PRODUCT CATALOGUE

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RECTOR PRESTRESSED BEAM





RECTOBETON system

RECTOLIGHT system

RECTOBETON SYSTEM





Beams up to 10 m long



State-of-the-art EURYDICE software



RS 130 (5.7 - 10 m)



PRESTRESSED CONCRETE BEAM:

- Fast and easy assembly, no heavy equipment required,
- All formwork virtually eliminated,
- No expensive and labour-consuming load distributing beams,
- Less deflections, no slab faulting,
- Savings on reinforcement work,
- Lower concrete consumption,
- 60% less props during installation, compared to a traditional floor,
- A complete, compatible system, thanks to a wide range of accessories,
- All products are available immediately,
- A technology well known to contractors,
- Technical support at every stage of the construction process,
- Free design and cost estimate.



RECTOBETON FLOOR SYSTEM







Hiding the system in the floor



Simple and quick assembly

The **RECTOBETON** floors are rib-and-slab, prefabricated beam and block type floors. These floors consist of prestressed and pre-tensioned concrete beams and fillings, in the form of gravel concrete, hydraulically-pressed filler blocks. The system is complemented by the following accessories: supporting reinforcement, welded steel wire mesh mats and monolithic concrete poured on site.



Filler blocks **RP 7, 12, 15, 16, 20, 24, and 25**:

- Blocks made of pure (no ash additions) hydraulically-pressed concrete,
- A wide range of hollow blocks to fit any construction site; the possibility of cutting the block or leaning it against the wall,
- Blocks capped on each pallet,
- Low weight resulting from thin-walled design,
- High durability (over 250 kg of 5x5 cm point load).





Heat-insulating balcony connectors



LARGE SPANS of the floor with the use of the RECTOR pre-tensioned concrete beams allow to eliminate the internal load-bearing walls and obtain a modern and spacious interior.

ACOUSTIC INSULATING

POWER is achieved by selecting the appropriate floor elements that have an impact on its weight.

Weight of the **RECTOBETON** floor: from 225 kg/m² to 574 kg/m²

FIRE RESISTANCE OF FLOORS confirmed by fire tests carried out by the Building **Research** Institute

Plastered floor — up to REI 240 Non-plastered floor - from REI 30 to REI 120







RECTOBETON:

- A wide range of applications from single- and multi-family residential buildings to public utility buildings,
- Span from 1 to 10 m,
- Floor height from 16 to 34 cm
- Hollow concrete block height from 12 to 25 cm
- Assembly height up to 5.6 m without any supports
- Supporting the beam against the wall: 5 or 7 cm,
- Fire resistance of the floor with gypsum plaster on a wire mesh, up to REI 240,
- Fire resistance of the floor without gypsum plaster, up to REI 120,
- Consumption of hollow concrete blocks from 6.33 to 8.47 pcs./m²,
- Weight of hollow concrete blocks from 11.0 to 20.0 kg/piece,
- Blocks capped on each pallet,
- Concrete consumption from 59 l/m²,
- Floor weight from 225 kg/m²



RECTOLIGHT FLOOR SYSTEM



Simple cutting









A complete system

The **RECTOLIGHT** floors are prefabricated rib-andslab, suspended beam and block floors. These floors consist of prestressed and pre-tensioned concrete beams and filler blocks made of compressed wood. The system is complemented by the following accessories: supporting reinforcement, welded steel wire mesh mats and monolithic concrete poured on site. Weight of the floor from 175 kg/m².



RECTOLIGHT RL 12, 16, 20 panels:

- Panels made of compressed wood, with commercial covers,
- Wide range of panels, the possibility of supporting them directly against the wall,
- Enables cutting holes in almost any shape,
- Very low weight from 4.6 to 6.4 kg/piece,
- High strength (up to 800 kg of 5x5 cm point load).



RL 12 - 4.6 kg/piece RL 16 - 4.8 kg/piece RL 20 - 6.4 kg/piece





Additional installation space

MODERN AND ELEGANT

The RECTOLIGHT panels often constitute part of interior design.

SIMPLE AND QUICK ASSEMBLY

One person can carry up to 5 m² of filler blocks at a time.

SIMPLE MACHINING

It is possible to cut out holes of any geometry in RECTOLIGHT panels, using simple tools

LOGISTIC ADVANTAGES



12 pallets with **RECTOBETON 16 = 1** pallet with **RECTOLIGHT 16** approx. 96 m² of the floor approx. 96 m² of the floor (816 pieces x 13 kg = 10,608 kg)20 pieces x 4.8 kg = 576 kg)









RECTOLIGHT:

- Span from 1.0 m to 8.5 m, every 10 cm,
- Floor height from 16 to 30 cm
- It is possible to assemble them without any supports, up to 5.6 m,
- Made of an eco-friendly material,
- Supporting the beam against the wall: 5 or 7 cm,
- Lightweight panel from 4.6 to 6.4 kg/piece,
- Consumption of panels from 0.93 to 1.39 pcs./m²,
- 50% faster installation compared to using concrete blocks,
- The spacing between centres of beams 59 or 60 cm,
- Dedicated covers,
- Fire resistance up to REI 60 (REI 120, when using the EI 120 suspended ceiling),
- Reduced cost of transport,
- Thanks to the special projections, there is no need to use spacers,
- Small area required for storage.





REFURBISHMENTS — FLOOR REPLACEMENTS







Recommended by contractors



Minimum interference with the existing walls



Small storage space required for Rectolight panels.



Supported on a reinforced concrete trimmer beam.



The **RECTOR** floors can be installed in cavities carved into the walls, without the need to make a groove and weaken the load-bearing wall. The tie beam is usually made at the first row of hollow concrete blocks / lowered panels. The low weight of the beam (15-20 kg/m) allows for manual installation, without using any heavy equipment. In special situations, it is possible to install the floor without any supporting, up to a span of 5.5 m (RECTOBETON) or 5.6 m (RECTOLIGHT).

The possibility of installing without any supports, over the existing floor.



The floor is supported against the lower foot of a steel beam.

Supported on a steel trimmer beam, if the floor is to be replaced.





Replacement of the floor in the existing building

SUPPORTING THE

BEAMS — it is not necessary to make grooves in the entire load-bearing wall. It is enough to make spot assembly cavities for prestressed beams.

A RECESSED TIE BEAM

is supported on a row of lowered hollow concrete blocks, which function as stay-in-place formwork.

LIGHTWEIGHT ELEMENTS

facilitate installation and make it twice as fast. The RECTOLIGHT lightweight panels are particularly appreciated by contractors.

LOGISTICS - small and lightweight elements, which do not require using heavy equipment, ideal for downtown built-up areas.











REFURBISHMENTS:

- Span from 1.0 m to 10.0 m, every 10 cm,
- Assembly height up to 5.6 m without any supports
- Easy and quick installation,
- The lightest suspended beam and block floor,
- The system does not require making grooves in all walls, but only assembly cavities for installing the beams,
- The small overall dimensions of the elements and manual assembly facilitate logistics in downtown built-up areas,
- Weight of the RECTOLIGHT panels from 175 kg/m²,
- The possibility of making a tie beam on the first row of hollow concrete blocks.





COMPLETED PROJECTS



Twin homes, Zielonki near Krakow



Multi-family residential building, Opole



Multi-family residential building, Skawina



Terraced houses near Złotoryja



Multi-family residential buildings, Wilanów



Multi-family residential buildings, Rzeszów



Housing development, Tychy





Multi-family residential building, Poznań



Single-family house, Wodzisław Śląski



Housing development, Łódź



Multi-family residential building, Żory

Housing development, Sosnowiec



Multi-family residential buildings, Siechnice



Housing development, Starogard Gdański









Office building, Włocławek



Renovation of an old tenement house, Poznań





The Theological Institute, Rzeszów



The National Health Fund facility, Bydgoszcz



Multi-family residential building, Toruń



School, Swarzędz



Office building, Opole



Commercial building, Wrocław



Kindergarten, Rybnik



Kindergarten, Konstancin Jeziorna



Office building, Mielec



Office building, Rabka



Renovation of the castle in Gniew



Renovation of the railway station in Gliwice









PPR PRESTRESSED BINDER

RANGE OF PPR BINDERS:



ADVANTAGES;

- Reduces the time required for masonry work
- No formwork or reinforcement required
- Protrudes by only 7 cm below the floor
- Lightweight element only 21 kg/lin.m.
- High aesthetic quality of the product

TECHNICAL DATA:

- Length from 2.7 m to 5.0 m
- Width: 115 mm
- Height 71 mm (180 mm with truss)
- 2 prestressing strands
- Minimum support on the wall: 7 cm
- Minimum support on a reinforced concrete support column: 2 cm
- Concrete C55/67

PLX PRESTRESSED LINTEL

PLX LENGTHS:





ADVANTAGES;

- Reduces the time required for masonry work
- No reinforcement or concreting required
- Lightweight element only 19.6 kg/m
- High aesthetic quality of the product

TECHNICAL DATA:

- Minimum support on the wall: 15 cm
- Lintel 120 cm, 150 cm assembled without supports
- Lintel 180 cm, 210 cm, 240 cm assembled using a single support
- Minimum height of the superstructure: 15 cm: solid material
- During the assembly phase, the floor remains supported, until it has achieved adequate strength (it does not rest directly on the lintels)
- Dismantling of the props after 21 days from the date of assembling the floor





STEEL WIRE MESH

Welded wire meshes are an integral part of the RECTOBETON and RECTOLIGHT systems

- The wire meshes are applied over the entire area of the floor,
- wire mesh overlap min. 1 mesh,
- Assembly of wire meshes using small spacers,
- The use of wire meshes eliminates the need for a load distributing beam.

RECTOR Polska offers the following welded wire meshes:

- Ø5 mm with 20x20 cm mesh,
- The size of the mat is 1.3 x 2.5 m = 3.25 m²,
- Weight of 1 piece is 5.3 kg or 1.63 kg/m²

PREFABRICATED TRIMMER BEAM



Floor		Type of trimmer beam	
height H [cm]	L [cm]	W type	WM type
		[L/width-height]	[L/width-height]
	80 - 120	W120/12-12	WM120/12-12
16-19	120 - 180	W180/15-12	WM180/15-12
	80 - 120	W120/12-16	WM120/12-16
20-23	120 - 180	W180/15-16	WM180/15-16
	180-240	W240/15-16	WM240/15-16
24-27	80 - 120	W120/12-20	WM120/12-20

LENGTHS OF TRIMMER BEAMS:

80-120 cm	120-180 cm	180-240 cm		
The trimmer beam is selected by designers				

- from RECTORReduces the time required for construction work
- Adjustable length of each element
- Precisely manufactured trimmer beam
- Dedicated to the following floor heights

HANGERS FOR THE RECTOLIGHT SYSTEM



- Quick assembly,
- No interference (drilling) in the beam,
- Fits suspension members of any length and width,
- Fixed with two 10 mm self-drilling screws,
- With a longitudinal hole for an adjustable hook,
- Consumption 1.5 3.5 pieces/m², depending on the fastening elements used in a drywall system.





CONCRETE TIE BEAM BLOCKS

LECA (light expanded clay aggregate) concrete blocks KZE and KWE

- A lowered tie beam is carried out each time, which is recommended by most floor manufacturers,
- Shortens the time required for assembling the floor and tie beam, thus eliminating the use of expensive and time-consuming boarding of the tie beam,
- With a floor of 100 m², we can save 1 m³ of concrete,
- Eliminates the need to use spacers between the reinforcement elements of the tie beam.
- Eliminates the need to use extreme assembly supports,
- Safety during the assembly and pouring of the floor,
- Ensures uniform distribution of the loads transferred from the floor to the wall,
- The possibility of running the core out of the wall, without interfering with the structure of the fitting,
- Compressive strength of the C 30/37 concrete.



rwn S	KWE blocks



Designation	Available base widths (A)	Block height (H)	Floor height	В	С
KZE H-410		410	340		
KZE H-370	180	370	300		
KZE H-310	240	310	240		
KZE H-290		290	220	600	70
KZE H-270	300	270	200		
KZE H-250		250	180		
KZE H-230	360	230	160		

Designation	Base width (A)	В	C
KWE L-180	180		
KWE L-240	240	600	70
KWE L-300	300	600	70
KWE L-360	360		



The longest external **KZE block** is **360** cm long and can be used as a lintel for a 330 cm wide opening.



rector.plate

Height of element [cm]	Quantity in metres per 1 pallet	Weight [kg/m]
16	324	0.59
20*	270	0.60
25*	224	0.69
30*	180	0.76

* - the element requires using a bracket and connecting it to the reinforcement





Stabilising brackets

FORMWORK ELEMENT OF THE TIE BEAM

- Extremely fast and simple assembly,
- The cheapest formwork system,
- No traditional boarding,
- Eliminates thermal bridges in the tie beam,
- A complete system,
- Simple cutting of elements,
- An all-purpose system adapted for all types of walls and floors.

TECHNICAL DATA:

- Height of an element: 16 cm, 20 cm, 25 cm, or 30 cm,
- Materials: XPS board 35 mm, λ = 0.033 W/mK, and heavy duty fibre cement board,
- Weight of an element from 0.59 kg/m,
- Length of an element: 100 cm,
- 1 pallet equals 324 m of blocks,
- No internal blocks are available, since RECTOR pre-stressed floor beams can be supported directly against the wall,
- Stabilising brackets for floors exceeding 20 cm in height,
- Simple machining,
- Assembly using foam, glue, or anchors.

INTENDED USE:

- As a cost-effective stay-in-place formwork for fast assembly,
- As an additional thermal insulation of the floor, particularly recommended when using single-layered walls,
- As a safe optional solution for the traditional formwork, which is difficult to install on higher floors.



Improved thermal insulation Quick assembly



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