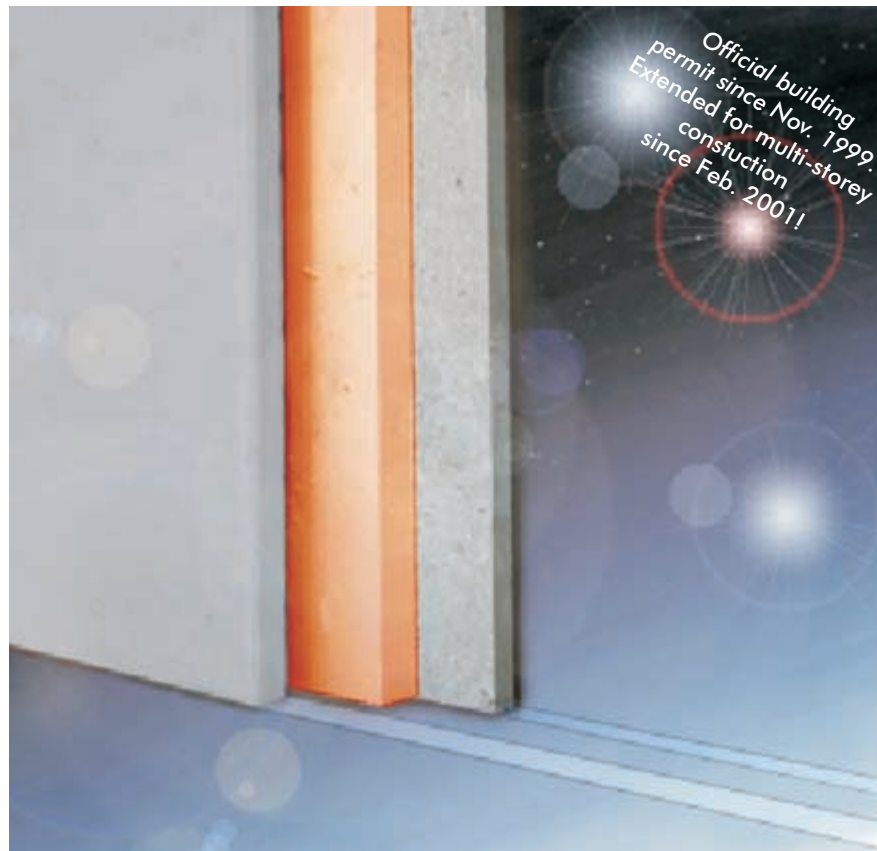


Syspro PART-thermo
Prefabricated wall elements including core insulation



... keeping it warm from the basement to the roof.



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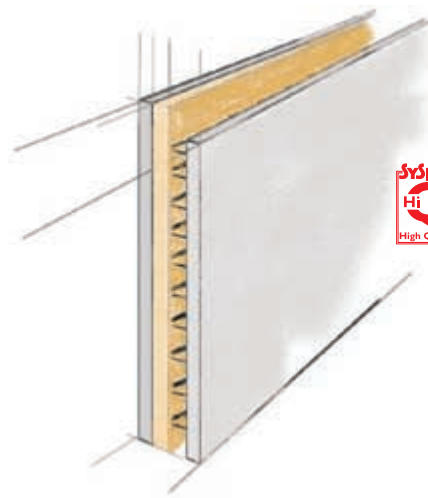
Application areas:

For all alternatives in traditional sandwich construction – from the basement to the roof

For housebuilding:
keeping energy consumption low

For watertight-structures:
ensuring high physical quality

For commercial and industrial construction:
halls, offices, schools, hospitals, shopping malls, markets



Syspro HiQ means: always better than the valid standards and regulations.

**Saving energy starts with the building shell:
SysproPart Thermo – the composite concrete wall panel with integrated core insulation**

The system:

The SysproPart Thermo wall system is a prefabricated wall panel with integrated core insulation. It consists of two precast concrete layers, connected through lattice girders. After the assembly the wall elements are completed with insitu concrete. After the hardening of concrete, the total cross section can be used as a monolithically wall. SysproPART thermo is produced according to valid standards and building regulations. During production, the insulation sheets are placed between the lattice girders just like other embedded items.

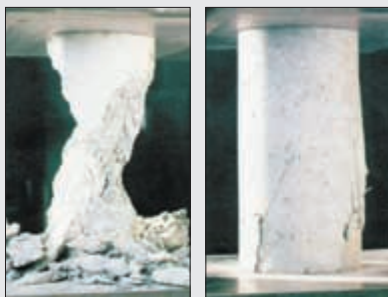
All advantages of the classical wall panel system are kept: The dimension of the outer layer can differ from the inner layer. Thereby you get the option of setting an edging for formwork needed when concreting floor slabs. The inner layer serves as a support for floor units. An ideal supplement of the Syspro system.

Exclusive quality:

The Syspro Group is the only supplier and distributor of core-insulated the wall panel allowing zero energy design. Only their thin stainless steel diagonal lattice girders can be used with thick insulation panels. As a result, there is practically no heat loss.

Fabrication and application according to building code. All across Europe, Syspro Group is the first and the only supplier for the application of thermo walls in multi-storey buildings.

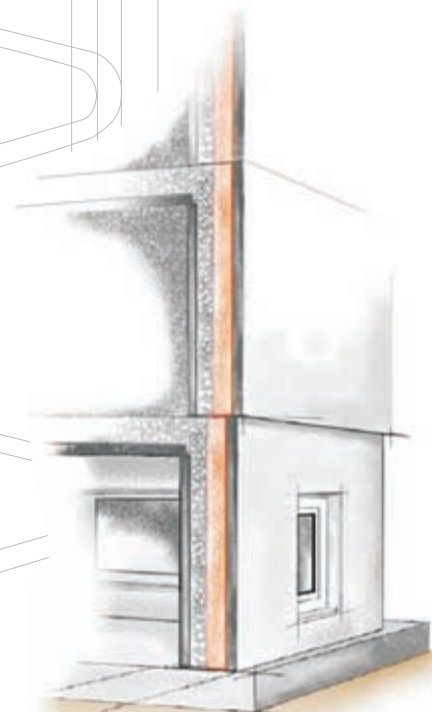
Syspro Fibre Concrete



Beaning behaviour without fibre Beaning behaviour with fibre

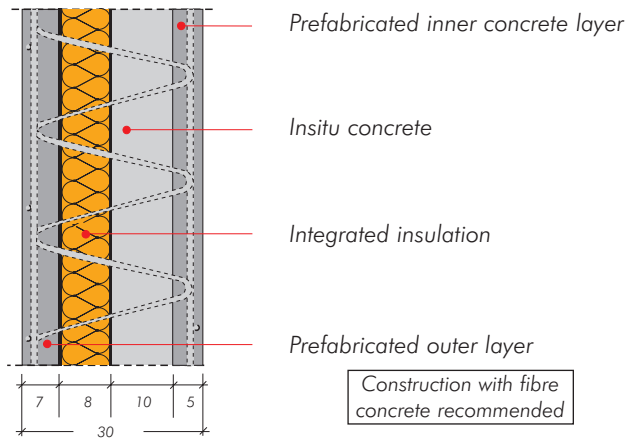
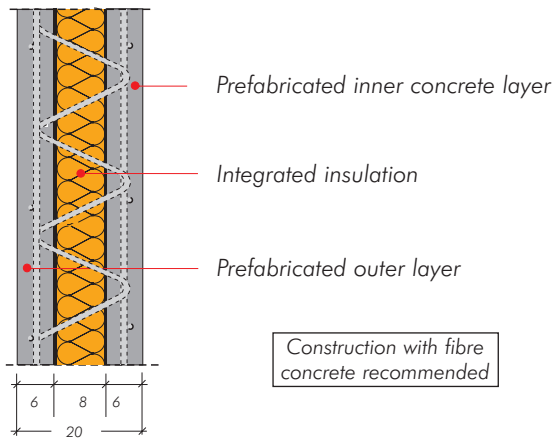
Advantages through the application of fibre concrete:

- protection from cracks and fissures
- high durability
- replacement of reinforcement
- higher bearing capacity
- low-weight precast elements

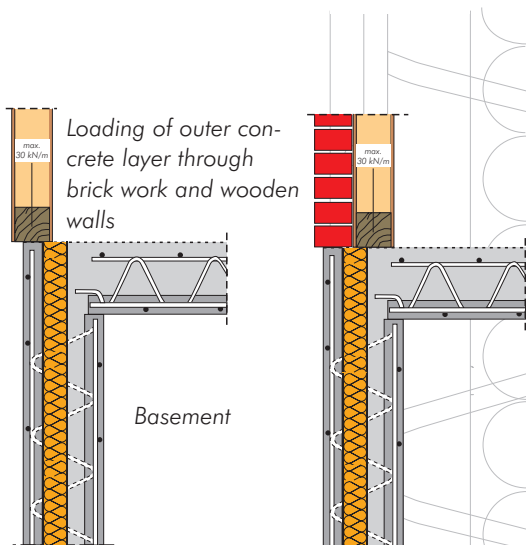


Syspro PART^{thermo}
New:
 without core concrete

Syspro PART^{thermo}
 "Classic"



Future-oriented solutions with the established composite concrete wall panel elements for buildings insulated



Dimensions

Total thickness: 26 - 40 cm
Insulation: 4 - 20 cm
Length of elements (height) bis 8 m
 (other dimensions upon request)

Application examples

Application Measurements	Water tight	Standard	Multi-storey	Sandwich
Total thickness	34 cm	30 cm	30 cm	20 cm
Outer layer	7 cm	7 cm	7 cm	6 cm
Insulation	8 cm	8 cm	10 cm	8 cm
Concrete core	14 cm	10 cm	8 cm	entfällt
Inner layer	5 cm	5 cm	5 cm	6 cm

Connecting basement to floor details:
 SysproPART thermo wall elements create a connexion basically free of thermal bridges even in critical areas.

Structural design: Activity the outer layer.

Through the enormous activation of the outer layer by lattice girders (as known in floorslabs), the carrying capacity of the outer layer is licensed for basement use. Up to now, loads had been limited to 15 kN/m. Now, regarding a layer thickness of 6 cm, the vertical load may be increased up to 32 kN/m. Single loads of 27 kN are supported with respect to standard lattice girder spacing and foot plate with dimensions of 15/15/1.0 cm standard steel.

Material data

Concrete	C20/25 (RESP. fibre concrete)	$\lambda = 2,1$ (W/mK)
Core insulation	Polystyrol	$\lambda = 0,035$ (W/mK)
Lattice girders	non corrosiv steel (Diagonal)	$\lambda = 15,0$ (W/mK)

*) In exceptional cases ordinary steel can be used

Wall panels

of a 30cm wall panel wall insulated according to thermal heat coefficient of 0,035 W/mK

thickness of insulation	stainless steel diagonals	ordinary steel
d = 8,0 cm	U = 0,451	U = 0,539
d = 10,0 cm	U = 0,367	U = 0,437
d = 12,0 cm	U = 0,297	U = 0,349

Space between lattice girders: e = 0.50 cm, U : W/m²K



The innovation for slim walls

SysproPART Thermo: special lattice girders render core reinforcement obsolete.

Ask us about it!

Syspro Building Advisory Service

Whether you need support in planning, search for tips and tricks in mounting or need advice in structural design, especially for slim walls, the certified Syspro experts will appreciate to assist you.

SysproPART thermo: Technically safe, providing ideal living conditions. A wall system for all purposes in multi-storey building.

Innovation in sandwich panels design for storage halls

Hall building, from now on without core concrete but still with energy-saving heat insulation. Both layer, 6 cm thick, are designed to carry upper facade walls. Compared to traditional sandwich building, this system achieves an enormous reduction in thickness and weight. Up to 30%!

Simple connexions within the system add to the efficiency on the building site.



Basement construction with prefabricated SysproPART thermo wall elements

Innovation in roof panels

The SysproPART thermo system's application was extended to roof panels. For this reason not only all advantages of low-energy construction are fulfilled, but the system also represents trend-setting solutions for roof building. The most striking advantages are to be found in the ideal living climate and the leak-proof and storm-resistant roof construction.

Additionally the thermo roof offers high sound protection.



Mounting a Syspro thermo roof



Mounting of 10 m high SysproPART thermo wall elements at Ulm University



SysproPART thermo wall units in Marl