100 per Bag

PRODUCT DESCRIPTION

Robusta Drop in Anchor

Tie Bar Form Anchor

Tie Bar Form Anchor is versatile, non-corrosive and used mainly for securing single-sided and climbing formwork. Easily fixed using the plastic cone locator enabling quick formwork erection, with no drilling of plywood. Can also be used for securing slab edge formwork, guard rails, etc. For use with 15 mm Dywidag Tie Rods. Safe working load 50 kn.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK087	Tie Bar Form Anchor 15 mm	Each / 100 per Box

Groove Cap

Used instead of cones but not removed after pouring concrete. The ribs provide a good bond with the concrete and improve water impermeability.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK017	Groove Cap 26 mm x 20 mm	250 per Bag

CONSTRUCTION ACCESSORI

Groove Plug

Used to close both ends of the Groove Caps, eliminating the need for rubber stoppers or Tiestop.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK018	Groove Plug 26 mm	500 per Bag

SST Formwork Plug

Plastic plug to close holes in formwork.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK015	SST Formwork Plug 20-25	500 per Bag

Double Wall Dowel

Double-wall dowel for attaching braces for precast concrete during construction. Made from high quality plastic. The double-wall dowel will be glued on the formwork. A screw with diameter 12x70 mm is needed for fixation of the braces on the double-wall dowel.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK204	Double Wall Dowel	250 per Bag

Plastic Kicker Without Nail



Plastic kickers are used to locate the formwork panel at the base of walls. Supplied without nail. Fixed using masonry nails.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK009	Plastic Kicker	100 per Bag

Aqua Plug

Soft elastic PVC plug for sealing flexible tight fittings for internal sealing of plastic sleeves prior to filling with Tiestop.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK000	Aqua Plug Flexi 22 mm	500 per Bag
FWK002	Aqua Plug Flexi 26mm	500 per Bag

Tiestop Sealer

For filling holes formed by formwork bolts in new construction, particularly where a rapid setting, durable and waterproof mortar is required.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK350	Tiestop Sealer	8Kg

Plastic Shim

Allow for alignment and levelling of heavy section steel plate and pre-cast concrete sections.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA170	Plastic Shim 2 mm: 70 x70 mm	125 per Bag
PLA171	Plastic Shim 3 mm: 70 x 70 mm	125 per Bag
PLA172	Plastic Shim 5 mm: 70 x 70 mm	125 per Bag
PLA173	Plastic Shim 7 mm: 70 x 70 mm	125 per Bag
PLA174	Plastic Shim 9 mm: 70 x 70 mm	125 per Bag
PLA174B	Plastic Shim 20 mm: 70 x 70 mm	50 per Bag

K-Form UPVC Screed Rail

K-Form plastic shuttering system made from uPVC is light weight, durable and does not require removal after concrete pouring. It is easily cut to length on site and has pre-drilled holes in the vertical face for locating steel dowel bars and in the base for mortar anchoring. K-Form's patented design features a built-in expansion joint, end clips for jointing and a removable top strip for joint sealing.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
KFM001	K-Form – K135 with 2 number Jointer. Designed for slab depth 150 mm-225 mm (when used in conjunction with K25 Riser).	3 Metre Lengths
KFM005	K-Form – K85 with 1 number Jointer. Designed for slab depth 100 mm-140 mm (when used in conjunction with K25 Riser).	3 Metre Lengths
KFM008	K-Form – K35 with 1 number Jointer. Designed for slab depth 50 mm-100 mm.	3 Metre Lengths
KFM010	K-Form – Risers 25mm	3 Metre Lengths
KFM015	K-Form – Crosses	Each
FWK185	Dowel Bar Cap 40mm	100 per box

Plastic Void Former

Void Formers used in or on ground concrete slabs to reduce the volume of concrete whilst maintaining the overall strength of the slab.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK120	Void Former 20 x 10 mm	Per 3 Metre
FWK121	Void Former 20 x 20 mm	Per 3 Metre

Dowel Bars

Mild steel plain round bars with sawn end. Bar cutting available on request. Finished in stainless steel. (Galvanised or polymeric available on request.)



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK068	Dowel Bar R12 x 900 mm	Each
FWK071	Dowel Bar R16 x 600 mm	Each
FWK072	Dowel Bar R20 X 600 mm	Each
FWK069	Dowel Bar R25 x 600 mm	Each

Dowel Bar Caps

Dowel bar caps have a compressible filler which allows for the expansion of dowel bars.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK180	Dowel Bar Cap 12 mm	100 per box
FWK181	Dowel Bar Cap 16 mm	100 per box
FWK182	Dowel Bar Cap 20 mm	100 per box
FWK183	Dowel Bar Cap 25 mm	100 per box
FWK184	Dowel Bar Cap 32 mm	100 per box
FWK185	Dowel Bar Cap 40 mm	100 per box

Dowel Bar Sleeves

PVC dowel bar sleeves act as a method of debonding of the mild steel dowel bars.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK190	Dowel Bar Sleeve 12 mm x 450 mm	100 per box
FWK191	Dowel Bar Sleeve 16 mm x 300 mm	100 per box
FWK192	Dowel Bar Sleeve 20 mm x 300 mm	100 per box
FWK193	Dowel Bar Sleeve 25 mm x 300 mm	100 per box
FWK194	Dowel Bar Sleeve 32 mm x 375 mm	50 per box

Protection Board

Protection Board is used for the protection of floors, walls, windows, stairs and doors in the construction industry and especially during refurbs – it is lightweight and cost effective.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PER010	Protection Board 1220 x 2440 x 2 mm Black	1220 x 2440 mm Sheet

Chamfer with Flange

Forming chamfered edges to columns and beams – the flanged profile allows for nailing to the formwork.



	PRODUCT RECORDETION	
PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK167	10 mm Chamfer with Flange	100 metres per bundle
FWK160	11 mm Chamfer with Flange	100 metres per bundle
FWK161	15 mm Chamfer with Flange	100 metres per bundle
FWK162	20 mm Chamfer with Flange	100 metres per bundle
FWK163	25 mm Chamfer with Flange	50 metres per bundle

Chamfer without Flange Forming chamfered edges to columns and beams.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK164	Chamfer 15 mm no Flange	100 metres per bundle
FWK165	Chamfer 20 mm no Flange	100 metres per bundle
FWK166	Chamfer 25 mm no Flange	100 metres per bundle

Bolt Boxes

Used to position holding down bolts in concrete bases. Available in light duty, heavy duty and cardboard.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK025	Bolt Box 225 mm – 24 mm Bolt	Each / 100 per bale
FWK026	Bolt Box 300 mm – 24 mm Bolt	Each / 100 per bale
FWK027	Bolt Box 375 mm – 24 mm Bolt	Each / 100 per bale
FWK028	Bolt Box 450 mm – 24 mm Bolt	Each / 100 per bale
FWK029	Bolt Box 600 mm – 24 mm Bolt	Each / 100 per bale
FWK035	Bolt Box Waxed Cardboard 229 mm	Each/ 400 per box
FWK036	Bolt Box Waxed Cardboard 305 mm	Each / 300 per box
FWK037	Bolt Box Waxed Cardboard 380 mm	Each / 200 per box
FWK038	Bolt Box Waxed Cardboard 457 mm	Each / 100 per box
FWK039	Bolt Box Waxed Cardboard 534 mm	Each / 100 per Box

Bottom Crack Inducer

Used where a vertical crack formed from the base of the slab is required.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK170	Bottom Crack Inducer 40 MM	5 Metres

Hy-Rib

Expanded metal sheet product, designed to use as permanent formwork. Creates a mechanical key for the second phase pour.

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PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK090	Hy-Rib 0.445 x 2 M	0.445 x 2 Metres per Sheet

Top Crack Inducer

Used in external concrete slab areas where the joint must be sealed – the top part is removed after the concrete has set to facilitate sealing.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK171	Top Crack Inducer 50 MM	5 Metres

Polythene

Manufactured from high quality recycled polyethylene for use in solid concrete ground floors to protect buildings against water from the ground providing an effective barrier against liquid or water vapour for the lifetime of the concrete slab in which they are installed.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK149	Polythene TPS Clear 50 mu/200 g	Per Roll: 4 x 25 Metres
FWK151	Polythene DPM 300 mu/1200 g (BBA)	Per Roll: 4 x 25 Metres
FWK152	Polythene DPM 250 mu/1000 g (BBA)	Per Roll: 4 x 25 Metres

Formwork Foam

Grout check tape, adhesive foam strip designed for inaccessible joints to prevent grout loss.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF049	Formwork Foam 12 x 6 mm	10 Metre Roll
NUF049B	Formwork Foam 24 x 12 mm	5 Metre Roll

Jointstrip

Jointstrip is a closed cell cross linked polyethylene foam which provides a fast, efficient and cost-effective system for all brick and concrete expansion joints. It has proven to be excellent for isolating structural components and forming joints in concrete slabs.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
JNT002	Jointstrip 125 x 10 mm	10 Metre Roll / 120 Metre Bundle
JNT010	Jointstrip 100 x 10 mm	10 Metre Roll / 120 Metre Bundle
JNT011	Jointstrip 150 x 10 mm	10 Metre Roll / 80 Metre Bundle
JNT012	Jointstrip 175 x 10 mm	10 Metre Roll / 60 Metre Bundle
JNT013	Jointstrip 200 x 10 mm	10 Metre Roll / 60 Metre Bundle
JNT014	Jointstrip 250 x 10 mm	10 Metre Rolls / 40 Metre Bundle
JNT015	Jointstrip 300 x 10 mm	10 Metre Rolls / 30 Metre Bundle
JNT020	Jointstrip 100 x 20 mm	2 Metre Lengths / 50 Metre Bale
JNT021	Jointstrip 150 x 20 mm	2 Metre Lengths / 50 Metre Bale
JNT022	Jointstrip 175 x 20 mm	2 Metre Lengths / 50 Metre Bale
JNT023	Jointstrip 200 x 20 mm	2 Metre Lengths / 50 Metre Bale
JNT025	Jointstrip 250 x 20 mm	2 Metre Lengths / 50 Metre Bale
JNT026	Jointstrip 300 x 20 mm	2 Metre Lengths / 50 Metre Bale

Other sizes available on request.

Jointstrip Expancell Sheets

Expancell is a closed cell polyethylene foam. It offers an easy and efficient method of forming expansion voids in brickwork, blockwork and concrete.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
JNT070	Expancell Sheet 12 mm	2 x 1.2 Metre
JNT071	Expancell Sheet 15 mm	2 x 1.2 Metre
JNT072	Expancell Sheet 20 mm	2 x 1.2 Metre
JNT073	Expancell Sheet 25 mm	2 x 1.2 Metre

Expansion Cord

Closed cell polyethylene foam cord in varying diameters. Used behind sealants and mastics in expansion.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
JNT028	Expanded Cord 10 mm	1 Metre / 1150 Metre per box
JNT030	Expanded Cord 13 mm	1 Metre / 750 Metre per box
JNT031	Expanded Cord 15 mm	1 Metre / 550 Metre per box
JNT032	Expanded Cord 20 mm	1 Metre / 350 Metre per box
JNT033	Expanded Cord 25 mm	1 Metre / 200 Metre per box
JNT036	Expanded Cord 30 mm	1 Metre / 160 Metre per box
JNT034	Expanded Cord 40 mm	2 Metres / 270 Metre per box
JNT035	Expanded Cord 50 mm	2 Metres / 180 Metre per box

EXPANSION JOINT MATERIALS

Fibre Fillerboard

Bitumen impregnated fibre fillerboard. It has excellent resistance to compression with outstanding recovery characteristics.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
JNT088	Fibre Fillerboard 1220 x 2200 x 12 mm	1.22 x 2.2 Metre
JNT089	Fibre Fillerboard 1220 x 2200 x 19 mm	1.22 x 2.2 Metre
JNT090	Fibre Fillerboard 1220 x 2200 x 25 mm	1.22 x 2.2 Metre

Texslip Membrane

Slip membranes are produced from an ultra-heavy 250 kg/m3 density polyethylene, 2mm in thickness, it is used in sliding joints where low friction resistance material is needed, but a high resistance to load is also required. Normally used in two layers to form a low friction load bearing sliding joint.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK220	Texslip Membrane 2 mm – 1.2 x 100 Metre	Per roll

Foam Frost Mats

Frost Mats – Perfect for winter concrete laying and curing. When the temperature drops, concrete pours and curing can be difficult – an easy and inexpensive solution is the use of thermally insulated frost mats.

The thermal insulation effect keeps the concrete warm long enough for a safe curing and reduces the loss of hydration. The frost mats are lightweight, reusable and recyclable.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK155	Foam Frost Blankets 75 x 1.5 Metre x 7 mm Thick	Each

Perm-E-Form

Perm-E-Form is a fast and simple system for construction of in-situ concrete ground beams and pile caps. Developed to save money, time and labour, Perm-E-Form is proving popular with many contractors. Perm-E-Form Beam Forming System is designed to meet the individual size requirements of concrete ground beam forming in light commercial and house building developments. An ideal product where ground beams are constructed in-situ onto piling or in unstable and contaminated ground situations. Other sizes available on request.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PER0030	Perm-E-Form 100 mm	2 Metre Strip
PER001	Perm-E-Form 500 mm	2 Metre Strip
PER002	Perm-E-Form 625 mm	2 Metre Strip
PER003	Perm-E-Form 833 mm	2 Metre Strip
PER007	Perm e Form 1000 mm	2 Metre Strip
PER005	Perm-E-Form 1250 mm	2 Metre Strip
PER015B	Perm-E-Form 2.5 M wide x 2 M long Full Sheet	Per Sheet
PER050	White Perm e Form 2.5 M x 2.5 M	2.5 Metre Sheet



Safety Caps

The protection cap is screwed onto the reinforcing bar and fits tightly and securely due to the ribbed construction on all reinforcement diameters. This is not possible with conventional caps.

The cap can be used several times and increases the visibility of danger points by the highly visible colour, yellow.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK200	Safety Caps 6-18 mm	250 per Bag
FWK201	Safety Caps 16-32 mm	250 per Bag
FWK202	Safety Caps 25-40 mm	100 per Bag

$Nevosafe^{\scriptscriptstyle (\!R\!)}$

The Nevosafe® safety strip can be easily and quickly installed because of its integrated handle strip. It can be applied in horizontal and vertical positions and can be re-used. The Nevosafe® is available in highly visible colours to increase visibility.

Range includes:

- Nevosafe[®]
- Nevosafe® with Steel Core

Nevosafe® TS

For application during storage and transport of precast concrete elements. Safety strip for securing cantilevered reinforcing bars.





LINE SPACERS

Wire Spacers

Provides support for mesh in ground floor slabs. Available in 2 Metre lengths and in heights up to 300 mm.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR013	50 mm WIRE SPACER	50 Meters
WIR014	75 mm WIRE SPACER	50 Meters
WIR015	90 mm WIRE SPACER	50 Meters
WIR016	105 mm WIRE SPACER	50 Meters
WIR017	120 mm WIRE SPACER	50 Meters
WIR017B	135 mm WIRE SPACER	50 Meters
WIR018	150 mm WIRE SPACER	50 Meters
WIR018B	165 mm WIRE SPACER	50 Meters
WIR019	180 mm WIRE SPACER	50 Meters
WIR019B	200 mm WIRE SPACER	50 Meters
WIR024	250 mm WIRE SPACER	20 Meters
WIR025	300 mm WIRE SPACER	20 Meters

Other sizes available on request.

Trik Trak

Spacer for light easy continuous stable support for mesh and reinforcement. Large lateral cut-outs allow for free flow of concrete. 2 Metre lengths.



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PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
CLS008	Trik Trak 20 mm	100 per Bundle
CLS001	Trik Trak 25 mm	100 per Bundle
CLS002	Trik Trak 30 mm	100 per Bundle
CLS003	Trik Trak 35 mm	60 per Bundle
CLS004	Trik Trak 40 mm	60 per Bundle
CLS005	Trik Trak 50 mm	60 per Bundle
CLS007	Trik Trak 60 mm	40 per Bundle

Zig Zag Trik Trak

Stable spacer for lower reinforcement, with the following advantages:

- Does not break if stood on
- Cannot overturn
- High load bearing capacity
- No cavitation due to optimum inclusion in concrete
- Avoids the formation of linear cracks in concrete
- 2 Metre lengths

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
CLS010	Zig Zag Trik Trak 25 mm	100 Metres per Bundle
CLS011	Zig Zak Trik Trak 30 mm	100 Metres per Bundle
CLS012	Zig Zag Trik Trak 35 mm	80 Metres per Bundle
CLS013	Zig Zag Trik Trak 40 mm	80 Metres per Bundle
CLS014	Zig Zag Trik Trak 50 mm	80 Metres per Bundle

Centipede Spacer

Rod type spacer which offers minimal contact with the concrete face, primarily for use in precast factories. Available in 2 Metre lengths.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
CLS049	Centipede Spacer 15 mm	64 Metres per Bundle
CLS048	Centipede Spacer 20 mm	64 Metres per Bundle
CLS050	Centipede Spacer 25 mm	64 Metres per Bundle
CLS051	Centipede Spacer 30 mm	80 Metres per Bundle
CLS052	Centipede Spacer 40 mm	24 Metres per Bundle
CLS053	Centipede Spacer 35 mm	24 Metres per Bundle

Centipede Spacer with Uprights

Rod type spacer which offers minimal contact with the concrete face. The uprights prevent movement of the rebar, primarily for use in precast factories. Available in 2 Metre lengths.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
CLS058	15 mm Centipede Spacer with Uprights	200 per Bundle
CLS059	20 mm Centipede Spacer with Uprights	200 per Bundle
CLS060	25 mm Centipede Spacer with Uprights	200 per Bundle
CLS061	30 mm Centipede Spacer with Uprights	200 per Bundle
CLS062	40 mm Centipede Spacer with Uprights	200 per Bundle
CLS063	50 mm Centipede Spacer with Uprights	200 per Bundle

Wheel Spacers

For fixing spacing of vertical reinforcements. Available to suit various bar diameter and cover.



PRODUCT CODE	PRODUCT DESCRIPTION (COVER/BAR DIA MM)	PRODUCT SIZE
WSP002	Wheel Spacer 15 mm 4-10	1000 Small / 5000 Large per bag
WSP010	Wheel Spacer 20 mm 4-12	1000 Small / 4000 Large per bag
WSP011	Wheel Spacer 25 mm 4-12 S	500 Small / 2500 Large per bag
WSP012	Wheel Spacer 30 mm 4-12 S	250 Small / 1500 Large per bag
WSP013	Wheel Spacer 35 mm 4-12	200 Small / 1000 Large per bag
WSP014	Wheel Spacer 40 mm 5-14	125 Small / 750 Large per bag
WSP015	Wheel Spacer 50 mm 8-14	100 Small / 500 Large per bag
WSP020	Wheel Spacer 30 mm 6-20	125 Small / 1000 Large per bag
WSP021	Wheel Spacer 35 mm 6-20	125 Small / 1000 Large per bag
WSP030	Wheel Spacer 20 mm 6-20	250 Small / 2000 Large per bag
WSP031	Wheel Spacer 25 mm 6-20	250 Small / 1000 Large per bag
WSP032	Wheel Spacer 40 mm 6-20	125 Small / 500 Large per bag
WSP033	Wheel Spacer 50 mm 12/20	250 Small per bag
WSP035	Wheel Spacer 60 mm 12-20	250 Small per bag

A Spacer

A strong economical general-purpose spacer that can be used in vertical or horizontal applications – suits bars ranging from 4-20 mm.



PRODUCT CODE	PRODUCT DESCRIPTION (COVER/BAR DIA MM)	PRODUCT SIZE
PLA003	Spacer A20	2000 Bag
PLA005	Spacer A25 MDPE	1000 Bag
PLA006	Spacer A30 MDPE	1000 Bag
PLA007	Spacer A35 MDPE	1000 Bag
PLA008	Spacer A40 MDPE	1000 Bag
PLA009	Spacer A50 MDPE	1000 Bag
PLA010	Spacer A60 HD	1000 Bag

ASKP Spacers

Plastic support spacers for vertical reinforcement with point-shaped formwork support and moulded terminals to hook into reinforcement mats (clamping distance: 150 mm). Cover/bar diameter (mm) available in a variety of sizes:



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA200	ASKP Spacer 20 mm	1000 per Bag
PLA202	ASKP Spacer 25 mm	1000 per Bag
PLA201	ASKP Spacer 30 mm	1000 per Bag

Tower Spacer

Stable spacer with pointed legs to ensure minimum visibility on the concrete surface. Cover/bar diameter (mm) available in a variety of sizes:



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA210	Tower Spacer 20/6-20	1000 per Box
PLA211	Tower Spacer 25/6-20	1000 per Box
PLA215	Tower Spacer 40/6-20	1000 per Box
PLA217	Tower Spacer 60/6-20	1000 per Box

Flat Foot Spacer

Provides stable support to reinforcing steel in ground floor slabs and its large base area prevents puncturing of polythene film. The clip feature also allows for vertical application. Cover/bar diameter (mm) available in a variety of sizes:



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA072	Flat Foot Spacer 25/30	250 per Bag
PLA073	Flat Foot Spacer 40/50	200 per Bag
PLA074	Flat Foot Spacer 65/75	200 per Bag

Pile Cage Spacer

Specially designed for use with pile cages. Clip on design allows for simple fixing to helical or main bars.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA198	Pile Cage Spacers 75 mm	1000 per Box

Paving Support Spacer

Stackable fixed height supports are ideal for paving on straightforward projects. They act as a guide when laying paving, ensuring uniform position.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA106	Paving Support Static 15 mm	175 per Box

Adjustable Paving Supports



Adjustable Plastic Paving Support Pads are designed to be rotated at the head so that the height can be very finely adjusted, to take into account small, continuous and irregular differences in the levels within a particular area.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLA011	Adj Paving Supports 35-50 mm	25 per Box
PLA012	Adj Paving Supports 50-70 mm	25 per Box
PLA013	Adj Paving Supports 65-100 mm	25 per Box
PLA014	Adj Paving Supports 95–130 mm	25 per Box
PLA015	Adj Paving Supports 125-160 mm	25 per Box
PLA016	Adj Paving Supports 155-190 mm	25 per Box
PLA017	Adj Paving Supports 185-220 mm	25 per Box

CONCRETE

Fibre Concrete Bar

Ensures concrete cover for high requirements.

Getting the right amount of concrete cover is essential for the durability of reinforced concrete structures. Fibre concrete spacers ensure correct concrete cover before and during concreting. They are characterised by high compressive strength and excellent chemical and physical resistance.

Advantages:

- Cement-bound spacers, no heat/cold deformation
- Absolute guarantee of concrete cover
- Various attachment options for quick and easy use
- Precise positioning
- Homogeneous bond, no hairline cracks between spacer and concrete
- Fire-resistant according to the maximum requirements of DIN 4102 - Class A1 (non-flammable)



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
C0N001	25 mm Concrete Bar	600 Metres per Pallet
C0N002	30 mm Concrete Bar	600 Metres per Pallet
CON110	40 mm Concrete Bar	440 Units per Pallet
C0N111	50 mm Concrete Bar	330 Units per Pallet
C0N112	60 mm Concrete Bar	234 Units per Pallet
C0N113	75 mm Concrete Bar	150 Units per Pallet
C0N114	100 mm Concrete Bar	70 Units per Pallet

Fibre Concrete Spacers

Wide range of heavy-duty spacers for accurate placing of both horizontal and vertical reinforcement and mesh maximum stability under normal loading conditions.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
C0N071	Concrete Spacer 35/40/50	200 per Bag
C0N054	Concrete Spacer 50/60 Arch Base	125 per Bag
C0N072	Concrete Spacer 40/50 Arch Base	200 per Bag
C0N057	Concrete Spacer 65/75 Arch Base	50 per Bag
C0N055	Concrete Spacer 60/75 Flat Base	50 per Bag
CON150	25 mm Concrete Spacer with Plastic Slip	480 per Bag
CON151	35 mm Concrete Spacer with Plastic Clip	340 per Bag
CON152	50 mm Concrete Spacer with Plastic Clip	215 per Bag
CON160	35/40/50 Pre-Wired 50N Concrete Spacers	185 per Bag

ACCESSORIES

Black Annealed Tying Wire

Tying wire is used for connecting loose rebar on-site to prevent any movement of the reinforcement during pouring and curing. Soft and malleable and can be bent, twisted and tied.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR050	Black Annealed Tying Wire	12 Kg Coils

Stainless Steel Tying Wire

Stainless Steel Tying Wire is used where there is a risk of staining.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR051	Stainless Steel Tying Wire 18 Gauge – 1.2 mm Diameter	15 Kg

Steel Fixers Nips

Precision cutting for soft and hard wire.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
TLS001	Wire Cutters	Each

Tying Tool

Tool for use with the Wire Ties.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR037	Wire Tying Tool	Each

Wire Ties

Alternative to tying wire, pre-formed looped wire ties. Wrap around reinforcing bar and pull through using wire tying tool.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR034	S/S Wire Ties 6 Inch	1000 Small /5000 Large
WIR035	Wire Ties 6 Inch	1000 Small /5000 Large
WIR036	Wire Ties 8 Inch	1000 Small /5000 Large

Used with wire ties, twists and tightens. Rubber hand grip for a firm hold.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WIR020	Wire Binder 8/12	9600/Box
WIR021	Wire Binder 8/16	8000/Box
WIR022	Wire Binder 8/20	5600/Box

RELEASE AGENTS

Omnilease Bio

Vegetable Oil Based

Vegetable oil-based release agent which forms a thin, colourless film on the surface of formwork. It facilitates the even dispersion of the concrete and assists bubble resorption during vibration. It is non-toxic, environmentally and user friendly and produces quality pre-cast finishes.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
OMN053	Omnilease Bio 25 Litres	25 Litres
OMN054	Omnilease Bio 210 Litres	210 Litres
OMN055	Omnilease Bio 1000 Litres	1000 Litres

Logco-Lease

Chemical Based

Versatile high specification chemical release agent blended with highly active surfactants ensures that optimum release is attained hence achieving a high-quality concrete surface finish. Produces uniform, stain-free concrete – can be used on timber, plywood, metal and plastic formwork.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
OMN001	Logcolease 20 Litres	20 Litres
OMN002	Logcolease 205 Litres	205 Litres
OMN003	Logcolease 1000 Litres	1000 Litres

CURING AGENTS

Water Based

An environmentally friendly concrete curing membrane. A blue grade version is also available to help in identification during application.

- Concrete Hardener
- Dustproofer
- Curing Agent

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF006A	ECO Cure ww	20 Litres
NUF005C	ECO Cure ww	205 Litres
NUF006C	ECO Cure ww	1000 Litres

Solvent Based R90

High efficiency curing membrane for concrete, cures to a minimum of 90% efficiency. Protects the concrete surface from rapid water evaporation during the initial curing stages. R90 has a water retention efficiency in excess of 90%.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF009C	Logco R90	25 Litres
NUF009A	Logco R90	205 Litres

Solvent Based R90 Aluminised

Aluminised high efficiency curing membrane for concrete, cures to a minimum of 90% efficiency.

Added aluminium flakes where requirement for light reflection is required to keep the temperature of the concrete to a minimum or a pigment is required. Offers 90% water retention.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF008A	Logco R90A	205 Litres

Acrylic Based Concrete Curing & Sealing Compound for Floors



High-performance heavy duty acrylic sealer. Hardseal is a low viscosity, penetrating colourless sealer and is based on a carefully sourced blend of chemicals. It hardens, seals and cures all in one. Offers 90% curing efficiency.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE	
NUF023A	Hardseal XS	20 Litres	
NUF024A	Hardseal XS	205 Litres	

Cleaning Agent

A powerful solvent cleaner used to clean all tools and equipment which have been in contact with resin-based materials.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF054	Nuwash	5 Litres

Debonding Agent

Designed for coating dowel bars in concrete roads, airfield joints and floor sections and is based on bitumen having a penetration between 100 and 200, blended with hydrocarbon solvents. The consistency of the material is such that once it has dried and the concrete cast, free movement between the bar and the surrounding concrete is achieved.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF026	Debonding Agent	5 Litres
NUF025	Debonding Agent	20 Litres

FORMWORK TREATMENT

Nulease Varnish Standard

Formwork varnish for sealing and protecting general formwork where the criterion is for multiple use.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF051	Nulease Varnish Standard	5 Litres

RETARDERS

Formwork Retarder -Paint On

Eco-Tard Liquid MF is an aqueous biodegradable pigmented retarder designed to be applied to formwork surfaces to produce an exposed aggregate surface which gives an excellent key for subsequent concreting or provides an alternative exposed finish. It is ideal for construction joints and rendering applications.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF003A	ECO Tard Liquid MF - (Paint on)	25 Litres

TopFace Retarder -Spray On

Topface retarder, water-based spray-applied retarder designed to expose aggregate on horizontal surfaces, biodegradable/environmentally friendly.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF001A	ECO Tard Liquid TF - (Spray on)	25 Litres

Nugrout Hi Spec

A high strength, non-shrink, free flowing, cementitious grout based on low alkaline Portland cement and nonreactive aggregates. Meets the requirements of HA Specification clause 2601.4. Tested by Aston Material Services.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF071	Nugrout Hi Spec	25 Kg

Nugrout Flowable Concrete

Flowable, self-compacting mirco concrete containing non-reactive aggregates and which has a low Na20 content. Suitable for use where cathodic protection is in operation. Compiles with the requirements of HA Specification BD27/86 Clause 4. Tested by Scientifics Group.

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PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF033	Nugrout Flowable Concrete	25 Kg

Epicon Grouts

EPICON GROUT L – Epoxy Grout: a three component pourable free flowing high strength grout for gaps over 20 mm.

EPICON GROUT M – Epoxy Grout: A lightly filled pourable grout for free flow gap grouting, recommended for gaps between 5mm – 30 mm.

EPICON GROUT S is based on solvent free epoxy resins. It is one of three epoxy grouts in our range which are specified below. These cover the majority of grouting and fixing applications encountered within civil engineering and the construction industry in general, where the mechanical properties must be of the highest order. Tropical versions of the epoxy grout range are available for large pours and warmer climates. Epicon Grout S is designed to comply with the requirements of EN1504 Part 5, due to its crack injecting / gap filling applications.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF031	Epicon Grout L	20 Kg
NUF029	Epicon Grout M	20 Kg
NUF028	Epicon Grout S	20 Kg

General Purpose Grout

Grout which is a blend of low alkali, high specific surface Portland cements and other cementitious binders combined with high purity aggregates and a system of compatible admixtures. It is a high fluidity grout that will neither bleed or shrink.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
TMC002	Hi-Flow GA Grout	20 Kg

Crack Injections Resins

A low viscosity epoxy injection resin for injection into concrete, masonry and brickwork to consolidate the structure and prevent ingress of moisture.

Also available as a Thixotropic epoxy injection resin designed to flow freely while under pressure.

Can be supplied as a prepacked kit containing Epicon injection resin and all ancillary equipment to enable small scale crack injection to be carried out by experienced operatives in either low viscosity or Thixotropic versions.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF030	Epicon Injection Resin Kit	Each
NUF055	Epicon Injection Resin LV 0.5 Kg	0.5 Kg
NUF057	Epicon Injection Resin LV 1 Kg	1 Kg

CEMENTITIOUS REPAIRS & PAVING PRODUCTS

Deck Repair Rapid

Polymer modified cement repair mortar characterised by its high early strength development and rapid moisture loss. The material has been designed to comply with the requirements of the Ha standard BD27/86 clause 6 and is an ideal material for the repair of bridge decks prior to waterproofing.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF027	Deck Repair Rapid	25 Kg

Nucem HB Mortar

High Build Lightweight Repair Mortar

High build lightweight fibre reinforced mortar designed for the repair and restoration of spalled or damaged concrete in the inverted and vertical plane. A prepacked material containing an SBR or acrylic gauging liquid to improve bonding and waterproofing properties of the mortar. Complies with the requirement of Ha 27.5 Kg standard BD 27/86 clause 6.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF041	Nucem HB Mortar	20 Kg

286
Nucem Mortar

Horizontal Repair Mortar

Pre-packed cementitious mortar for the repair of sections between 10 mm – 30 mm mainly in the horizontal plane. Available with either an SBR or acrylic gauging liquid as required, guaranteed low W/c ratio. Complies with the requirements of Ha specification BD27/86 clause 6.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF070	Nucem Mortar	25 Kg

Nucem Primer

Repair Mortar



use with Acropak HB40 Mortar, Nucem HB Mortar, Nucem	
Mortar and Nucem Concrete. Also recommended for use	
when bonding fresh concrete to existing concrete.	

Water dispersed cementitious/epoxy primer tack coat for

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF042	Nucem Primer	1 Kg

Nucem Skimcoat

Fairing Coat

Polymer modified cementitious levelling 12.5 Kg 6.24 L coat with built-in flexibility and waterproofing properties at 1 mm ideal for the treatment of repaired concrete and the surrounding areas to give an overall uniform appearance.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF043	Nucem Skim Coat	12.5 Kg

Nupatch Cosmetic Special

An easy to use cementitious compound which develops a high strength at an early age for small cosmetic repairs of both insitu and precast concrete. It can be colour-blended on site to match substrate.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF019	Cosmetic White	7.5 Kg
NUF020	Cosmetic Special	25 Kg
NUF021	Cosmetic Special	7.5 Kg



RESIN MORTARS & ADHESIVES

Epoxy FS Mortar

A rapid curing epoxy mortar. Allows concrete 5 kg 2.56 L repairs to be carried out with the minimum of disruption. 25 kg 12.5 L. A primer is not required and the mortar will tolerate being applied to a damp substrate.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF083	Epicon F.S. Mortar 5 Kg	5 Kg
NUF084	Epicon F.S. Mortar 25 Kg	25 Kg

Tack Coat H

Epoxy primer / tack coat. A solvent free system used on vertical and horizontal surfaces. Can be applied to damp surfaces. Use with Resiset, Epicon and Epibear mortar systems.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF094	Epicon Tack Coat H	1 Kg

Epoxy Bearing Mortar

Epoxy bridge bearing mortar. Designed 18 Kg 8.35 L specifically for bridge bearing pad levelling plinths and other load bearing applications. Develops high strengths quickly even at low temperatures. Used in conjunction with Epicon Primer/Tack Coat 'H'.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF090	Epibear	18 Kg

PROTECTIVE COATINGS FOR CONCRETE

Covercrete

Anti-Carbonation Coatings

Anti-carbonation coating which also provides a highly durable weather resistant surface. This water based protective coating is available in a range of colours.

PRODUCT CODE	PRODUCT CODE
NUF022	NUF022
NUF022	NUF022

Nucryl

SDG PRODUCT CATALOGUE

Clear anti-carbonation coating. A solvent borne acrylic



COVERCRETE

treatment with excellent resistance properties that protects substrates from aggressive atmospheric contaminants.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF044	Nucryl	5 Litres

Epigard

Epoxy Waterproofing Coating

Heavy duty and flexible waterproof, protective coating for concrete and steel structures. Resistant to abrasion and chemical attack.

Protecting concrete structures including, abutments, drainage channels, silage pits & tanks.

Product Advantages:

- Long term protection
- Easily installed by brush or roller
- Resistant to agricultural and silage effluent
- Excellent mechanical abrasion resistance

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF032	Epigard	5 Kg

Nuproof

Bitumen Waterproofing Coating

Alkali resistant, rubberised, bituminous coating with excellent adhesion to sound building materials including asphalt surfaces. Flexible at low temperatures and resists softening. Ideal as a flexible waterproof membrane on bridge abutments and external walls prior to backfilling.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF047	Nuproof	25 Litres
NUF048	Nuproof	200 Litres



CONSTRUCTION ACCESSORIES > CONSTRUCTION GROUTS, MORTARS & RELEASE AGENTS > PROTECTIVE COATINGS FOR CONCRETE

Blockseal Standard

Resin Based Block Paving Sealer.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF101	Blockseal Standard	25 Litres

CHEMICAL RESIN ANCHOR

Resicon 3

Resicon 3 comprises a high-performance rapid curing styrene free low odour chemical injection anchoring system based on modified epoxy acrylate resin. Primarily designed for heavy duty bonding of anchor studs, bolts, threaded bars sockets, rebar starter bars and dowels into reinforced and non-reinforced concrete rock and stone.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
RES001	Resicon 3 – 345 ML	Each
RES002	Resicon 3 – Applicator Gun	Each
RES004	Resicon Replacement Nozzle	Each

Resicon 5

Resicon 5 is a premium grade high-performance, solvent free, low odour, pure epoxy resin based chemical injection anchoring system. As a pure epoxy resin Resicon 5 offers excellent adhesion to steel and concrete and has the highest performance and load values of all our systems. Resicon 5 is designed for heavy duty anchoring of rebar, starter bars and dowels, anchor studs, bolts, threaded bars and sockets into reinforced and non-reinforced concrete rock and stone. Its nonshrink, no sag extended cure time formula makes it ideal for large diameter deep and oversized drill holes. Suitable for use underwater and in submerged holes.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
RES020	Resicon 5 – 400 ML	Each
RES022	Resicon 5 – Applicator Gun	Each

HYPERSEAL®-Expert-150

One Component Polyurethane



HYPERSEAL[®]-Expert-150 is a novel low modulus expansion joint sealant, especially formulated to ensure bubble free cure even at very high temperatures and humidity climatic conditions.

Recommended for sealing joints in; expansion concrete plates, insitu concrete, precast panels, brick and block work, water tanks and swimming pools, metal frames, aluminium windows and panels, irrigation channels, glass, granite & marble.

Colour: Concrete Grey as standard. Other colours available on request.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS012	Hyperseal®-Expert-150 Grey 600cc	Each / 15 per Box

Microprimer PU

One component, low viscosity, 100% aliphatic polyurethane based primer suitable for all substrates.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS030	Micro Primer PU 1 Litre	Each

Two Component Polysulphide Sealant

Pouring Grade is a two part Polysulphide Sealant which cures once the two components are mixed together to give a flexible rubber seal. It has good adhesion to concrete, metals and many other common building substrates.



Gun Grade is a two part Polysulphide Sealant which cures once the two components are mixed together to give a flexible rubber seal. It has good adhesion to concrete, stone, metals and many other common building substrates. Recommended for sealing structural floor joints, parapet wall joints, concrete roadways and pavements, hard standing floor pads, joints in metal and concrete sea walls and joints in water retaining (non drinking water) structures.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
ARB010	Arbokol AG2 Pouring Grade 5 Litre (Grey)	5 Litres
ARB011	Arbokol AG2 Gun Grade	5 Litres
ARB030	Arbokol Porous Primer – 5 Litre	5 Litres

Uniseal 200/90

Uniseal 200/90 Sealant is a pitch free, high-performance, two-part elastomeric sealant specifically developed for sealing contraction and expansion joints in airfield runways, taxiways, hard standings and fuelling areas. It can accommodate above average movement and severe climatic conditions.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF063	Uniseal 200/90 Black	5 Litres

Porous Primer

One part, solvent containing, air-drying isocyanate resin-based primer.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
ARB031	Porous Primer	5 Litres

Uniseal Primer P2

Moisture curing solvent borne polyurethane primer. A versatile, single component, penetrating primer for use with epoxy and polyurethane systems. Designed for the treatment of porous substrates prior to the application of protective/technical performing coatings.

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PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF068	Uniseal Primer P2	1 Litre

Bituseal

Bituseal joint sealants are hot poured thermoplastic bitumen rubber joint sealants designed for use in sealing horizontal movement joints in concrete pavements, floor slabs and asphalt surfaces.

Standards Compliance: BS 2499: 1973 and BS 6920: 1988.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF004	Bituseal	20 Kg

APPLICATOR SPRAYERS & GUNS

Jointsealant Applicator Gun

Applicator Gun to suit Hyperseal Expert 150.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS020	Applicator Gun	Each

Cleaning Agent

A powerful solvent cleaner used to clean all tools and equipment which have been in contact with resin-based materials.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF054	Nuwash	5 Litres

Bitusheet XL

Self Adhesive Waterproofing Membrane

Bitusheet XL membrane consists of a self-bonding polymer modified bitumen which is covered on one side by a tough multiply cross laminated polythene film and protected on the other side by a release sheet which is removed prior to the bonding of the material onto a suitably prepared substrate. Once the release sheet has been removed the membrane can be easily applied by roller pressure. Incorporates a 50 mm selvedge on one edge to form homogenous overlap joints. Bitusheet XL is intended for use as a self-bonding vertical or horizontal damp proof membrane in tanking below ground structures, subways and retaining walls. BBA Approved.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF020	Bitusheet XL 19.05 x 1.05 M	20 Pallet
WPF021	Bitusheet XL Tape 100 mm x 20 M	10 per Box
WPF024	Bitusheet XL Strip 300 mm x 20 M	3 per Box
WPF025	Bitusheet Protection Board 2 x 1 M	2 x 1 Metre
WPF022	Bitusheet Primer	5 Litres

Dual Seal Membrane

Dual seal is a high performance self-swelling, self-healing waterproofing membrane comprising of a thick, tough, high density polyethylene sheet laminated to 4 Kg/m2 of quality Bentonite granules. The Bentonite used in the manufacture of Dual Seal is capable of repeated cycles of wetting and drying without deterioration of its sealing properties and has a life expectancy measured in thousands of years (BBA Certified). It has WRAS approval for use with potable water.



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DUAL	EPL .	anti-	/	6
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PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF010	Dual Seal Roll 1.22 x 7.32 M	Per Roll
WPF011	LG Dual Seal Roll – 1.22 x 7.32 M	Each
WPF012	Dual Seal Mastic Tub 23 Kg	23 Kg

300

HYPERDESMO®-HAA

Liquid Polyurethane Waterproofing Membrane

HYPERDESMO®-HAA is a unique single component polyurethane liquid membrane, based on the successful combination of HYPERDESMO® and Accelerator 3000 which throughout the years has provided applicators with a solution for a fast curing, bubble free thick layer membrane.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS037	HYPERDESM0 [®] –HAA Grey	25 Kg
PLS038	HYPERDESM0 [®] -HAA Grey	15 Kg
PLS039	HYPERDESM0 [®] –HAA Grey	6 Kg
PLS039A	HYPERDESM0 [®] –HAA Grey	0.5 Kg
PLS039B	HYPERDESM0 [®] -HAA White	6 Kg

Isostud Geop

Protection & Drainage Membranes

Isostud Geop is a high density extruded polyethylene (HDPE) membrane bonded to a high quality geotextile fabric providing both drainage and mechanical protection of waterproof membrane.

Isostud Geop is a studded membrane which offers great resistance to all chemical agents and to mechanical compression (>200 KN/m2). Isostud can also be used for terraces, flat roofs and roof gardens. The studs are aligned along vertical and horizontal axis: water can easily and rapidly drain from the top to the bottom of the foundation (whereas HDPE membranes with studs diagonally aligned do not offer this advantage and water drains slowly).



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
TEM001	lsostud Geop 2 x 20 M	20 Metre Rolls

Aquatek Plug & Aquatek Plug XF

Rapid Setting Mortar to plug active water leaks

Stops active water leaks and seepage, even under high pressure through joints, cracks, honeycombing and holes in all structures made out of concrete, masonry, stone and renders.

Aquatek Plug has a final setting time of 3 minutes and Aquatek Plug XF of 30 seconds.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
DNF001	Aquatek Plug XF	10 Kg
DNF003	Aquatek Plug	10 Kg

Bentonite Swelling Tape

Masterstop Bentostrip swelling tape used for reliable waterproofing of construction joints as well as penetrations in concrete structures against water penetration. The swelling of the tape and the swelling pressure developed during the swelling process prevent water penetration.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF003A	Masterstop Bentonite Swelling Tape 25 x 20 mm Black	30 Metres per Box
WPF004A	Bentonite Swelling Tape Steel Grid 25 x 20 mm	30 Metres per Box

Hydrophillic High Pressure Swelling Tape



Flowstop high pressure swelling tape is used for safe waterproofing of construction joints and penetrations in concrete structures. The swelling and the swelling pressure that form during the swelling process prevent the ingress of water.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF002A	Flowstop High Pressure Swelling Tape 20 x 10 mm Red	10 metres per Roll
WPF014	Flowstop Adhesive	1 Cartridge / 8 M

Metal Water Stop

Polymer-coated joint sheet metals for waterproofing of construction joints. The packaging in rolls reduces joints and therefore increases installation reliability. The rolls are packed in cartons, the handling on the building side is easier and so is the transportation.

In the waterproofing of concrete construction joints high demands are placed on the waterproofing technology. The fully coated joint sheet metal 160 VB waterproofing profiles ensure secure and permanent waterproofing against pressurised and non-pressurised water.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FRA001A	Metal Water Stop VB1 160	20 Metres per Roll

Self Adhesive Bentonite Swelling Tape

MASTERSTOP SK for reliable waterproofing of construction joints as well as penetrations in concrete structures against water penetration. The swelling of the tape and the swelling pressure developed during the swelling process prevent water penetration.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF015	Masterstop SK20 x 5	Metre / 90 M Carton

PVC Waterstop

Floor, Wall & Joints

A specifically designed PVC high performance waterstop suitable for both internal and external use. Specifically developed to seal joints (watertight) in concrete structures which protects the reinforcing steel against corrosion attack.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF050	PVC Waterstop External (Floor) 200 mm	15 Metre Roll
WPF051	PVC Waterstop Internal (Wall) 200 mm	15 Metre Roll
WPF071	PVC Waterstop Internal (Wall) 250 mm	15 Metre Roll
WPF070	PVC Waterstop External (Floor) 250 mm	15 Metre Roll

PVC Waterstop Joint Junction Pieces

We supply a variety of PVC Waterstop Junction Pieces. Contact us for assistance.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT CODE	PRODUCT DESCRIPTION
WPF052A	200 mm INT FLAT 'L'	WPF064	200 mm EXT VERT 'T'
WPF053	200 mm EXT FLAT 'L'	WPF072	250 mm INT/EXT MIXED VERTICAL
WPF054	200 mm EXT VERTICAL 'L'	WPF073	250 mm EXT VERTICAL 'L'
WPF055	200 mm INT VERTICAL 'L'	WPF074	250 mm INT VERTICAL 'L'
WPF056	200 mm INT/EXT MIXED VERTICAL 'L'	WPF075	250 mm EXT FLAT 'T'
WPF057	200 mm EXT REVERSE VERTICAL 'L'	WPF076	250 mm EXT FLAT 'X'
WPF058	200 mm INT/EXT MIXED VERTICAL 'T'	WPF077	250 mm INT FLAT 'T'
WPF059	200 mm EXT FLAT 'T'	WPF078	250 mm INT FLAT 'L'
WPF060	200 mm INT FLAT 'T'	WPF079	250 mm EXT FLAT 'L'
WPF061	200 mm EXT FLAT 'X'	WPF080	250 mm INT/EXT MIXED VERTICAL
WPF062	200 mm INT FLAT 'X'	WPF081	250 mm INT FLAT 'X'
WPF063	200 mm INT VERT 'T'	EXT = External IN1	[= Internal

BESPOKE WATERSTOP JOINTS AVAILABLE. CONTACT OUR TECHNICAL DEPARTMENT FOR YOUR BESPOKE PROJECT REQUIREMENTS.



MIXED INTERNAL / EXTERNAL JOINTS

Mixed Vertical L

Mixed Vertical T





Compression Joint Seal: TOKSTRIP®

A plastic seal for manhole components and special profiles made of concrete. Thanks to the combination of bitumen, butyl rubber and other innovative components, as well as the self-adhesive, one-sided coating, the seal profile fits to the existing geometries, compensates for any unevenness in the component and adheres very well to the contact surfaces.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S005	TOKSTRIP® 25 x 20 mm 20 per box	5 Metre Roll
K0S010	TOKSTRIP® 40 x 20 mm 15 per box	3 Metre Roll
K0S013	TOKSTRIP® 60 x 12 mm 24 per box	24 Metre Box
KOS014	TOKSTRIP® 80 x 12 mm 18 per box	15 Metre Box

Active Ring

Swelling TPE Seal for Tubing

Swelling external high-pressure seal for distance tubes. The Active Ring mini/maxi, made of TPE (thermoplastic elastomer), is used for a simple and reliable external waterproofing of plastic and fibre cement distance tubes. The swelling and the swelling pressure that forms during the swelling process prevents the ingress of water.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE	
WPF400	Active Ring Mini 22 mm	250 per Bag	
WPF041	Active Ring Maxi 26 mm	250 per Bag	

CONCRETE TESTING EQUIPMENT



STEEL 150 MM



TAMPING BAR SQUARE

CONCRETE MOULD CUBE

PLASTIC 100 MM DOUBLE

SLUMP CONE

TAMPING ROD



CUBE MOULD SCOOP 4.5 KG

BASE PLATE

CN059 - CURING TANK PLASTIC FOR SITE 240V

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
TST002	Concrete Mould Cube Steel 100 mm	Each
TST001	Concrete Mould Cube Steel 150 mm	Each
TST005	Concrete Mould Cube Plastic 100 mm Double	Each
TST010	Slump Cone	Each
TST011	Tamping Rod	Each
TST012	Tamping Bar Square	Each
TST013	Cube Mould Scoop 4.5 Kg	Each
TST014	Base Plate	Each
TST020	Curing Tank Plastic for Site 240v	Each

Builders Tape

Mammoth Builders PVC tape is a strong tape with versatile adhesive ideal for jointing all PVC and polythene sheets and membranes.

Ideal for contamination barrier fastening, dust sealing of sheets and many other uses in the construction industry.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF081	Black tape	50 mm x 33 Metres



Economical, chemical-resistant Tap works with many liquids.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK141	Small Barrel Tap	Each
FWK141B	Large Barrel Tap	Each

recostal[®] Speed Edge Formwork

recostal[®] Speed Edge Formwork is made from galvanised sheet metal and is used for shuttering base and floor slabs.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FWK370	recostal® Speed edge Formwork: 180 x 2250 mm	Per Metre
FWK371	recostal® Speed edge Formwork: 200 x 2250 mm	Per Metre
FWK372	recostal® Speed edge Formwork: 250 x 2250 mm	Per Metre
FWK373	recostal® Speed edge Formwork: 300 x 2250 mm	Per Metre

recostal[®] Permanent Formwork System

recostal[®] Shuttering units are comprised of finely meshed, trapezoidally-profiled, expanded metal, designed for creating construction joints in concrete base slabs. Units are supplied to specific project heights on site. recostal[®] shuttering is also available with anti-leakage material and clamps to eliminate the need to weld rebars.

For the installation of permanent lateral formwork for reinforced concrete base and floor slabs in structural and civil engineering.

Features include:

- Self-supporting up to 50 cm height
- No additional support necessary
- No stripping
- Fast installation
- Corners are simply bent into shape
- Low transport costs
- Installation without crane



Range available includes:

- recostal[®] 1000 for concrete slabs up to 300 mm of wet concrete
- recostal[®] 2000 for concrete slabs up to 900 mm of wet concrete
- recostal[®] 2000 GT for concrete slabs up to 1500 mm of wet concrete
- recostal[®] 2000 GTZ for concrete slabs over 1500 mm of wet concrete

For more information and to discuss site specific requirements please contact our Technical Department.

MASONRY REINFORCEMENT

recostal[®] Shutter Strips

Shuttering Strips facilitate quick and easily installed openings of all sizes in base slabs and concrete floors. Shuttering Strips are perforated crosswise at every 50 mm and the scaled profile ensures a good bond to the concrete.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
CNT100	recostal® Shuttering Strip – Type SF	16 Metre
CNT101	recostal® Shuttering Strip – Type SF	20 Metre
CNT102	recostal® Shuttering Strip – Type SF	25 Metre
CNT103	recostal® Shuttering Strip – Type SF	30 Metre

Murfor[®] Compact

Murfor[®] Compact is the next generation of Masonry Reinforcement on a roll. Available in stainless steel and galvanised it can be used on both internal and external walls; it is easily rolled out onto masonry joints reducing install time making the building process quicker.

CE and ETA approved due to its design it is the first product to market which is used for both structural and crack control.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
MUR001	Murfor Compact Internal 150	30 Metres per Roll
MUR002	Murfor Compact Internal 100	30 Metres per Roll
MUR003	Murfor Compact External E35	30 Metres per Roll
MUR004	Murfor Compact External E70	30 Metres per Roll

Stucanet®

Render Carrier

Stucanet[®] is a purpose designed plaster and render carrier which is manufactured from heavy galvanised steel welded wire mesh into moisture absorbent chip paper.

It is used specifically for exterior façade applications and is protected with a breather membrane to prevent moisture penetration.

Applications:

- Stucanet[®] is used specifically for exterior facade applications
- Stucanet[®] can be used on a Masonry wall or Timber frame
- Available in Stainless Steel or Galvanised



Key Benefits:

- Quick and easy install
- Durable plasterwork and rendering
- Can be used as a dry wall alternative
- CE Compliant
- No need to remove existing render

Acoustic Insulation Layer

Application Sector

DAMTEC® rubber is a floor underlay for footfall sound reduction and thermal insulation; used in building construction and renovation. Suitable for underscreed applications and can also be used above screed especially in wet rooms under ceramic tiles.

Material: Fine granules of recycled rubber with PU elastomer bonding agent.

Appearance: Colour – Black. Surface – Fine granular texture.

TECHNICAL DATA		
Dimensions/Tolerances		
Width:	1,000 mm	± 1.5 %
Length:	on request	± 1.5 %
Available thickness:	3, 4, 5 and 6 mm	± 0.3 mm
Density:	approx. 800 kg/m³	

Physical Characteristics

Tensile strength:	approx. 0.6 N/mm²	(ISO 1798)
Elongation at break:	арргох. 60%	(ISO 1798)
Service temperature range:	- 30°C to 80°C	
Flammability rating:	B 2	(DIN 4102-1)
Heat transmission coefficient:	0.03 m² K/W for 3 mm slab	(DIN 52612)
Impact sound improvement:	$\Delta L = 20 dB$ without covering	
	ΔL = 17dB under 8 mm tiles	(ISO 140-8/ISO 717-2)



Made from recycled rubber granules. Solutions for constant loads up to 20 $t/m^2\!.$

Features and benefits:

- European Technical Approval (CE label)
- Brilliant noise insulation with a low panel thickness
- Outstanding compressive strength and load-bearing performance permanently elastic
- Highest resiliency even after years of use (does not compress and reduce sound absorption)
- Very low emission
- Water proofed and rot-proofed
- Very environment-friendly, recycled rubber
- Can be recycled again
- Fast and easy installation
- High pressure load capacity
- Elasticity and fast and easy installation low thickness of 4 mm to 17 mm for low
- Allowing planners to save heights in new buildings or adapt to given conditions in the case of renovation



Applications:

- Production halls and depots
- Shopping centres
- Concert halls, cinemas
- Fitness centres
- Public buildings
- Schools, training centers
- Recording studios
- Acoustic test laboratories
- Hotels

PRODUCT	\triangle LW	MAX. CONTINOUS LOAD	DYNAMIC STIFFNESS
DAMTEC [®] estra	≤ 21 dB	0.20 N/mmÇ	≤ 90 MN/mÑ
DAMTEC [®] estra 3D 8/4	≤ 26 dB	0.10 N/mmÇ	< 20 MN/mÑ
DAMTEC [®] system	≤ 21 dB	0.05 N/mmÇ	≤ 35 MN/mÑ
DAMTEC [®] 3D 17/8	≤ 30 dB	0.10 N/mmÇ	< 15 MN/mÑ

Estra 3D 8/4

Impact sound improvement under screed: < 26 db.

Application Sector

DAMTEC[®] Estra 3D is a leading rubber underlay in floating screed / concrete slab systems with European Technical Approval, which has been granted by DIBt, the German Center of Competence in Civil Engineering. Another application is for example underneath rigid floor elements on wooden sub floors. DAMTEC[®] Estra 3D is quick and easy to install and is providing extremely high resistance to compressive loads and outstanding elasticity. It is equally well suited for applications in residential, office and commercial buildings.

Material: Granules of recycled rubber with PU elastomer bonding agent. Appearance: Colour – Multicolour. Surface –

Smooth with granular texturing profiled on one side.



TECHNICAL DATA		
Material	Granules of recycled rubber with PU elastor	ner bonding agent
Area weight	3,800 - 4,800 g/m²	
Thickness	8/4 mm	(± 1.0 mm)
Roll width	1,250 mm	(± 1.5 %)
Roll length	on request	(± 1.5 %)
Surface	smooth with granular structure	
Lower side	wave profile	
Colour	black / multicoloured	
Maximum pressure	0.10 N/mm ²	(in accordance with EN 826)
Dynamic stiffness	8/4 mm < 20 MN/m ³	(EN 29052)
Service temperature range	-30°C up to + 80°C	
Impact sound improvement Δ LW	22dB	(under 50mm screed, 120kg/m²)
	26dB	(under 80mm screed, 179kg/m²)

CONSTRUCTION ACCESSORIES

Still looking for something?

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Contact our sales team: wearesdg.com +44 (0) 28 3752 8999

Koster Deuxan 2C

Liquid Waterproofing Membrane

Koster Deuxan 2C is a BBA Approved two component, polystyrene-free, fibrated, polymer modified bitumen thick film sealant for the secure waterproofing of building structures. The coating bridges cracks in the substrate against pressurised water. Koster Deuxan 2C is also radon-proof.

It is ideal for external basement waterproofing, floor slab waterproofing, waterproofing against Radon and can be spray applied.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S071	Koster Deuxan 2C	32 Kg

Koster Glass Fibre Mesh

Reinforcement Mesh

Koster Glass Fibre Mesh is a glass silk fabric with extremely high tear resistance; it is resistant to relocation, plasticiser-free, and resistant to alkalis. Highly tear resistant mesh for the reinforcement of waterproofing layers especially in the case of pressurised water, areas in danger of cracking as well as connections, wall / floor junctions and fillets. Resistant to dislocation, alkalis, plasticiser-free.

Particularly suitable for: Koster KBE Liquid Film, Koster Bikuthan 1C and Koster Bikuthan 2C, Koster Deuxan 2C and Koster Deuxan Professional, Koster BD 50 and Koster Elastic Roof.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S072	Koster Glass Fibre Mesh – 100 M²	100 M ²
K0S073	Koster Glass Fibre Mesh – 35 M² Roll	35 M ²

Koster KBE Liquid Film

Detailing Liquid

Koster KBE Liquid Film is a highly elastic, solvent-free sealing compound designed for priming substrates and detailing complex areas.

Solvent-free, highly elastic bitumen / rubber based sealing compound. For high quality external waterproofing of construction members in ground contact, such as basements. Elongation: > 900%

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S020	KBE Liquid Film (Primer) 6 Kg	6 Kg

Koster KSK SY 15

Self Adhesive Tanking Membrane

Koster KSK SY 15 consists of a highly tear resistant, 2-layer cross laminated polyethylene foil with a plastic bitumen / rubber adhesive and sealing compound. It is cold applied and therefore no hot air or propane gas welding is required for application. Due to its high ductility it can easily be applied to difficult details. The sealing membrane is highly flexible, immediately waterproof, resistant to driving rain, and crack bridging. Koster KSK SY 15 is also radon proof.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S090	Koster KSK SY15 1.05 x 20 M	1.05 x 20 M Roll
K0S091	Koster KSK SY-15 200 mm x 20 M	0.2 x 20 M Roll

Koster NB 1 Grey

Cementitious Waterproofing Membrane

Koster NB 1 Grey is a BBA Approved mineral based, sulphate resistant waterproofing system for positive and negative side waterproofing against pressurised water. It contains migratory crystallising and capillary-plugging agents. It can be used for waterproofing against ground moisture, and for non-pressurised and pressurised water. Waterproofing done with Koster NB 1 Grey is characterised by excellent resistance to pressure and abrasion as well as chemical and sulphate resistance.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S030	Koster NB1 Grey	25 Kg

Isostud Geop

Protection & Drainage Membranes

Isostud Geop is a high density extruded polyethylene (HDPE) membrane bonded to a high quality geotextile fabric providing both drainage and mechanical protection of waterproof membrane.

Isostud Geop is a studded membrane which offers great resistance to all chemical agents and to mechanical compression (>200 KN/m2). Isostud can also be used for terraces, flat roofs and roof gardens. The studs are aligned along vertical and horizontal axis: water can easily and rapidly drain from the top to the bottom of the foundation (whereas HDPE membranes with studs diagonally aligned do not offer this advantage and water drains slowly).



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
TEM001	Isostud Geop 2 x 20 M	20 Metre Rolls

Koster Repair Mortar Plus

Detailing Mortar

Koster Repair Mortar Plus is a watertight, fast setting, slightly expanding repair mortar with excellent adhesion even to old building material substrates. With the addition of Koster SB Bonding Emulsion, it can be used as PCC (Polymer-modified cement concrete) mortar.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S032	Koster Repair Mortar Plus	25 Kg

Koster Polysil TG 500

Lime Inhibitor Spray

Koster Polysil TG 500 is a thin liquid based on polymers and silicates. On salt burdened and on damp substrates it leads to a reduction of the pore volume and decreases the likelihood of new salt efflorescence development. It also increases the chemical and mechanical resistance of mineral building materials. Depending on the substrate, the product penetrates the surface up to 2 cm deep. Koster Polysil TG 500 also has strengthening and hydrophobing properties. The material is compatible with mortars, plasters, cementitious slurries and concrete.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S059	Koster Polysil TG 500	10 Kg

Koster SB Bonding Emulsion

SBR Flexibility Additive



Koster SB Bonding Emulsion is a universally usable synthetic liquid for all cementitious mortars, plasters and sealing slurries. Koster SB Bonding Emulsion is solvent, plasticiser, and filler-free. When added to mineral based systems, the synthetic liquid increases elasticity and flexibility and reduces water absorption.

Multi-purpose liquid plastising dispersion for use with all cement-based mortars, plasters and sealing slurries. Solvent free, plasticiser and filler free. The product provides a plastifying effect, increases the elasticity and reduces the water absorption of mineral systems. It is waterproof after full cure. Typical field of application; as an additive for waterproofing with NB 1 Grey.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S031	Koster SB Bonding Emulsion	5 Kg

REMEDIAL WATERPROOFING

Koster Restoration Plaster

Salt-Resistant Restoration Plaster



Koster Restoration Plaster is a salt and pressure resistant restoration plaster for the restoration of heavily moisture and salt burdened substrates. Due to its high porosity and hydrophobicity, Koster

Restoration Plaster allows for the damage free drying and de-salting of masonry even in the case of high salt contents. It improves the insulative properties of the wall and therefore helps prevent the formation of condensate.

Koster Restoration Plaster is free of light fillers and therefore requires no further surface treatment prior to the application of breathable paints or wallpaper which is open to vapor diffusion.

Available in grey and white.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S061	Koster Restoration Plaster Grey	25 Kg
K0S062	Koster Restoration Plaster White	25 Kg

Bitusheet XL

Self Adhesive Waterproofing Membrane

Bitusheet XL membrane consists of a self-bonding polymer modified bitumen which is covered on one side by a tough multiply cross laminated polythene film and protected on the other side by a release sheet which is removed prior to the bonding of the material onto a suitably prepared substrate. Once the release sheet has been removed the membrane can be easily applied by roller pressure. Incorporates a 50 mm selvedge on one edge to form homogenous overlap joints. Bitusheet XL is intended for use as a self-bonding vertical or horizontal damp proof membrane in tanking below ground structures, subways and retaining walls. BBA Approved.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF020	Bitusheet XL 19.05 x 1.05 M	20 Pallet
WPF021	Bitusheet XL Tape 100 mm x 20 M	10 per Box
WPF024	Bitusheet XL Strip 300 mm x 20 M	3 per Box
WPF025	Bitusheet Protection Board 2 x 1 M	2 x 1 Metre
WPF022	Bitusheet Primer	5 Litres

Dual Seal Membrane

Dual Seal is a high performance self-swelling, self-healing waterproofing membrane comprising of a thick, tough, high density polyethylene sheet laminated to 4Kg/m2 of quality Bentonite granules. The Bentonite used in the manufacture of Dual Seal is capable of repeated cycles of wetting and drying without deterioration of its sealing properties and has a life expectancy measured in thousands of years (BBA Certified). It has WRAS approval for use with potable water.



Dual Seal has been specifically developed for use as a high-performance waterproofing membrane to provide a totally watertight barrier in below ground concrete construction, including basements, underground car parks, plant rooms, access tunnels etc. Dual Seal Membrane can be installed in damp conditions and is, therefore particularly suitable for use as a roof waterproofing system for each covered potable water reservoirs.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF010	Dual Seal Roll 1.22 x 7.32 M	Per Roll
WPF011	LG Dual Seal Roll 1.22 x 7.32 M	Each
WPF012	Dual Seal Mastic Tub	23 Kg

Koster 2 IN 1

Two Component PU Injection Resin

Broadly applicable solvent-free PU injection resin for dry and water bearing cracks. The speciality: Koster 2 IN 1 forms an elastic foam when coming into contact with water which pushes the water out of the crack. If no water is present the material forms an elastic solid body resin and permanently seals the crack.

Fields of application: Waterproofing of water bearing and permanently sealing dry cracks in masonry and concrete.



Koster PUR Cleaner

Cleaning Agent

A cleaning agent for the removal of fresh polyurethane. Suitable for cleaning tools, e.g. the Koster 1C Injection Pump after injecting Koster Injection Resins. Based on special solvents.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
KOS156	Koster PUR Cleaner	10 Litres

Koster One	Day
Site Packer	



Injection Packer

The Koster One-Day-Site Packer allows injection work to be completed in one day. The screw packer for pressure injection has a firmly mounted cone-head fitting and two non-return valves. Immediately after injecting, that part of the port stays in the wall sealing the borehole so that no injection material can flow out of the borehole even under high pressure. The borehole can then be closed immediately after injection.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S157	Koster 1 Day Site Packer 13 x 90 mm	100 per Bag

Koster IN 7

PRODUCT CODE

K0S155

Two Component PU Foaming Injection Resin

Viscoplastic, water activated PU injection foam. Reacts only when in contact with water and spontaneously forms a compact, viscoplastic, waterproof polyurethane foam which is able to follow crack movements. Volume expansion up to 30 times. Free of solvents and fillers, resistant to hydrolysis. Fields of application: Singlestep waterproofing of water bearing cracks without the subsequent injection of a solid body resin.



PRODUCT SIZE

5 Kg

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S160	Koster IN 7	27.5 Kg

PRODUCT DESCRIPTION

Koster 2 IN 1

Koster Grip Head

Connects Packer to Nozzle

Four jaws for cone-head fittings.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
INJ005	Koster Grip Heads	Each

Koster 1C Injection Pump

Electric Injection Pump

Electrical 1C injection pump for injecting cracks and voids. It is suitable for the injection of all Koster injection materials (foams and resins). Operating pressure can be adjusted from 0 – 200 bar. The maximum delivery rate is approx. 2.2 I / min.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
-	Koster 1C Injection Pump	Each

Koster Hand Pump without Manometer

Manual Injection Pump

For small injection projects or areas which are difficult to access. Operating pressure 10 bar maximum, output approx. 2 cm³ per pass. Manometer can be purchased separately from builders merchant.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
K0S158	Koster Hand Pump without Manometer	Each

Koster Crisin 76 Concentrate

Injectable Damp Proof Course

Koster Crisin 76 Concentrate is a low viscosity, solvent free, concentrated liquid synthetic resin. It penetrates deeply into even the smallest capillaries and pores in building materials. Due to its very low density and a surface tension lower than that of water, Koster Crisin 76 Concentrate displaces the water in the capillaries.

The curing of the injected product is independent of the drying of the masonry. After full cure, Koster Crisin 76 Concrete remains flexible, does not decay or decompose, acts neutrally, does not effloresce, and does not affect steel reinforcement.

- Benefits:
- Simple installationSuitable for thick walls
- Very low density

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
-	Koster Crisin 76 Concentrate	200 ml

Koster Crisin Cream

Injectable Damp Proof Course

Injection cream based on resin / silane against rising damp (wicking moisture). Resistant against any moisture / salt content.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
-	Koster Crisin Cream	600 ml



200 ml	
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PVC Waterstop

Floor, Wall & Joints

A specifically designed PVC high performance waterstop suitable for both internal and external use. Specifically developed to seal joints (watertight) in concrete structures which protects the reinforcing steel against corrosion attack.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF050	PVC Waterstop External (Floor) 200 mm	15 Metre Roll
WPF051	PVC Waterstop Internal (Wall) 200 mm	15 Metre Roll
WPF071	PVC Waterstop Internal (Wall) 250 mm	15 Metre Roll
WPF070	PVC Waterstop External (Floor) 250 mm	15 Metre Roll

PVC Waterstop Joint Junction Pieces

We supply a variety of PVC Waterstop Junction Pieces. Contact us for assistance.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT CODE	PRODUCT DESCRIPTION
WPF052A	200 mm INT FLAT 'L'	WPF064	200 mm EXT VERT 'T'
WPF053	200 mm EXT FLAT 'L'	WPF072	250 mm INT/EXT MIXED VERTICAL '
WPF054	200 mm EXT VERTICAL 'L'	WPF073	250 mm EXT VERTICAL 'L'
WPF055	200 mm INT VERTICAL 'L'	WPF074	250 mm INT VERTICAL 'L'
WPF056	200 mm INT/EXT MIXED VERTICAL 'L'	WPF075	250 mm EXT FLAT 'T'
WPF057	200 mm EXT REVERSE VERTICAL 'L'	WPF076	250 mm EXT FLAT 'X'
WPF058	200 mm INT/EXT MIXED VERTICAL 'T'	WPF077	250 mm INT FLAT 'T'
WPF059	200 mm EXT FLAT 'T'	WPF078	250 mm INT FLAT 'L'
WPF060	200 mm INT FLAT 'T'	WPF079	250 mm EXT FLAT 'L'
WPF061	200 mm EXT FLAT 'X'	WPF080	250 mm INT/EXT MIXED VERTICAL
WPF062	200 mm INT FLAT 'X'	WPF081	250 mm INT FLAT 'X'
WPF063	200 mm INT VERT 'T'	EXT = External IN	= Internal

BESPOKE WATERSTOP JOINTS AVAILABLE. CONTACT OUR TECHNICAL DEPARTMENT FOR YOUR BESPOKE PROJECT REQUIREMENTS.



MIXED INTERNAL / EXTERNAL JOINTS

Mixed Vertical L

Mixed Vertical T





Bentonite Swelling Tape

Masterstop Bentostrip swelling tape used for reliable waterproofing of construction joints as well as penetrations in concrete structures against water penetration. The swelling of the tape and the swelling pressure developed during the swelling process prevent water penetration.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF003A	Masterstop Bentonite Swelling Tape 25 x 20 mm Black	30 Metres per Box
WPF004A	Bentonite Swelling Tape Steel Grid 25 x 20 mm	30 Metres per Box

Hydrophillic High Pressure Swelling Tape



Flowstop high pressure swelling tape is used for safe waterproofing of construction joints and penetrations in concrete structures. The swelling and the swelling pressure that form during the swelling process prevent the ingress of water.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF002A	Flowstop High Pressure Swelling Tape 20 x 10 mm Red	10 Metres per Roll
WPF014	Flowstop Adhesive	1 Cartridge / 8 M

Self Adhesive Bentonite Swelling Tape

MASTERSTOP SK for reliable waterproofing of construction joints as well as penetrations in concrete structures against water penetration. The swelling of the tape and the swelling pressure developed during the swelling process prevent water penetration.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF015	Masterstop SK20 x 5	Metre/90 M Carton

Metal Water Stop

Polymer-coated joint sheet metals for waterproofing of construction joints. The packaging in rolls reduces joints and therefore increases installation reliability. The rolls are packed in cartons, the handling on the building side is easier and so is the transportation.

In the waterproofing of concrete construction joints high demands are placed on the waterproofing technology. The fully coated joint sheet metal 160 VB waterproofing profiles ensure secure and permanent waterproofing against pressurised and non-pressurised water.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
FRA001A	Metal Water stop on a roll VB1 160	20 Metres per Roll

Active Ring

Swelling TPE Seal for Tubing

A swelling external high-pressure seal for distance tubes. The Active Ring mini/maxi, made of TPE (thermoplastic elastomer), is used for a simple and reliable external waterproofing of plastic and fibre cement distance tubes. The swelling and the swelling pressure that forms during the swelling process prevents the ingress of water.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
WPF400	Active Ring Mini 22 mm	250 per Bag

PRODUCT CATALOGUE

SDG

HYPERDESMO®-HAA

Liquid Polyurethane Waterproofing Membrane

HYPERDESMO®-HAA is a unique single component polyurethane liquid membrane, based on the successful combination of HYPERDESMO® and Accelerator 3000 which throughout the years has provided applicators with a solution for a fast curing, bubble free thick layer membrane.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS037	HYPERDESMO®-HAA Grey	25 Kg
PLS038	HYPERDESMO [®] –HAA Grey	15 Kg
PLS039	HYPERDESMO [®] –HAA Grey	6 Kg
PLS039A	HYPERDESMO [®] –HAA Grey	0.5 Kg
PLS039B	HYPERDESMO®-HAA White	6 Kg

Bituseal

Bituseal joint sealants are hot poured thermoplastic bitumen rubber joint sealants designed for use in sealing horizontal movement joints in concrete pavements, floor slabs and asphalt surfaces.

Standards Compliance: BS 2499: 1973 and BS 6920: 1988.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF004	Bituseal	20 Kg

HYPERSEAL[®]-Expert-150

One Component Polyurethane

HYPERSEAL®-Expert-150 is a novel low modulus expansion joint sealant, especially formulated to ensure bubble free cure even at very high temperatures and humidity climatic conditions.

Recommended for sealing joints in; expansion concrete plates, insitu concrete, precast panels, brick and block work, water tanks and swimming pools, metal frames, aluminium windows and panels, irrigation channels, glass, granite & marble.

Colour: Concrete Grey as standard. Other colours available on request.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
PLS012	Hyperseal®-Expert-150 Grey 600cc	Each / 15 per Box

Two Component Polysulphide Sealant

Pouring Grade is a two part Polysulphide Sealant which cures once the two components are mixed together to give a flexible rubber seal. It has good adhesion to concrete, metals and many other common building substrates.



Gun Grade is a two part Polysulphide Sealant which cures once the two components are mixed together to give a flexible rubber seal. It has good adhesion to concrete, stone, metals and many other common building substrates. Recommended for sealing structural floor joints, parapet wall joints, concrete roadways and pavements, hard standing floor pads, joints in metal and concrete sea walls and joints in water retaining (non drinking water) structures.

PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
ARB010	Arbokol AG2 Pouring Grade (Grey)	5 Litres
ARB011	Arbokol AG2 Gun Grade	5 Litres
ARB030	Arbokol Porous Primer	5 Litres

Uniseal 200/90

Uniseal 200/90 Sealant is a pitch free high performance two-part elastomeric sealant specifically developed for sealing contraction and expansion joints in airfield runways, taxiways, hard standings and fuelling areas. It can accommodate above average movement and severe climatic conditions.



PRODUCT CODE	PRODUCT DESCRIPTION	PRODUCT SIZE
NUF063	Uniseal 200/90 Black	5 Litres

WATERPROOFING

Still looking for something?

A full index of our product catalogue can be found on page 362.





Acoustics

Contact our sales team: wearesdg.com +44 (0) 28 3752 8999

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ACOUSTIC CEILINGS

Our partner Vogl Deckensysteme GmbH are market leaders in the supply of acoustic ceilings.

Acoustic design ceilings are the most significant instrument in the acoustic design of a room. In determining the right sound absorption, various factors such as room volume or planned utilisation play a major role. Acoustic ceilings can also be convincing from a design point of view.



An individual calculation must be performed for each construction object in order to come up with the right room acoustics.

Three applications for absorbing materials are available to suit the different purposes:

- Room acoustic design
- Noise reduction
- Control of reverb time

Perforated Acoustic Ceiling

Vogl Fuge®

In drywall construction, acoustic design ceilings meet the highest demands in function and aesthetics. Particularly in highly frequented areas, acoustic ceiling systems not only serve as sound absorbers but also have cooling elements and create an eye catching design at the same time. For this reason, precision in installation is particularly important. Unlike conventional ceiling solutions, slight errors in installation are immediately visible to the naked eye in the finished product and can effect the final appearance.

This is where the VoglFuge® system comes into its own, as a system which achieves acoustic design ceilings quickly, economically and with the most reliability during installation for guaranteed results.

The acoustic design panels / absorption panels are classified in building material class A2 – s1, d0 in compliance with European standard DIN13501-1.

Acoustic performance and air purification effect (absorption). There are numerous pattern designs to choose from giving you the finish and design required.

Black or white acoustic fleece backing is available (other fleece colours available on request), four-side sharp-edged with under-cut for installation using the quickest and most secure 'edge-to-edge' laying principle. Other available options: acoustic design panels with non-perforated edges, block perforation, applications, manufactured in accordance with customer designs and ceiling plans.

Delivery includes VoglFuge System Kit (incl. perforated panel screws SN 3.5 x 30).

Based on standard: EN 14190 'Gypsum plasterboard products from reprocessing'

Fire rating: A2-s1, d0 (non-flammable) according to EN 13501-1 Long edge: SK (sharp-edged) Short edge: SK (sharp-edged)

Benefits of the VoglFuge® system include:

The unique joint technology offers maximum reliability for installation and finishes:

- Quick mounting of panels 'edge-to-edge'
- No more complex panel alignment
- Quickest possible joint finishing with our unique VoglFuge system
- Significant time saving due to quick installation and drying times
- Maximum crack resistance
- Significantly less dust and moisture













PRODUCT CATALOGUE

SDG

ACOUSTICS > ACOUSTIC CEILINGS

Available Perforations

IMAGE	DESCRIPTION	SIZE	PERFORATED AREA	MASS	M² PALLET	PANELS
	Acoustic design panel VF 6/18R Acoustic fleece, black or white	1188 x 1998 x 12.5 mm	8.7%	9.1 kg/m²	59.3m²	25pcs
	Acoustic design panel VF 8/18R Acoustic fleece, black or white	1188 x 1998 x 12.5 mm	15.5%	8.5 kg/m²	59.3m²	25pcs
	Acoustic design panel VF 10/23R Acoustic fleece, black or white	1196 x 2001 x 12.5 mm	14.8%	8.5 kg/m²	59.8m²	25pcs
$ \begin{array}{c} \bullet \\ \bullet \\$	Acoustic design panel VF 12/25R Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	18.1%	8.5 kg/m²	60.0m²	25pcs
	Acoustic design panel VF 15/30R Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	19.6%	8.0 kg/m²	59.4m²	25pcs
	Acoustic design panel VF 8/12/50R Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	13.1%	8.7 kg/m²	60.0m²	25pcs

IMAGE	DESCRIPTION	SIZE	PERFORATED AREA	MASS	M² PALLET	PANELS
	Acoustic design panel Acoustic fleece, black or white	1188 x 1980 x 12.5 mm	19.6%	8.0 kg/m²	58.8m²	25pcs
	Acoustic design panel VF 8/18Q Acoustic fleece, black or white	1188 x 1980 x 12.5 mm	19.8%	8.0 kg/m²	59.3m²	25pcs
	Acoustic design panel VF 12/25Q Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	23.0%	7.7 kg/m²	60.0m²	25pcs
	Acoustic design panel VF 8/15/20R Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	9.5%	9.1 kg/m²	60.0m²*	25pcs
	Acoustic design panel VF 12/20/35R Acoustic fleece, black or white	1200 x 2000 x 12.5 mm	11.0%	8.9kg/m²	60.0m²*	25pcs
	Acoustic design panel VF 5/82/15.4SL Acoustic fleece, black or white	1186 x 1984 x 12.5 mm	21.5%	7.9kg/m²	58.8m²	25pcs

Acoustic Plaster Ceiling

Vogl Toptec®: Spray Applied

Acoustic spray applied plaster come into consideration where a considerable improvement in room acoustics is required and are often combined with our highly effective acoustic perforation panels on both ceilings and walls. Each of these techniques can offer a highly effective acoustic solution. Together they are unbeatable in terms of aesthetics and sound absorption.

Until now, working with conventional gypsum-based panels was more like using traditional smooth plasterboard panels than a modern construction method. VoglToptec[®] works differently and, above all, without requiring jointing, making VoglTopec® economical and ultra-efficient.





Advantages:

- Elimination of panel jointing results in considerable increase in perforated area, thus enhancing acoustic efficiency
- Quicker and more economical installation due to precise edge-to-edge mounting technique
- Sound absorption coefficient of up to $\alpha w = 0.95$ (absorption class A)
- All from one source: The complete system, perfectly harmonised and tested
- Delivery includes Vogl screw kit

Acoustic Floating Ceiling

Perfectly created floating ceilings lastingly upgrade any conventional ceiling construction. They improve the sound absorption and thus selectively contribute to improved room acoustics. Furthermore, they offer the possibility of integrating chilled ceiling floating elements and fitted ceiling components (sprinklers, illumination, ventilation etc.) in great variability and always accessible. Vogl floating ceilings are

manufactured upon request within a short time of drawing approval in accordance with customer specifications, pre-assembled and - if huge in size disassembled again into easy-to-handle segments to facilitate logistics to the construction site. Simple assembly technique assures easy handling and especially quick installation. Perfectly shaped from factory.

The unique pre-assembly offers substantial advantages:

- Appealing surface without any visible panel edges
- Great diversity in form, colour and performance
- Ideal to add to existing ceilings
- Easy to install
- Individual solutions are standards and can be realised quickly
- Also available pigmented throughout
- Perfectly pre-fabricated floating ceilings for direct final installation there is no easier way



Vogl Access Panels

Access panels that are barely visible; technology perfectly integrated.

Acoustic ceilings usually have more than one function. The ceiling void is often used to accommodate technical installations such as lighting, air conditioning, sound or sprinkler systems. Access panels are necessary to make these services accessible for inspection and maintenance after installation of the acoustic ceiling. Vogl Access Panels offer unbeatable performance for easy access to services while retaining the design elements of the ceiling.

The perforated panel which is inserted into the frame offers an identical perforation pattern to the Vogl acoustic design ceiling. This makes the access panel an integrated and harmonised part of the acoustic design ceiling.

Available sizes: 300 x 300 mm, 450 x 450mm and 600 x 600 mm.

Benefits:

- Sturdy, high-quality aluminium frame for dimensional stability
- Diverse perforation patterns factory prepared
- Consistency in the rows of perforation throughout the ceiling
- Best acoustic characteristics due to factory-applied acoustic fleece perforated panel inlet
- Secure locking mechanism prevents the panel from dropping accidentally while being opened
- Customised special designs can be produced
- Convenient opening and closing mechanism
- Surrounding seal in the panel frame prevents unwanted air flow and dust deposits



Pre-Formed Bulk Head Board

Vogl Fold Fix®

Record Results on all Corners and Edges

Neat, exact and uniform corner connections of coverings and moulded components of gypsum board are a special challenge for the on-site installation.

The moulded components with Vogl Fold Fix® are so cleverly milled that the sturdy paper liner of the gypsum board remains undamaged.

The stable connection is accomplished with a factory-mounted, double-sided adhesive tape.

In addition to the space-saving transportation of the moulded components, another advantage of the Vogl Fold Fix® system is that the assembly on site takes just a few simple steps.



The ultimate in easy installation:

- Space-saving, cost-effective transportation due to flat delivery for economic job site handling
- Significantly reduced expenditure of time and costs in stepped moulded components and coverings
- Vogl Fold Fix[®] adhesive tape develops maximum adhesion immediately
- Precise pre-fabrication and easiest assembly without time-consuming finishing work provide maximum application and result reliability
- Rational joining to perforated ceiling panels done with ease

ACOUSTIC PANELS

Pre-Formed Special Elements

Curved Ceilings in any shape

SDGs partner, Vogl, have long-standing experience and absolute precision in the production of curved moulded components enable us to achieve a complex interaction between the individual components of steel and gypsum. In this process, it is not only the design that counts. Another aspect of great importance is the ease of handling during transport and on the job site. We package the prefabricated moulded elements ready for shipment and deliver them to their destination.





Acoustic Wall Absorb Panels

Providing an aesthetically pleasing solution to control reverberation time and increase the acoustic absorption of any space. Widely used in classrooms, recording studios, offices, cinemas, reception areas and atriums, these panels can provide up to Class A absorption either as a complete wall covering or as a number of individually manufactured panels.

Absorb Panels feature a highly absorbent glass fibre core wrapped in an aesthetically pleasing, acoustically transparent fabric.

The edges are reinforced to provide a perfect square edge. Class A acoustic absorption rating can be achieved with our 40 mm or 50 mm panel as standard.

Visit our website to see the full range of Acoustic Wall Absorb Panels.

Acoustic Baffles

Discover the limitless design flexibility of our Absorb Baffle; a lightweight and semi-rigid panel that has sound absorbing properties. Designed with solid colour throughout, our Baffle has the potential to be used with a large array of spatial design and interior solutions. More than just a traditional interior acoustic panel, the Baffle can be employed as a base material for creative solutions where design and aesthetics are important. The Acoustic Baffle is made from 100% polyester and manufactured in the UK. Containing a minimum of 65% post-consumer recycled material. Our Baffle is completely safe, non-toxic, non-allergenic and non-irritant.

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Absorb Switch is also available. These are high-pressure sprayed baffles and rafts. They have high quality adhesion and sealed edges. They are a cost effective solution to a complex problem.



Acoustic Foam

Acoustic Foam is highly effective in terms of sound insulation and sound absorption. The sound absorbing element can be used in many different application areas with a choice of base material (available in different fire protection classes and colours) and different material thicknesses.



Properties:

- Outstanding acoustic properties
- Attractive appearance with a convoluted surface
- Conversion of sound into thermal energy based on open celled pore structure
- Professional acoustic solution for various application areas
- Creative design versatility through different formats, thicknesses and colours
- Equally suitable for wall and floor assembly
- Available with optional flame-retardant additive in different fire protection classes
- Made of special acoustic foam that, compared to conventional foams within xenon tests, take a considerably longer time until showing colour changes, thus have superior light ageing properties
- Free of mineral fibre
- CFC-free

Underscreed Acoustics

SDG's range of underscreed rubber makes an excellent addition to a floor underlay for footfall sound reduction and thermal insulation used in building construction and renovation. It is suitable for underscreed applications and can be used above screed especially in wet rooms under ceramic tiles.

Peace and quiet is a primary basic need in today's society and of great importance. An effective impact footfall sound reduction and vibration isolation, improves quality of life, provides living comfort and a good working atmosphere. Customers can avail of a wide range of products for acoustic insulation as well as for vibration deadening for different requirements and application areas.

Applications:

- Production halls and depots
- Shopping centres
- Concert halls, cinemas
- Fitness centres
- Public buildings
- Schools, training centres
- Recording studios
- Acoustic test laboratories
- Hotels
- Apartments

Benefits:

- European Technical Approvals (CE label)
- Excellent noise insulation with a low panel thickness
- Outstanding compressive strength and load-bearing performance
- Permanently elastic
- Highest resiliency even after years of use (does not compress and reduce sound absorption)
- Water and rot proof

- Environmentally friendly, recycled rubber
- Allows planners to save heights in new buildings or adapt to given conditions in the case of renovation
- Materials used are fully recyclable
- Fast and easy installation
- High pressure load capacity
- Excellent elasticity and fast, easy installation with available thickness of 4 mm to 17 mm



ACOUSTIC FLOORING



SDG work in partnership with Isomass Ltd. Together we are one of the UK and Ireland's largest suppliers of acoustic floor, wall and ceiling systems for architectural and domestic projects. Isomass domestic acoustic flooring, wall and ceiling solutions are designed to control intrusive noise whether it is airborne sound from speech, televisions or impact noise from footsteps, banging or slamming doors.

Acoustics for Timber Floors

Monodeck 17T, 26T and 30 T systems are designed to reduce transmission through timber floors in situations where finished floor height is not critical.

Monodeck 26T and Monodeck 30T boards consist of a layer of 8 mm reconstituted ACF bonded to 18 mm or 22 mm V313 P5 moisture resistant chipboard; Monodeck 17T boards consist of a layer of 8 mm reconstituted ACF (Acoustic Chip Foam) bonded to 9mm moisture resistant medium-density fibreboard.



When installed as part of an Isomass approved separating floor construction either system enables a traditional timber joisted floor to meet the sound transmission standards of Approved Document E 2003 and subsequent amendments in 2004, 2010, 2013 and 2015.

Applications:

To be used over existing floorboards for conversions, refurbishments or new build with a new resilient bar ceiling.

Benefits:

- Closed cells prevent water absorption which can impair
- Simple to install with highly efficient results
- Reduces impact sound transmission in finished wooden floors
- Includes a moisture-resistant chipboard

Acoustics for Concrete Floors

Isocheck Cradle acoustic flooring system is designed to reduce impact sound transmission through uneven or cambered concrete floors by elevating the floor on timber battens that are supported by a pre-treated adjustable plastic cradle (Otherwise, can be referred to as an acoustic saddle). This system not only facilitates the incorporation of services but is also frequently specified with water based underfloor heating systems.

Isocheck Cradle consists of a 5 mm layer of Isopoli HD foam bonded to an injection moulded plastic cradle. The system includes levelling packers in various thicknesses as well as elevating blocks where a greater degree of height is required beneath the acoustic cradle.

When installed as part of a complete party floor construction this system enables a concrete floor to meet the sound transmission standards of Approved Document E 2003 and subsequent amendments in 2004,2010,2013 and 2015.

Applications:

To be used over hollow core, cast in-situ or supported metal deck concrete floors for new build or various types of conversion.

Benefits:

- Reduces impact sound transmission through concrete floors
- Corrects uneven or cambered concrete floors

Acoustic overlay for Joisted Timber Flooring

Isocheck RENOVO acoustic flooring system is designed to reduce impact sound transmission through traditional joisted timber floors where there is little or no access available to enhance the ceiling below for both sound insulation and additional fire protection.

Isocheck RENOVO consists of 8 mm environmentally friendly Ecopoli resilient layer bonded to 18 mm p5 moisture resistant chipboard.

When installed as part of a complete party floor construction either system enables a traditional timber joisted floor to meet the sound transmission standards of Approved Document E 2003 and subsequent amendments in 2004, 2010, 2013 and 2015.



Applications:

To be used directly over existing floorboards in refurbishment, conversion, and listed building projects.

Benefits:

- Tested by NHBC and UKAS or ANC compliant consultants for use in conversion applications and meets performance requirements as specified in the latest version of approved document E of the building regulations with or without the use of a proprietary resilient bar or MF suspended ceiling system. Further guidance is available on floors with direct fixed ceilings, as some shallower constructions may require a different approach.
- Ideal for listed buildings incorporated over the floorboards or chipboard. This method is second fix making it one of the last operations, thus avoiding costly protection which is often necessary on alternative direct to joist systems.

Acoustic Treatments for Walls and Ceilings

Isowave 23 consists of a 10 mm Isowave acoustic foam measured to BS EN ISO 845:2009 bonded to 12.5 mm high density, square edged fibre-reinforced gypsum board. The system incorporates acoustic foam which is semi rigid and is an excellent absorber with high damping characteristics when bonded to an acoustically reflective stiff surface. Isowave foam is manufactured using water as a blowing agent and is free of CFCs, HFCs or HCFCs. The acoustic ceiling system complies with requirements of EU Regulation No 2037/2000 for ozone depletion and offers good thermal properties.

The Isowave 23 acoustic wall system is for the treatment of excessive flanking sound that bypasses a separating floor via lightweight structural walls. The Isowave 23 acoustic wall system is used to enhance a wall that is found to underperform or to provide a high-performance wall commonly used in home cinemas/studios.

Also in situations where commercial activities adjoin a dwelling or for upgrading separating walls where there is limited space. This is a versatile system used in refurbishments or new build with a decoupled ceiling as illustrated or otherwise approved by Isomass.

This is a versatile system used in refurbishments or new build with a decoupled ceiling as illustrated or otherwise approved by Isomass.

Isowave 23 acoustic ceiling system complies with requirements of EU Regulation No 2037/2000 for ozone depletion and offers good thermal properties.

Applications:

To construct or upgrade separating ceilings for conversions, new build and refurbishments projects.

Benefits:

- Reduces unwanted flanking noise in order to comply with Approved Document E 2003 and subsequent amendments
- Fire protection 30 minutes for a single layer

WALLS



CEILINGS



WOODEN ACOUSTICS



Isolation Strip

Enhance impact sound on walls

Isolation Strip is ideal for upgrades when looking to increase impact sound insulation from footfall noise on floors and reduce structure-borne noise from doors closing and light switches on stud walls.

It has no adverse effect on the structural stability of the walls and its adhesive backing ensures it can be held in position as the work progresses.

The Isolating Strips are composed of cross linked Isopoli foam with a self-adhesive layer on one side.

They are designed to enhance impact sound insulation when used within all types of construction by isolating timber, steel and masonry separating and partition walls.



Applications:

Can be used on timber, steel and masonry separating and partition walls.

Benefits:

- Ideal for upgrades when looking to increase impact sound insulation from footfall noise on floors and reduce structure-borne noise from doors closing and light switches on stud walls.
- Has no adverse effect on the structural stability of the walls and its adhesive backing ensures it can be held in position as the work progresses.

Décorslat Wooden Slatted Panels

Wood veneered wall and ceiling panels provide high-end acoustics through unique milling and groove patterns. These panels can be used for walls and ceilings, with an excellent acoustic absorption for public and private spaces, auditoriums, theatres, hotels, offices. Timber slats add a warm and natural feel that is unobtainable through any other material. SDG acoustic timber slats add another dimension to the comfort that timber offers, through their excellent acoustic qualities. When backed with our acoustic absorption material, the reduction in incidental noise is dramatic and of great consequence to the inhabitants of the area. The three-dimensional effect of timber panels can be enhanced by separating and dispersing the panels, creating a continuous linear look that delivers light and air into the environment.






Décorslat Max Wooden Beams

Lightweight larger slats offer even greater freedom in 3D design without compromising on acoustic performance.

Our Max slats offer a range of fixing options to suit any project. In contrast to Slat panels, Max is supplied as beams. Quick easy fixing cleats create ease for installation.







CISILENT[®] Flexible Noise Control: Flexible Acoustic Sound Barriers

Noise control – the easy way

Flexible Sound Barrier for various purposes.

Rising environmental awareness and the knowledge of health damaging effects caused by intensive noise demand efficient countermeasures. In those cases where common products can only be used restrictedly, the CISILENT[®] sound barrier reveals its great advantages. This applies to indoor and outdoor locations, where spatial, technical, weight or other restrictions do not allow other options than CISILENT[®].



Applications:

- Near busy main roads
- Sport facilities
- Open-air concerts
- Shunting yards
- Building sites
- Airports
- Indoors, e.g. in production halls etc.

Benefits:

- With CISILENT[®] sound-proofing problems can be solved efficiently
- Little space needed for installation
- Low transport weight
- Simple assembling also allows mobile applications
- The flexible CISILENT[®] sound barrier reaches a sound insulating value of Rw = 25 dB despite being a fraction of the weight compared with other noise barriers
- Massive elements of the same area weight as CISILENT[®] insulate noise less, because they are more rigid and radiate sound themselves again from their outer surface
- The flexible CISILENT® however, fully uses the noise insulating effect of the area related mass
- CISILENT® is good for the well-being and fitness

Still looking for something?

A full index of our product catalogue can be found on page 362.





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How can SDG support your next construction project?

Visit our website for further product information or call our team to speak with one of our experts.

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