

Certificates



Insulation

PYROPLATE® Fibre (PYROCOAT® ASX)

European Technical Assessment No. ETA-17/0364 issued 01-12-2018

Fire protection systems for the highest level of safety



Be it in a residential building or an industrial complex – OBO has the appropriate solution for fireproof electrical installations. Our tested and certified fire protection systems cover all the relevant fire protection guidelines and provide you with an electrical installation that really serves its purpose. We will be happy to provide you with more details – on our website or personally.

Approval body for construction products
and types of construction

Bautechnisches Prüfamt

An institution established by the Federal and
Laender Governments



European Technical Assessment

ETA-17/0364
of 12 January 2018

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the
European Technical Assessment:

Deutsches Institut für Bautechnik

Trade name of the construction product

PYROCOAT ASX

Product family
to which the construction product belongs

Ablative fire stopping product used in penetration seals

Manufacturer

OBO BETTERMANN GmbH & Co. KG
Hüingser Ring 52
58710 Menden
DEUTSCHLAND

Manufacturing plant

Herstellwerk S

This European Technical Assessment
contains

7 pages including 3 annexes which form an integral part
of this assessment

This European Technical Assessment is
issued in accordance with Regulation (EU)
No 305/2011, on the basis of

EAD 350454-00-1104

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Specific Part

1 Technical description of the product

The construction product "PROCOAT ASX" is an ablative fire stopping product. It is provided in the form of a white or grey liquid.

In case of fire, the construction product forms a protective layer on the surfaces to be protected. The protective layer either consumes energy or releases matter through chemical or physical processes. The protective layer thus prevents the passage of heat, flames and/or smoke.

A detailed technical description and fire safety related performance criteria in relation to the construction product are given in Annex 1.

NOTE:

The characteristics listed are suitable both for identifying the construction product as well as for performing the manufacturer's factory production control.

2 Specification of the intended use in accordance with the applicable European Assessment Document

The construction product "PYROCOAT ASX" is intended for use as a component with a fire protection effect in penetration seals that are subject to fire safety requirements. In the event of fire, its reactive effect helps prevent the passage of heat and the spread of fire. The construction product "PYROCOAT ASX" is intended for use in penetration seals.

Construction products for penetration seals are used to seal openings in fire-resistant floors and walls, which are penetrated by services.

This ETA served to verify the resistance to fire of penetration seals consisting of the products listed in Annex 1.

Their function is to preserve the walls' or floors' resistance to fire in the area of openings where services were fed through.

The construction product "PYROCOAT ASX" may be used for penetration seals intended for outdoor use (rain, UV light, frost; use category type X).

The test and assessment methods on which this European Technical Assessment is based, lead to the assumption of working life of the construction product "PYROCOAT ASX" of at least 10 years in final use.

The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

The performance data in Section 3 relates only to the penetration seals tested as part of this assessment (e.g. regarding the design and arrangement of the penetration seal components and the type and position of the services).

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class E in accordance with EN 13501-1
Resistance to fire of a penetration seal containing the product	The resistance to fire depends on the design and installation of the penetration seal and on the other components forming the penetration seal. More details on the tested penetration seals and the related fire resistance classes are given in Annexes 1 to 3.

3.2 Hygiene, health and the environment (BWR 3)

Content and release of dangerous substances	No dangerous substances ¹
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4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with EAD No. 350454-000-1104 the applicable European legal act is: 1999/454/EC.

The system to be applied is: system 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable EAD

Technical details necessary for the implementation of the AVCP system are laid down in the test plan (control plan) deposited with Deutsches Institut für Bautechnik.

Issued in Berlin on 12. Januar 2018 by Deutsches Institut für Bautechnik

Prof. Gunter Hoppe
Head of Department

beglaubigt:
Bisemeier

¹ In accordance with Regulation (EC) No 1272/2008 of the European Parliament and the European Council of 16 December 2008 (published in the Official Journal of the European Communities L 353 of 31 December 2008, p. 1)

The factory manufactured construction product "PYROCOAT ASX" is an ablative fire stopping product. It is provided in the form of a white or grey liquid.

Properties and performances criteria of the construction product "PYROCOAT ASX"*

	Property/ Performance criteria	Parameter	Test method
1	Density	1410 g/l ± 70 g/l	EN ISO 2811-1
2	Nonvolatile components	66,0 % bis 86,0%	EN ISO 3251
3	Loss mass on heating	38,0 % bis 48,0 %	EN ISO 3451-1/EOTA TR 24 (2009) on 400°C over 30 Minutes
4	LOI	55,0 % ± 3 %	ISO 4589 Sample thickness ca. 1,5 mm
5	Flexibility of the coating	≥ 5 mm	EN ISO 1519 Sample thickness ca. 1,5 mm
6	Fire behavior	Klasse E	EN ISO 11925-2

The properties listed can be used both for the identification of the construction product and for the implementation of the factory production control of the manufacturer.

Implementation details for the factory production control are included in the inspection plan.

* The composition of the materials is deposited at DIBt.

Description of the additional components of the tested sealings

Soffit of the opening	Gypsum plasterboard acc. to EN 520, Typ F thickness: 12,5 mm Classification of fire behavior acc. to EN 13501-1: Class A1
Sealing of the residual opening	Loose mineral wool "RL", Deutsche Rockwool Mineralwoll GmbH, 45866 Gladbeck, Germany; EN 14303 Classification of fire behavior acc. to EN 13501-1: Class A1

PYROCOAT ASX	Annex 1
Description of the construction products, properties and performances	

Performances of tested penetration seals, comprising the construction product "PYROCOAT ASX"

	Essential requirement	Test method	Construction of the sample	Performance acc. to EN 13501-2
1	Resistance to fire	EN 1366-3	100 mm thick flexible wall; design and layout of the penetration seal according to Annex 3*	EI 60
2	Resistance to fire	EN 1366-3	125 mm thick rigid floor; design and layout of the penetration seal according to Annex 3*	EI 90

* Illustrations without guarantee for completeness

The use of the construction product "PYROCOAT ASX" in penetration seals shall be in accordance with national requirements for planning, design and execution and in accordance with the installation instruction of the manufacturer.

The tested/ illustrated seals are only examples for the use.

PYROCOAT ASX

Description of the construction products, properties and performances

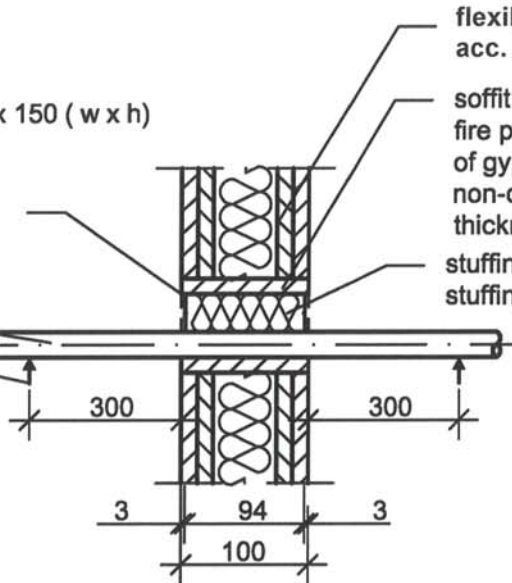
Annex 2

wall installation

rectangular opening 350 x 150 (w x h)

coating with
"PYROCOAT ASX",
thickness 3 mm

cable
first support in
front of the wall



flexible wall
acc. EN 1366-3; EI 90 (EN 13501-2)

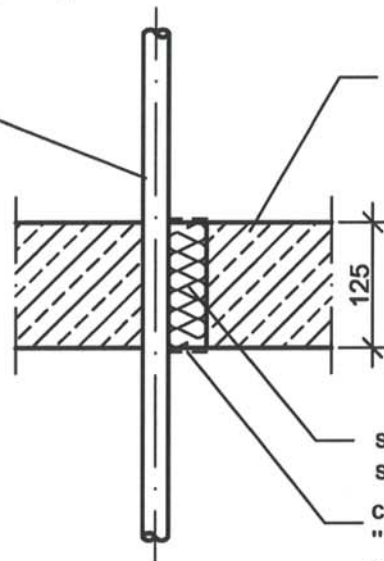
soffit with
fire protection board
of gypsum plasterboard,
non-combustible,
thickness 12.5 mm, Type F acc. EN 520

stuffing with mineral wool
stuffing density 175 - 225 kg/m³

floor installation

rectangular opening 350 x 150 (w x h)

cable



rigid floor acc. EN 1366-3;
concrete, $\rho = 2200 \pm 500 \text{ kg/m}^3$;
EI 90 (EN 13501-2)

stuffing with mineral wool
stuffing density 175 - 225 kg/m³

coating with
"PYROSAFE ASX",
thickness 3 mm

cable	Designation	Insulation/sheath material	Standard
A1	NY-Y-J 5x1,5 RE	PVC/PVC	HD 603.3G
A2	H 07 RN-F 5G1,5	EPR/PO	HD 22.4
A3	N2XH-J 5x1,5 RE	XLPE/EVA	HD 604,5G
B	NY-Y-J x 95 RM	PVC/PVC	HD 603.3G

(cable in accordance with EN 1366 - 3 : 2009, Table A1)

PYROCOAT ASX

Use as a part of a cable penetration seal with the fire resistance class EI 60 (wall installation) respectively EI 90 (floor construction)

Annex 3

Annex

According to classification reports

The following drawings show different examples of mixed penetration seals named system "PYROPLATE Fibre", using ablative coating "PYROCOAT ASX", based on the test- and classification reports according to EN 1366-3 and EN 13501-2.

The fire resistance classes depend on the different executions of the seals, using defined materials and components described in the ETA and this annex.

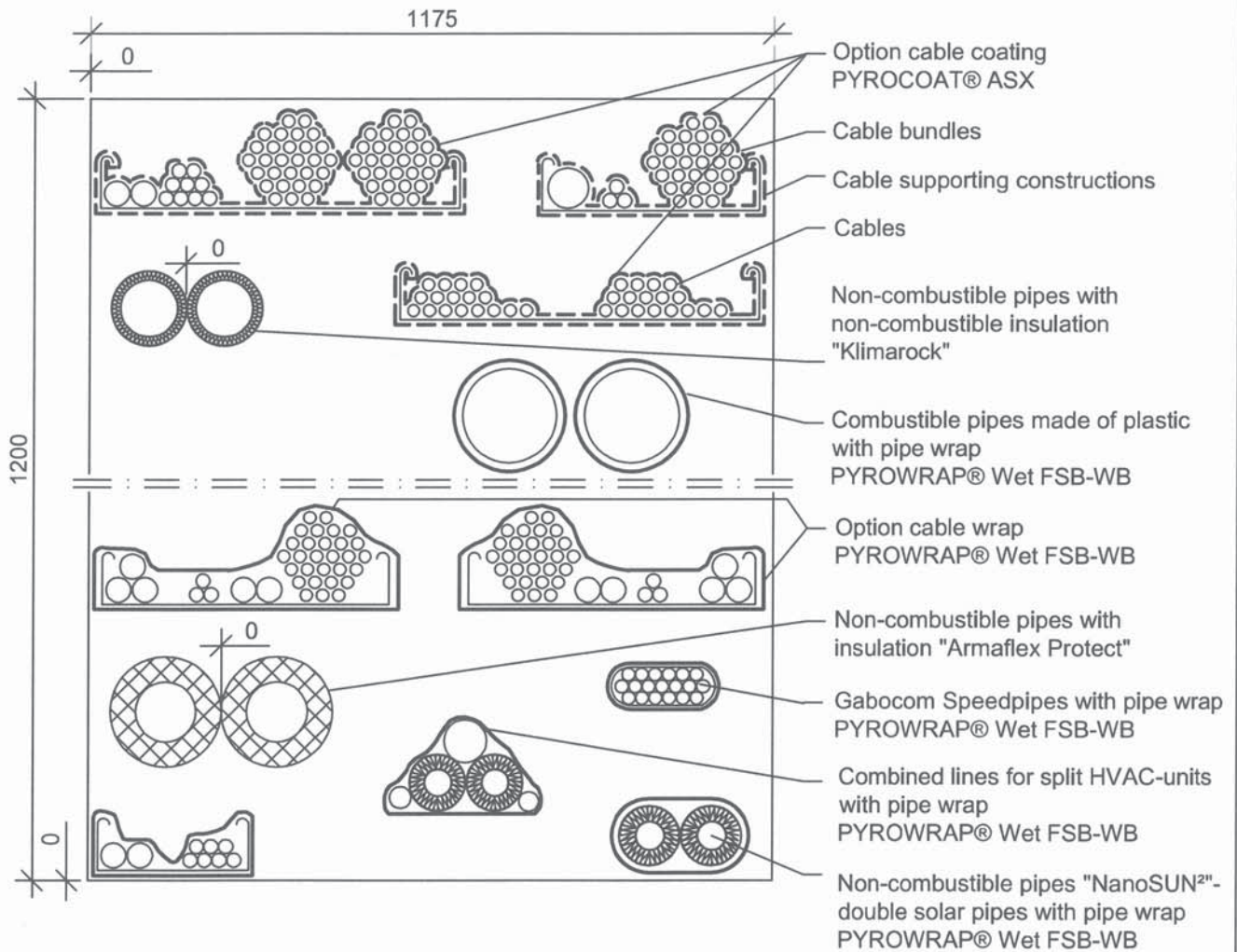
Fire resistance classes: EI 30, EI60, EI90, EI120 and EI 240

This annex is a technical summary of approved installations and can be used in addition with the European Technical Assessment for the building material ablative coating "PYROCOAT ASX" - ETA-17/0364 and the installation manual of the system "PYROPLATE Fibre".

"PYROCOAT® ASX"	Annex 1

Mixed penetration seal "PYROPLATE® Fibre" - Single layer

Details of the installation - see table annex 6



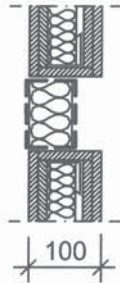
Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm










"PYROCOAT® ASX"	Annex 2
Detailed information for the confirmation of fire resistance EI 60 Use as part of a mixed penetration seal with one layer of mineral fibre board; Wall installation - view	

Mixed penetration seal "PYROPLATE® Fibre" - Single layer

Arrangement:



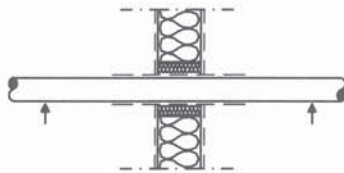
Legend

-  flexible wall
-  Mineral fibre board
Rockwool Hardrock 040, t = 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable or pipe wrap
PYROWRAP® Wet FSB-WB
-  First support
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX
-  Local sustained insulation made
of "Klimarock"
-  if necessary protective insulation
made of "Klimarock"
-  Synthetic rubber insulation
"Armaflex Protect"

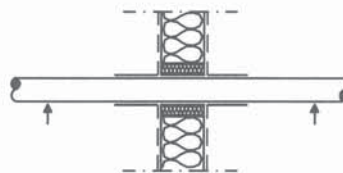
Measures at passing through installations:

Details of the installation - see table annex 6

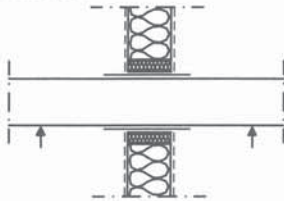
Cables, cable supporting constructions



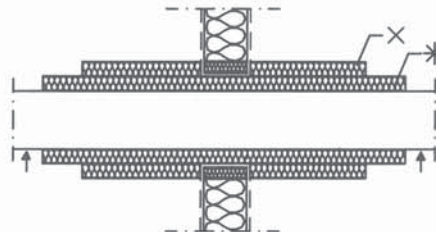
Cables, cable supporting constructions



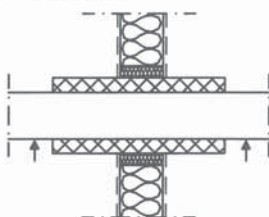
Combustible pipe



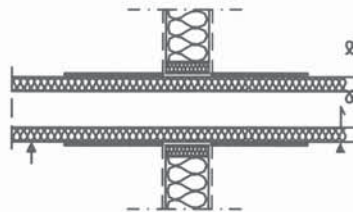
Non-combustible pipe



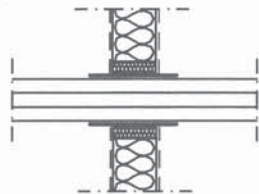
Non-combustible pipe



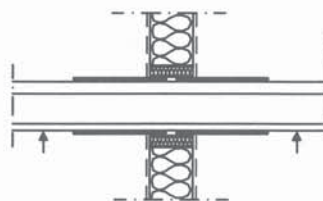
"NanoSUN²" - double solar pipe



Speedpipes



Combined lines for split HVAC-units



Construction details see installation instructions
dimensions in mm

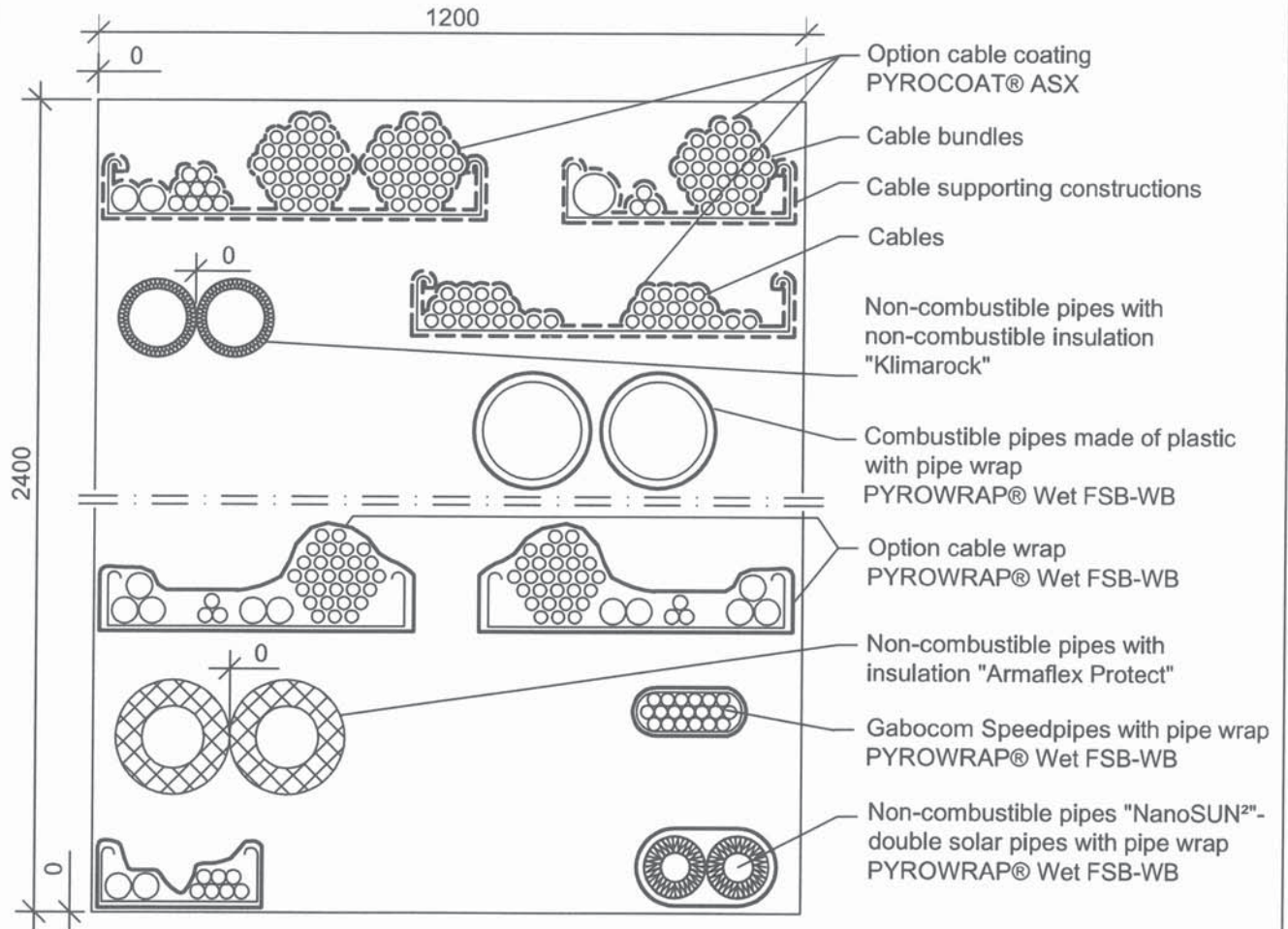
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance EI 60
Use as part of a mixed penetration seal with one layer of mineral fibre board;
Wall installation - section view

Annex 3

Mixed penetration seal "PYROPLATE® Fibre" - Single layer

Details of the installation - see table annex 6



Note: Drawing of mixed penetration seal is allegorized.
 Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
 Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

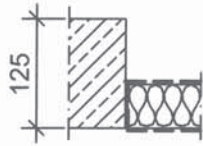
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
 Use as part of a mixed penetration seal with one layer of mineral fibre board;
 Floor installation - view

Annex 4

Mixed penetration seal "PYROPLATE® Fibre" - Single layer









Arrangement:



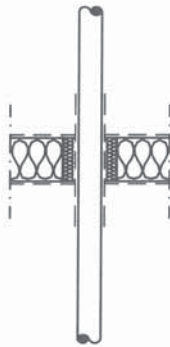
Measures at passing through installations:

Details of the installation - see table annex 6

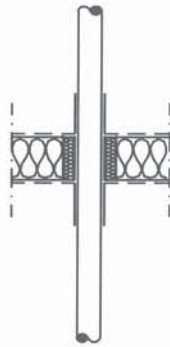
Legend

-  Rigid floor
-  Mineral fibre board
Rockwool Hardrock 040, t = 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable or pipe wrap
PYROWRAP® Wet FSB-WB
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX
-  Local sustained insulation
made of "Klimarock"
-  if necessary protective insulation
made of "Klimarock"
-  Synthetic rubber insulation
"Armaflex Protect"

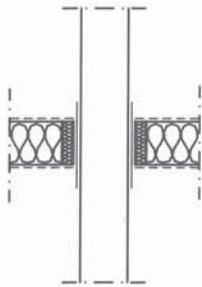
Cables, cable supporting constructions



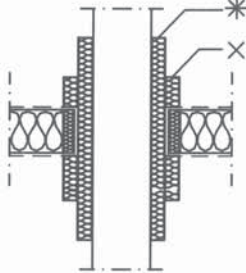
Cables, cable supporting constructions



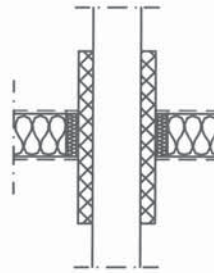
Combustible pipe



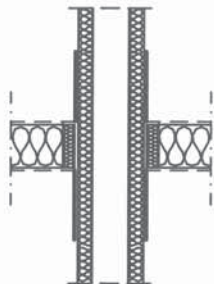
Non-combustible pipe



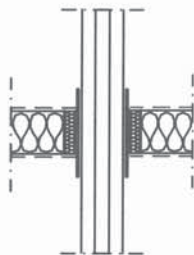
Non-combustible pipe



"NanoSUN²" - double solar pipe



Speedpipes



Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
Use as part of a mixed penetration seal with one layer of mineral fibre board;
Floor installation - section view

Annex 5

Mixed penetration seal "PYROPLATE® Fibre" - Single layer

Scope	Type of installation	Short description
Flexible wall	Combined lines for split HVAC-units ("Tubolit DuoSplit", "Tubolit Split" produced by Armacell Enterprise GmbH & Co. KG)	consisting of up to two copper pipes (U/U) with pipe insulation made of PE foam according to EN 14313, plastic pipes made of PVC-U according to EN 1329-1: 2004; DIN 8061/DIN 8062: 2009 (U/U) and two accompanying cables with pipe wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Non-combustible pipes with non-combustible insulation made of mineral fibre (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel up to 3 pipes (C/U) with non-combustible pipe insulation made of "Klimarock" (mineral fibre mat) according to EN 14303: 2009 + A1: 2013
Flexible wall or floor	Cable	Cables and cable bundles according to EN 1366-3: 2009-7 with "PYROCOAT® ASX" (ablative coating) or with cable wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Cable supporting constructions	Perforated or non-perforated cable trays and ladders made of steel
	Combustible pipes made of plastic	Pipes made of PE-HD according to EN 1519-1:1999 and DIN 8074/ DIN 8075:2011, PVC-U according to EN 13291-1:2014; DIN 8061/ DIN 8062:2009, (U/U) with pipe wrap " PYROWRAP® Wet FSB-WB "
	Non-combustible pipes with non-combustible insulation made of mineral fibre (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel (C/U) with non-combustible insulation made of "Klimarock" and if necessary additional protective insulation made of "Klimarock" according to EN 14303:2009 + A1:2013
	Non-combustible pipes with insulation "Armaflex Protect" produced by Armacell GmbH (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel (C/U)
	"NanoSUN"- double or single solar pipes produced by Aktarus Group SRL	Special pipes consisting of non-combustible pipes (U/U) with pre-assembled local sustained insulation and integrated accompanying cable, with pipe wrap "PYROWRAP® Wet FSB-WB"
	"speed pipe®"- systems: pipe bundles "SRV 50", "SRV-i 50", Single pipes "speed pipe® ground", "speed pipe® indoor" produced by gabo Systemtechnik GmbH	Special installation pipe bundles or single pipes made of PE-HD according to EN 1519-1: 1999 and DIN 8074 / DIN 8075: 2011, with or without micro-and fibre optic cables with pipe wrap "PYROWRAP® Wet FSB-WB"

Construction details see installation instructions
dimensions in mm

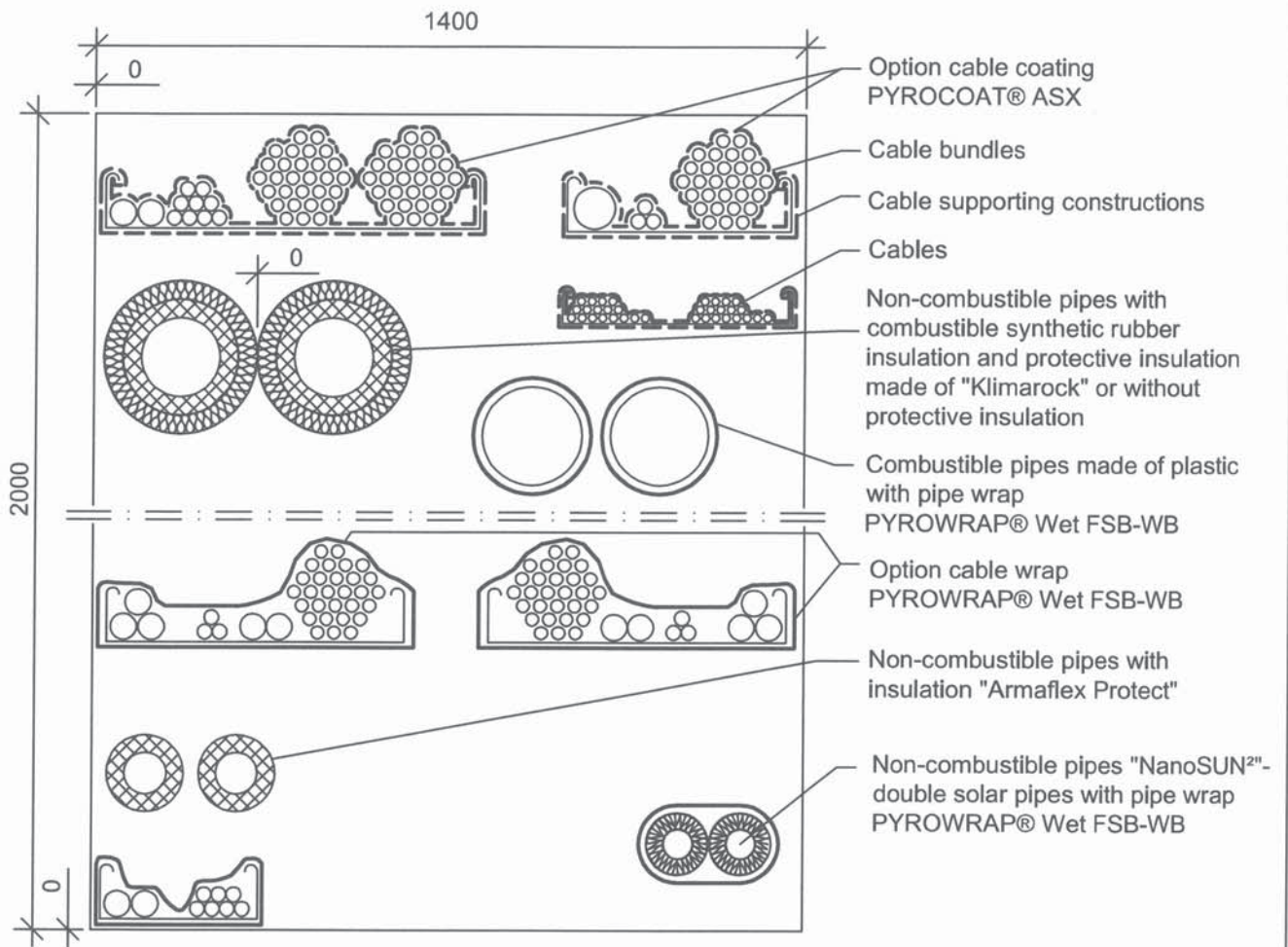
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
Use as part of a mixed penetration seal with one layer of mineral fibre boards;
Description of the passing through installations

Annex 6

Mixed penetration seal "PYROPLATE® Fibre" - Double layer

Details of the installation - see table annex 11



Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

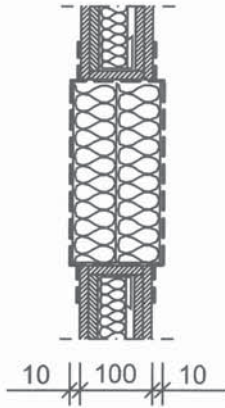
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance EI 120
Use as part of a mixed penetration seal with two layers of mineral fibre board;
Wall installation - view




Annex 7

Mixed penetration seal "PYROPLATE® Fibre" - Double layer

Arrangement:



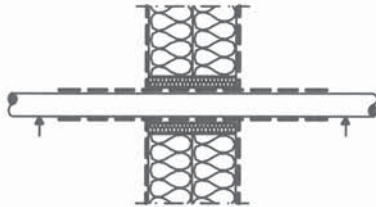
Legend

-  flexible wall
-  Mineral fibre board
Rockwool Hardrock 040, t = 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable or pipe wrap
PYROWRAP® Wet FSB-WB
-  First support
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX
-  protective insulation made of
"Klimarock"
-  Synthetic rubber insulation
(combustible)

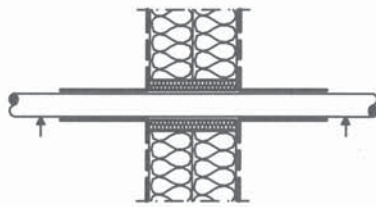
Measures at passing through Installations:

Details of the installation - see table annex 11

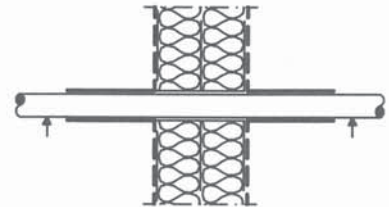
Cables, cable supporting constructions



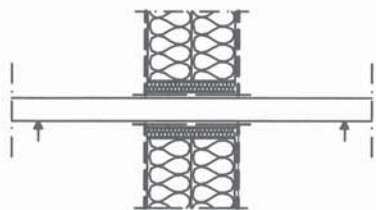
Cables, cable supporting constructions



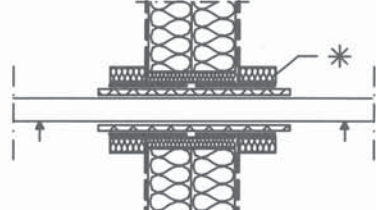
Cables subsequent installed through boreholes in area of existing cable wrap



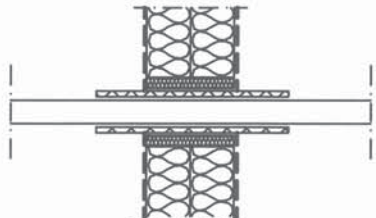
Combustible pipe



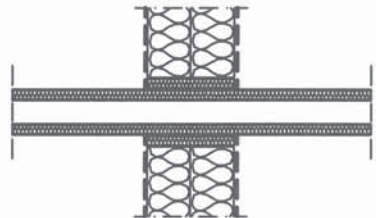
Non-combustible pipe



Non-combustible pipe



"NanoSUN²" - double solar pipe



Construction details see installation instructions
dimensions in mm

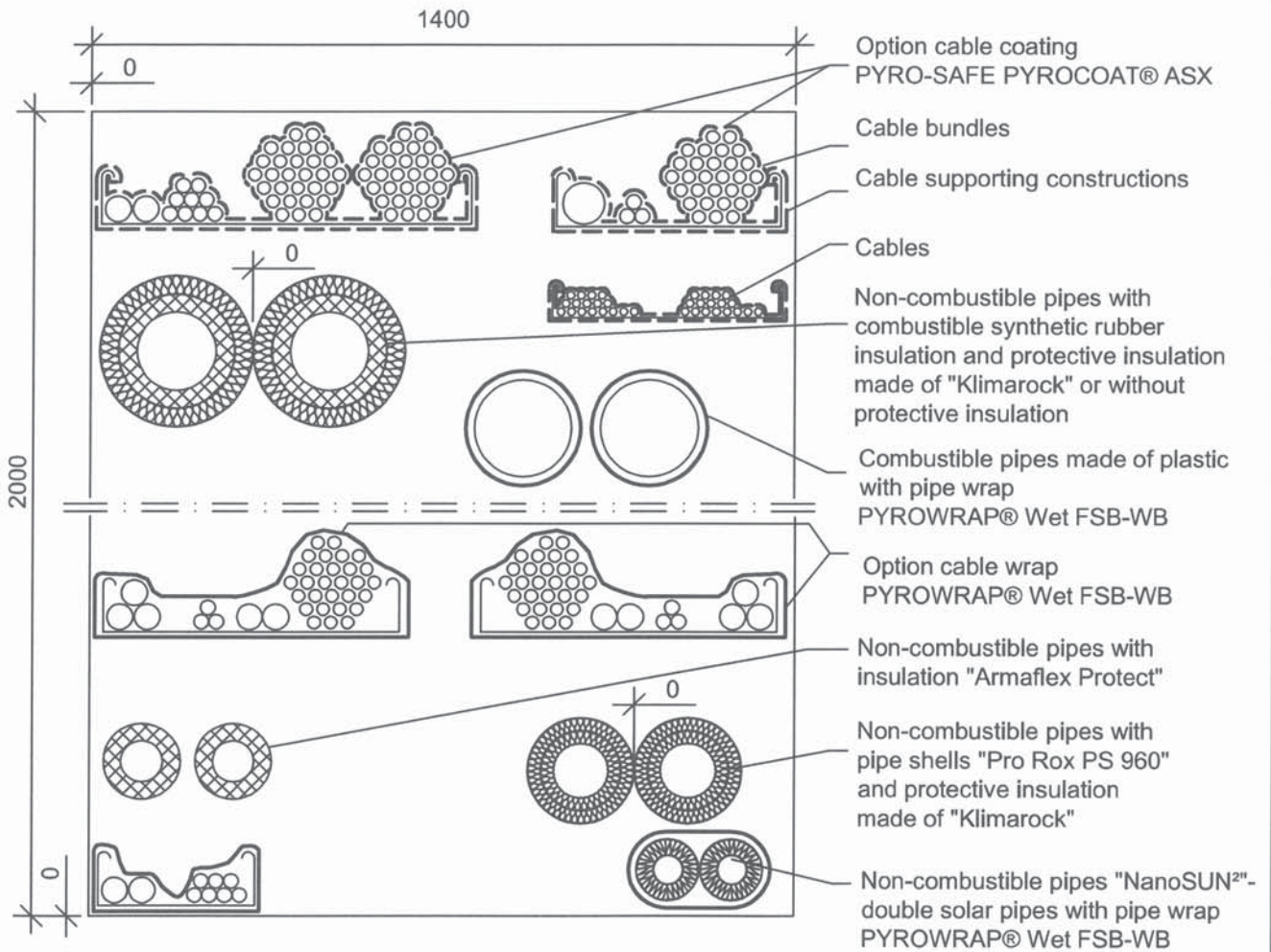
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 120**
Use as part of a mixed penetration seal with two layers of mineral fibre board;
Wall installation - section view

Annex 8

Mixed penetration seal "PYROPLATE® Fibre" - Double layer

Details of the installation - see table annex 11



Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

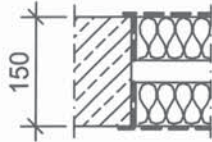
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 120**
Use as part of a mixed penetration seal with two layers of mineral fibre board;
Floor installation - view

Annex 9

Mixed penetration seal "PYROPLATE® Fibre" - Double layer

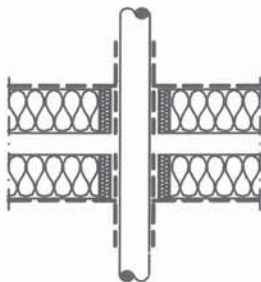
Arrangement:



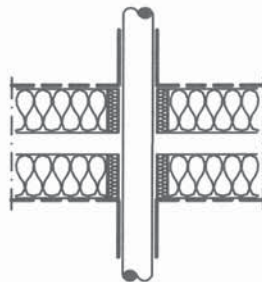
Measures at passing through installations:

Details of the installation - see table annex 11

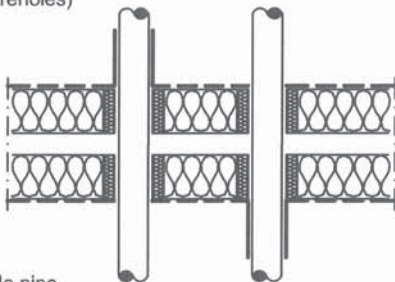
Cables, cable supporting constructions



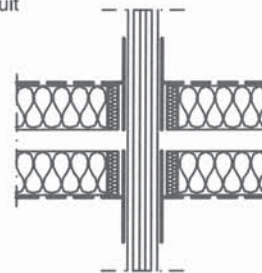
Cables, cable supporting constructions



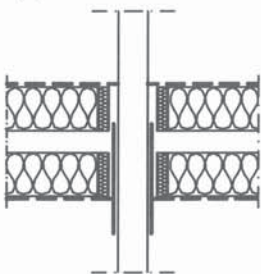
Cable lines (one-sided subsequent installation through boreholes)



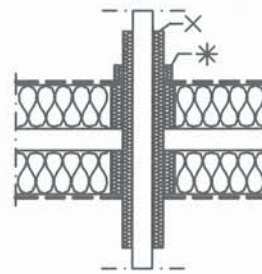
Conduit



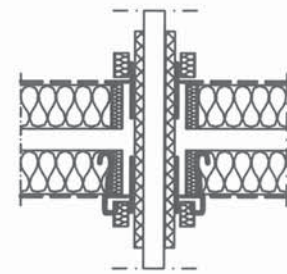
Combustible pipe



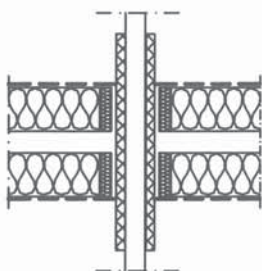
Non-combustible pipe



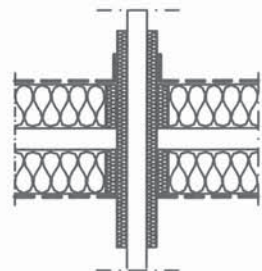
Non-combustible pipe












Non-combustible pipe



"NanoSUN²" - double solar pipe



Legend

-  Rigid floor
-  Mineral fibre board
Rockwool Hardrock 040, t = 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable or pipe wrap
PYROWRAP® Wet FSB-WB
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX
-  protective insulation made of
"Klimarock"
-  pipe shells "Pro Rox PS 960"
-  Synthetic rubber insulation
(combustible)
-  Fastener of wired mat

Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance EI 120
Use as part of a mixed penetration seal with two layers of mineral fibre board;
Floor installation - section view

Annex 10

Mixed penetration seal "PYROPLATE® Fibre" - Double layer

Scope	Type of installation	Short description
Flexible wall or floor	Cables	Cables and cable bundles according to EN 1366-3: 2009-7 with "PYROCOAT® ASX" (ablative coating) or with cable wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Cable supporting constructions	Perforated or non-perforated cable trays and ladders made of steel
	Combustible pipes made of plastic	Pipes made of PE-HD according to EN 1519-1:1999 and DIN 8074/ DIN 8075:2011, PVC-U according to EN 13291-1:2014; DIN 8061/ DIN 8062:2009, (U/U) with pipe wrap " PYROWRAP® Wet FSB-WB "
	Non-combustible pipes with combustible insulation made of Synthetic rubber "Kaiflex ST" produced by Kaimann GmbH (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel (C/U) with additional protective insulation made of "Klimarock" (mineral fibre mat) according to EN 14303:2009 + A1:2013 and with pipe wrap " PYROWRAP® Wet FSB-WB "
	Non-combustible pipes with insulation "Armaflex Protect " produced by Armacell GmbH (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel (C/U)
	"NanoSUN®"- double or single solar pipes produced by Aktarus Group SRL	Special pipes consisting of non-combustible pipes (U/U) with pre-assembled local sustained insulation and integrated accompanying cable, with pipe wrap "PYROWRAP® Wet FSB-WB"
Flexible wall	Cable (subsequent installation)	Cable according to EN 1366-3: 2009-7 subsequent installed through boreholes in area of existing cable wrap (without coating of mineral fibre board and without mineral wool stuffing)
Floor	Conduits, flexible	Flexible conduits according to EN 61386-22:2004 + A11:2010 (U/U) made of PE-HD according to EN 1519-1:1999 and DIN 8074/DIN 8075:201, single or bundled, with cables or without cables, with pipe wrap "PYROWRAP® Wet FSB-WB " (intumescent fabric)
	Non-combustible pipes with non-combustible insulation made of mineral fibre (Local insulation case LS according to EN 1366-3:2009-07)	Pipes made of copper or steel with non-combustible insulation "ProRox 960" (mineral fibre shell) and protective insulation made of "Klimarock" (mineral fibre mat) on the top of floor according to EN 14303:2009 + A1: 2013
	Cables (subsequent installation one-sided from penetration seal)	Cables according to EN 1366-3:2009-7 in boreholes of mineral fibre board without coating the layers) with cable wrap "PYROWRAP® Wet FSB-WB", installed one-sided on the top or below of floor

Construction details see installation instructions
dimensions in mm

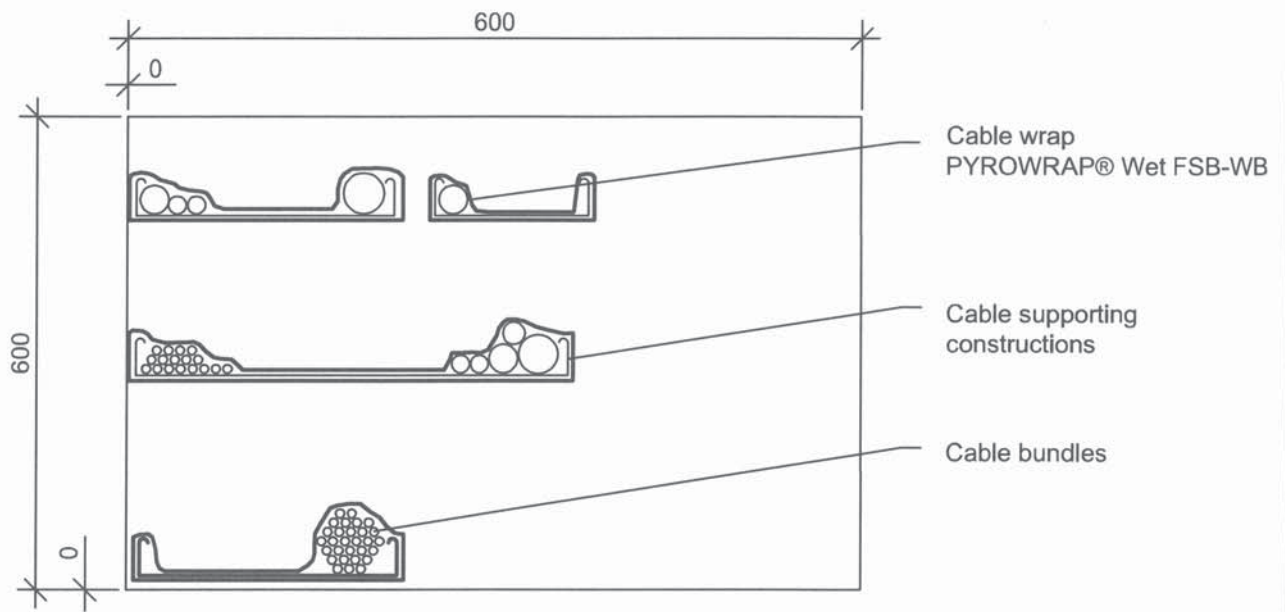
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 120**
Use as part of a mixed penetration seal with two layers of mineral fibre boards;
Description of the passing through installations

Annex 11

Cable penetration seal "PYROPLATE® Fibre" - Four layers

Details of the installation - see table annex 16



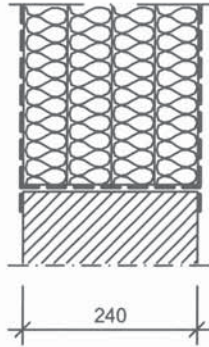
Note: Drawing of mixed penetration seal is allegorized.
 Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
 Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

"PYROCOAT® ASX"	Annex 12
Detailed information for the confirmation of fire resistance EI 240 Use as part of a mixed penetration seal with four layers of mineral fibre board; Wall installation - view	

Cable penetration seal "PYROPLATE® Fibre" - Four layers

Arrangement:



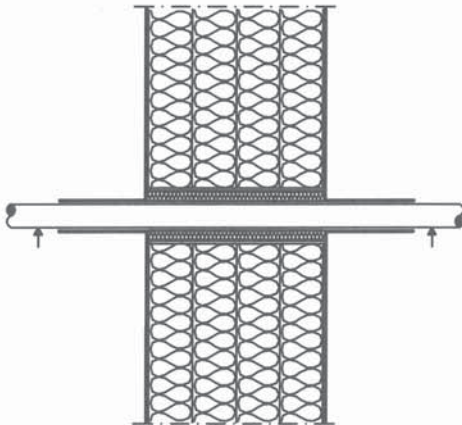
Legend

-  Rigid wall
-  Mineral fibre board
Rockwool Hardrock 040, t = 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable wrap
PYROWRAP® Wet FSB-WB
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX

Measures at passing through installations:

Details of the installation - see table annex 16

Cables, cable trays



Construction details see installation instructions
dimensions in mm

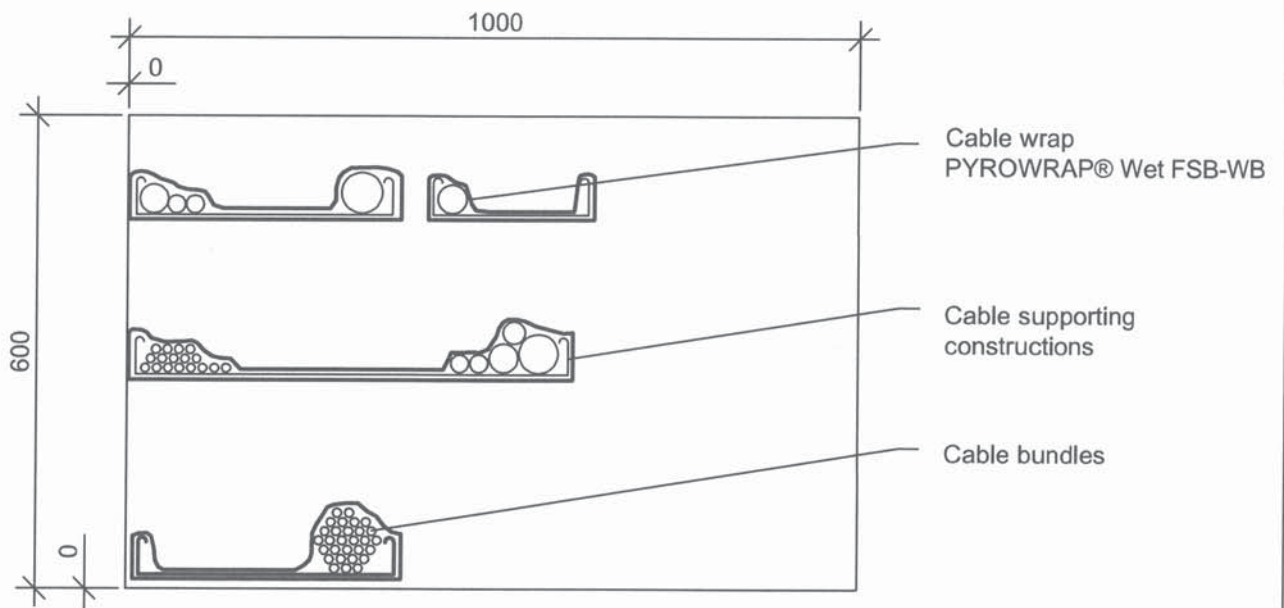
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 240**
Use as part of a mixed penetration seal with four layers of mineral fibre board;
Wall installation - section view

Annex 13

Cable penetration seal "PYROPLATE® Fibre" - Four layers

Details of the installation - see table annex 16



Note: Drawing of mixed penetration seal is symbolic.
Detailed information e.g. to type and arrangement of the cables/pipes and to construction of penetration seal;
Construction details see e. g. manufacturer installation instructions for construction products

dimensions in mm

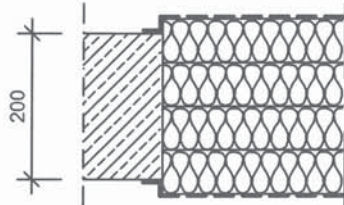
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 240**
Use as part of a mixed penetration seal with four layers of mineral fibre board;
Floor installation - view

Annex 14

Cable penetration seal "PYROPLATE® Fibre" - Four layers

Arrangement:



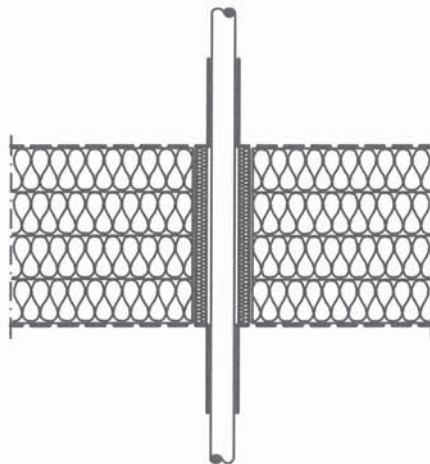
Legende

-  Rigid floor
-  Mineral fibre board
Rockwool Hardrock 040, d= 60 mm
-  Ablative coating
PYROCOAT® ASX
-  Cable wrap
PYROWRAP® Wet FSB-WB
-  Mineral wool stuffing
(non-combustible) or sealing
with PYROCOAT® ASX

Measures at passing through installations:

Details of the installation - see table annex 16

Cables, cable trays



Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"	Annex 15
Detailed information for the confirmation of fire resistance EI 240 Use as part of a mixed penetration seal with four layers of mineral fibre board; Floor installation - section view	

Cable penetration seal "PYROPLATE® Fibre" - Four layers

Scope	Type of installation	Short description
Rigid wall/ rigid floor	Cables	Cables and cable bundles according to EN 1366-3: 2009-7 with "PYROCOAT® ASX" (ablative coating) or with cable wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Cable supporting constructions	Perforated or non-perforated cable trays and ladders made of steel

Construction details see installation instructions
dimensions in mm

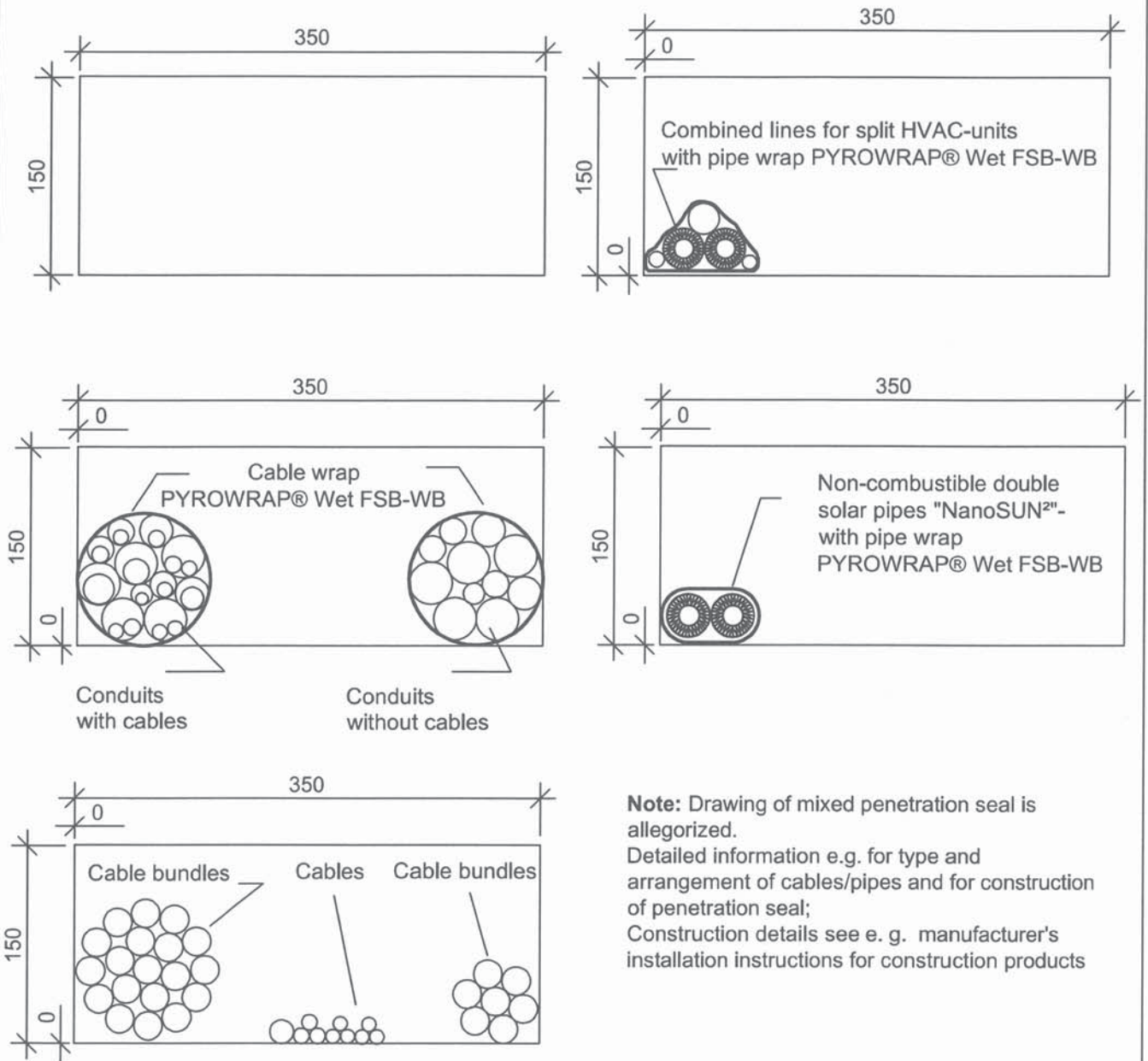
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 240**
Use as part of a mixed penetration seal with four layers of mineral fibre boards;
Description of the passing through installations

Annex 16

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 22



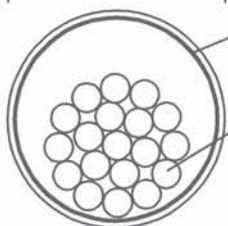
Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

"PYROCOAT® ASX"	
Detailed information for the confirmation of fire resistance EI 30 Use as part of a cable penetration seal with mineral wool; Wall installation - view	Annex 17

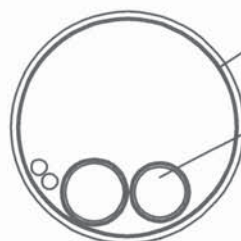
Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 22



Inlay
PYROWRAP® Wet FSB-WB

Cables/cable bundles
installation in
flexible walls only



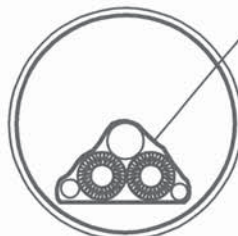
Inlay
PYROWRAP®
Wet FSB-WB

combustible pipes
with accompanying
cables

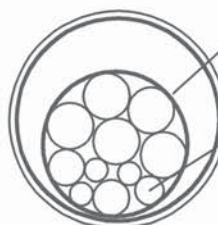


Cable wrap
PYROWRAP® Wet FSB-WB

Conduits
with cables



Combined lines for
split HVAC-units
with pipe wrap
PYROWRAP®
Wet FSB-WB,
installation in rigid walls
only



Cable wrap
PYROWRAP® Wet FSB-WB

Conduits
without cables



Non-combustible double
solar pipes "NanoSUN²"-
with pipe wrap
PYROWRAP®
Wet FSB-WB

Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of
penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

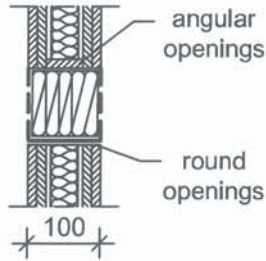
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 30**
Use as part of a cable penetration seal with mineral wool;
Wall installation - view






Annex 18

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



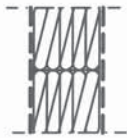
Legend

-  flexible wall
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  reveal or cable/pipe wrap PYROWRAP® Wet FSB-WB
-  First support

Measures at passing through installations:

Details of the installation - see table annex 22

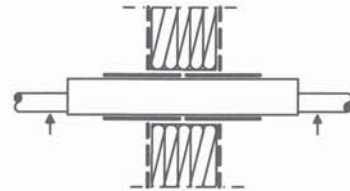
Blank penetration seal



Cables, cable bundle



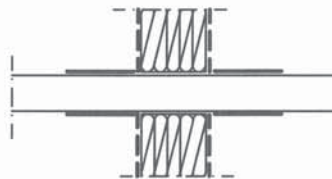
Conduits



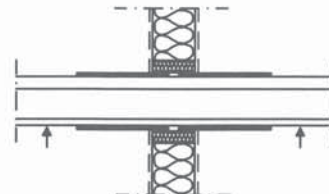
Combustible pipe



NanoSUN² - double solar pipe



Combined lines for split HVAC-units



Construction details see installation instructions
dimensions in mm

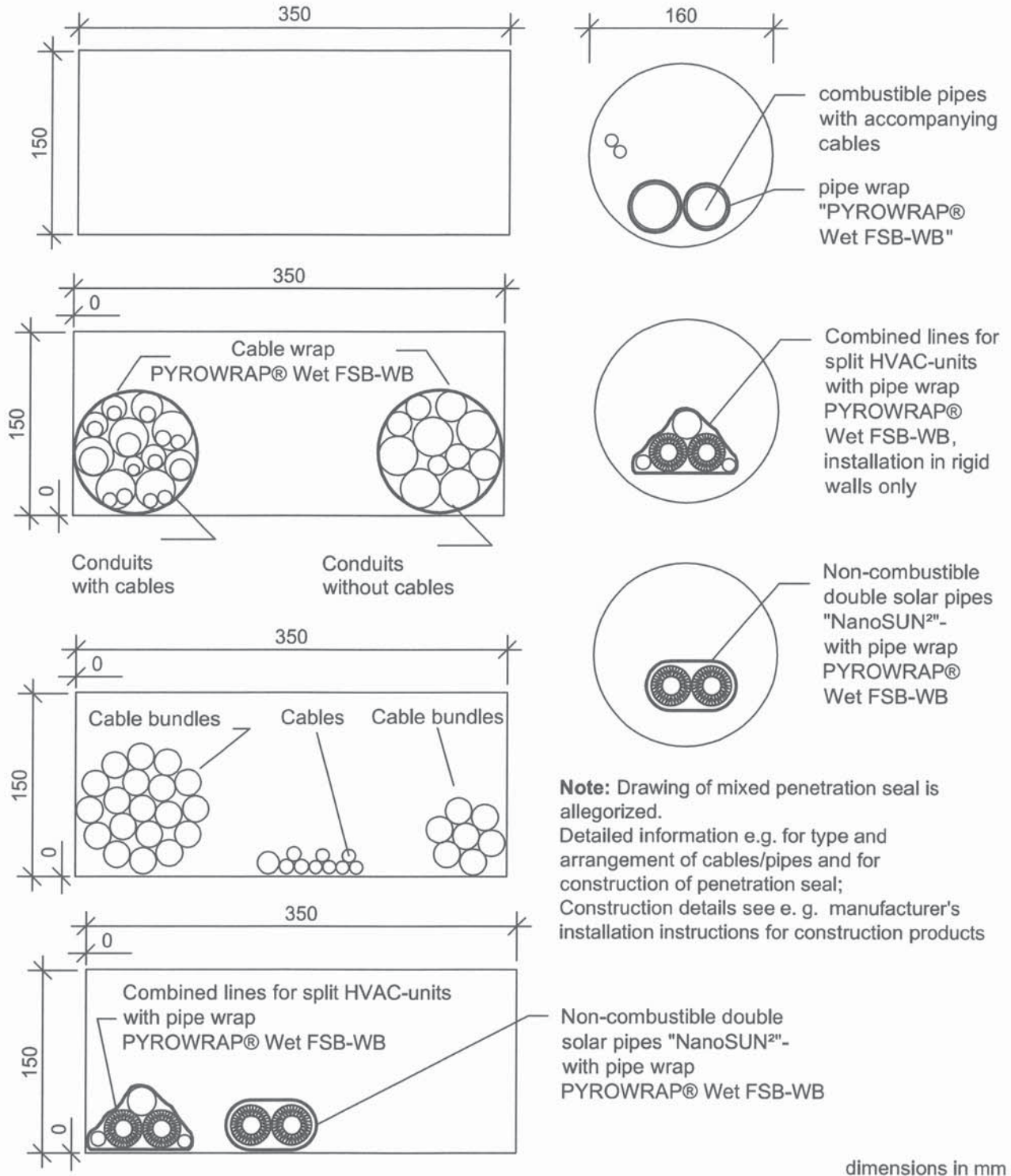
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 30**
Use as part of a cable penetration seal with mineral wool;
Wall installation - section view

Annex 19

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 22



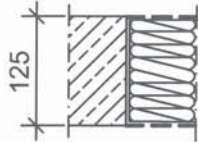
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 30**
Use as part of a cable penetration seal with mineral wool;
Floor installation - view





Annex 20

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



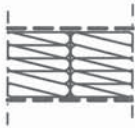
Legend

-  Rigid floor
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  Cable or pipe wrap PYROWRAP® Wet FSB-WB

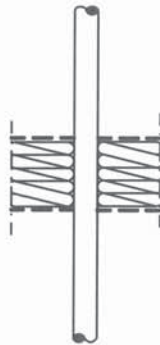
Measures at passing through installations:

Details of the installation - see table annex 22

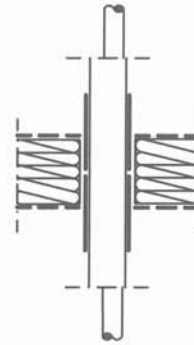
Blank penetration seal



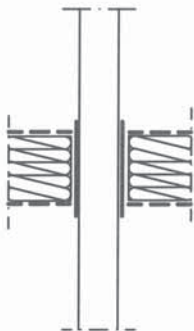
Cable, cable bundle



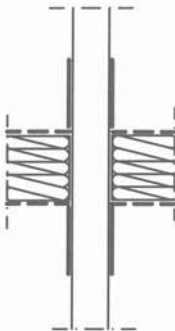
Conduits



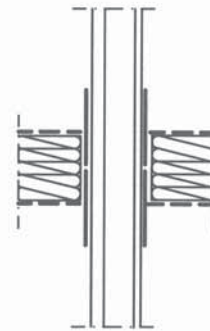
Combustible pipe



NanoSUN² - double solar pipe



Combined lines for split HVAC-units



Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 30**
Use as part of a cable penetration seal with mineral wool;
Floor installation - section view

Annex 21

Cable penetration seal "PYROPLATE® Fibre CM"

Scope	Type of Installation	Short description
Flexible wall or floor	Cables	Cables and cable bundles according to EN 1366-3: 2009-7
	Conduits, flexible	Flexible conduits according to EN 61386-22:2004 + A11:2010 (U/U) made of PE-HD according to EN 1519-1:1999 and DIN 8074/DIN 8075:201, single or bundled, with cables or without cables, with pipe wrap "PYROWRAP® Wet FSB-WB" (Intumescent fabric)
	Conduits, rigid	rigid conduits according to EN 61386-21:2004 + A11:2010 (U/U), made of any plastics, with cables or without cable
	Combustible pipes made of plastic	Pipes made of PVC-U according to EN 13291-1:2014; DIN 8061/ DIN 8062:2009 (U/U), with pipe wrap "PYROWRAP® Wet FSB-WB "
	"NanoSUN²"- double or single solar pipes produced by Aktarus Group SRL	Special pipes consisting of non-combustible pipes (U/U) with pre-assembled local sustained insulation and integrated accompanying cable, with pipe wrap "PYROWRAP® Wet FSB-WB"
	Combined lines for split HVAC-units ("Tubolit DuoSplit", "Tubolit Split" produced by Armacell Enterprise GmbH & Co. KG)	consisting of two copper pipes (U/U) with pipe insulation made of PE foam according to EN 14313, plastic pipe made of PVC-U according to EN 1329-1: 2004; DIN 8061/DIN 8062: 2009 (U/U) and up to two accompanying cables with pipe wrap "PYROWRAP® Wet FSB-WB" (Intumescent fabric)

Construction details see installation instructions
dimensions in mm

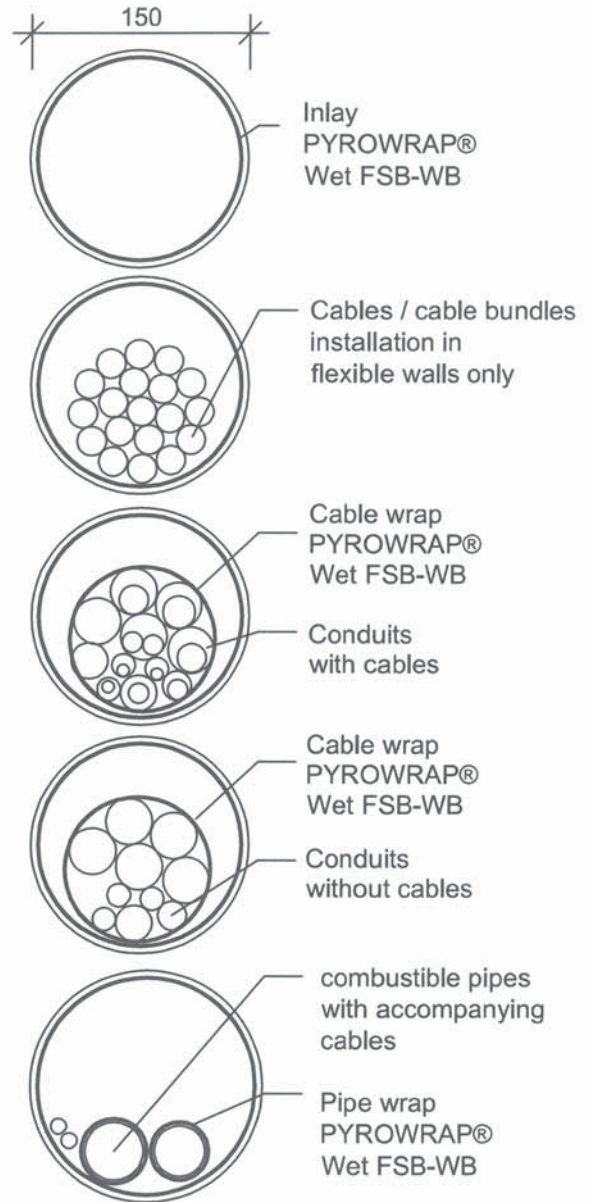
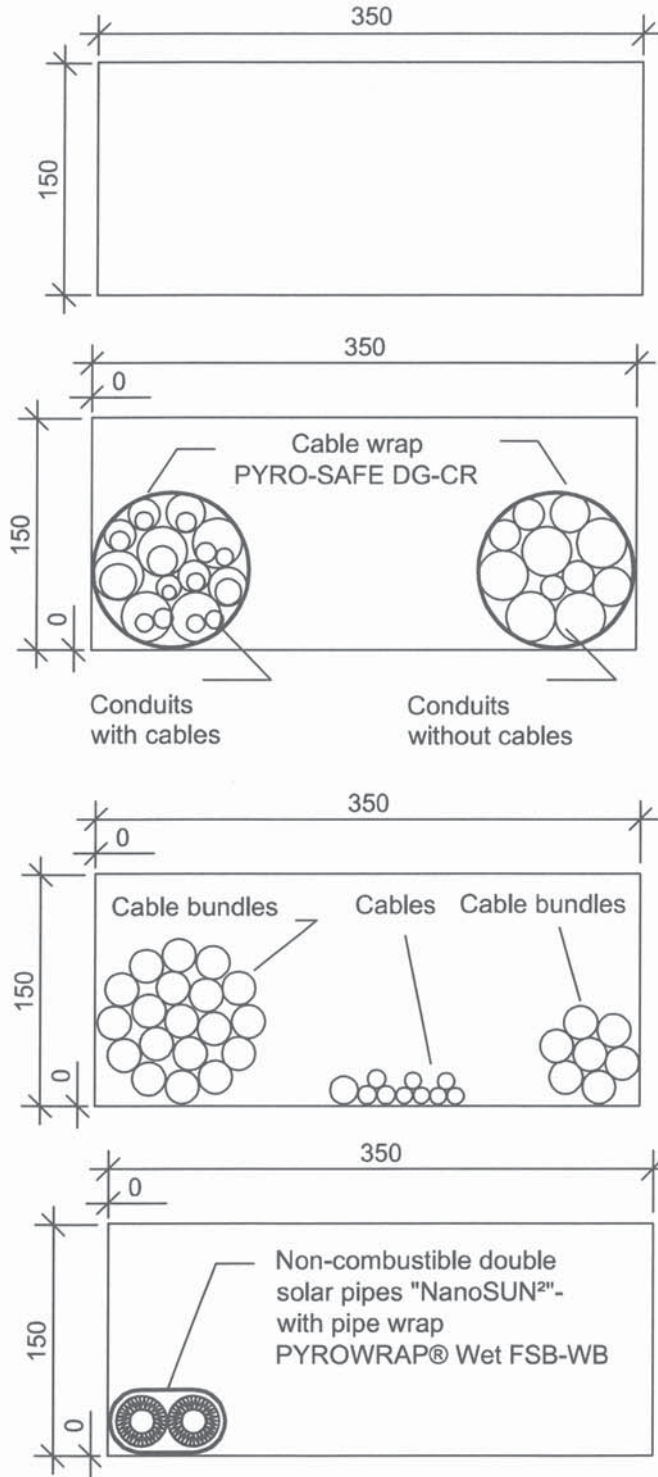
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 30**
Use as part of a cable penetration seal with mineral wool;
Description of the passing through installations

Annex 22

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 27



Note: Drawing of mixed penetration seal is allegorized.
 Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
 Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

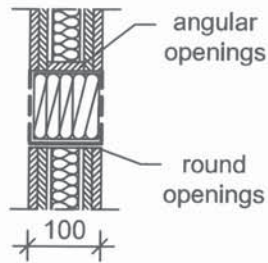
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
 Use as part of a cable penetration seal with mineral wool;
 Wall installation - view


Annex 23

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



Legend

-  Flexible wall
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  reveal or cable/pipe wrap PYROWRAP® Wet FSB-WB
-  First support

Measures at passing through installations:

Details of the installation - see table annex 27

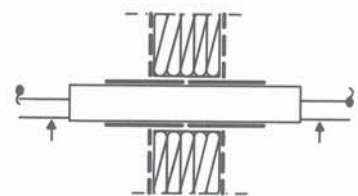
Blank penetration seal



Cables, cable bundle



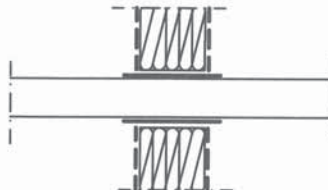
Conduits



NanoSUN² - double solar pipe



Combustible pipe



Construction details see installation instructions
dimensions in mm

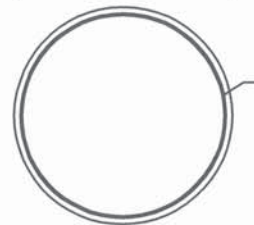
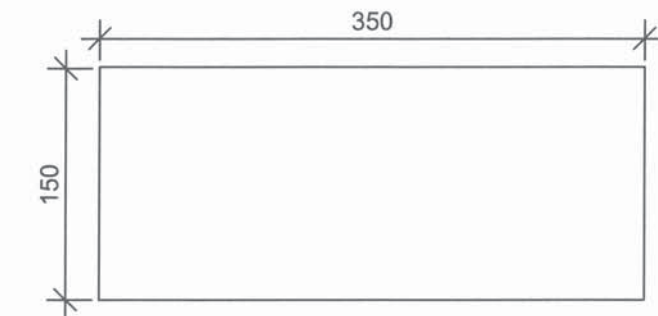
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
Use as part of a cable penetration seal with mineral wool;
Wall installation - section view

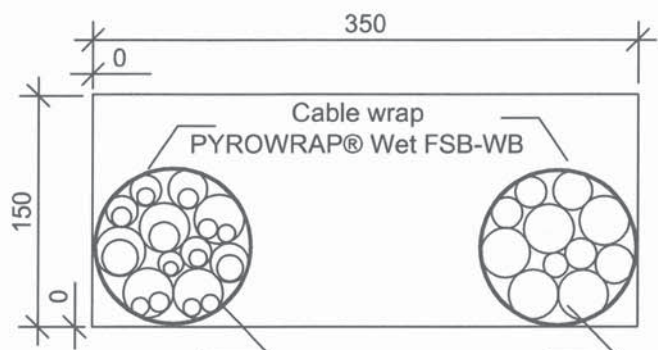
Annex 24

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 27



Inlay
PYROWRAP®
Wet FSB-WB

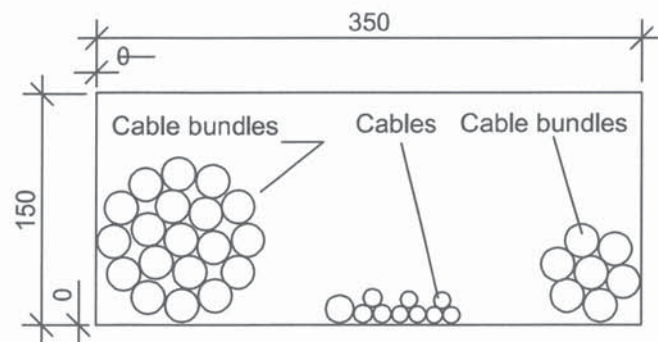


combustible pipes
with accompanying
cables

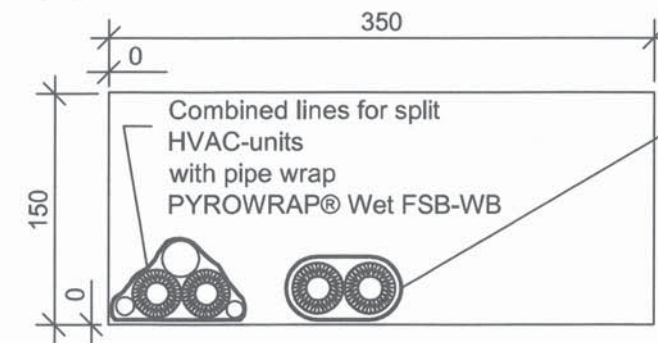
Pipe wrap
PYROWRAP®
Wet FSB-WB

Conduits
with cables

Conduits
without cables



Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e.g. manufacturer's installation instructions for construction products



Non-combustible double
solar pipes "NanoSUN2"
with pipe wrap
PYROWRAP® Wet FSB-WB

dimensions in mm

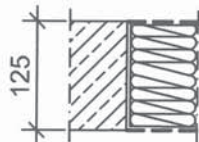
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
Use as part of a cable penetration seal with mineral wool;
Floor installation - view

Annex 25

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



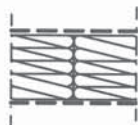
Legend

-  Rigid floor
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  Cable or pipe wrap PYROWRAP® Wet FSB-WB

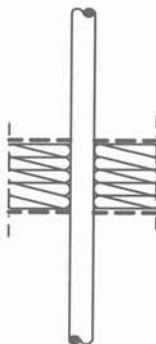
Measures at passing through installations:

Details of the installation - see table annex 27

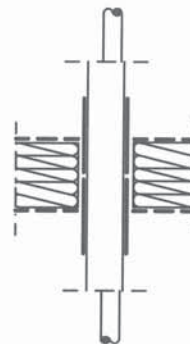
Blank penetration seal



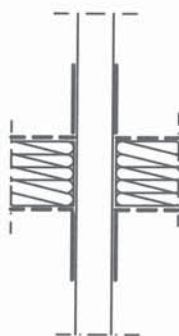
Cables, cable bundle



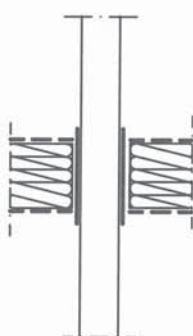
Conduits



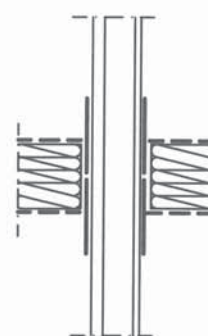
NanoSUN² - double solar pipe



Combustible pipe



Combined lines for split HVAC-units



Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance EI 60
Use as part of a cable penetration seal with mineral wool;
Floor installation - section view

Annex 26

Cable penetration seal "PYROPLATE® Fibre CM"

Scope	Type of Installation	Short description
Flexible wall or floor	Cables	Cables and cable bundles according to EN 1366-3: 2009-7
	Conduits, flexible	Flexible conduits according to EN 61386-22:2004 + A11:2010 (U/U) made of PE-HD according to EN 1519-1:1999 and DIN 8074/DIN 8075:201, single or bundled, with cables or without cables, with pipe wrap "PYROWRAP® Wet FSB-WB " (intumescent fabric)
	Conduits, rigid	rigid conduits according to EN 61386-21:2004 + A11:2010 (U/U), made of any plastics, with cables or without cable
	Combustible pipes made of plastic	Pipes made of PVC-U according to EN 13291-1:2014; DIN 8061/ DIN 8062:2009 (U/U), with pipe wrap "PYROWRAP® Wet FSB-WB "
	"NanoSUN®"- double or single solar pipes produced by Aktarus Group SRL	Special pipes consisting of non-combustible pipes (U/U) with pre-assembled local sustained insulation and integrated accompanying cable, with pipe wrap "PYROWRAP® Wet FSB-WB"
Floor	Combined lines for split HVAC-units ("Tubolit DuoSplit", "Tubolit Split" produced by Armacell Enterprise GmbH & Co. KG)	consisting of two copper pipes (U/U) with pipe insulation made of PE foam according to EN 14313, plastic pipe made of PVC-U according to EN 1329-1: 2004; DIN 8061/DIN 8062: 2009 (U/U) and up to two accompanying cables with pipe wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)

Construction details see installation instructions
dimensions in mm

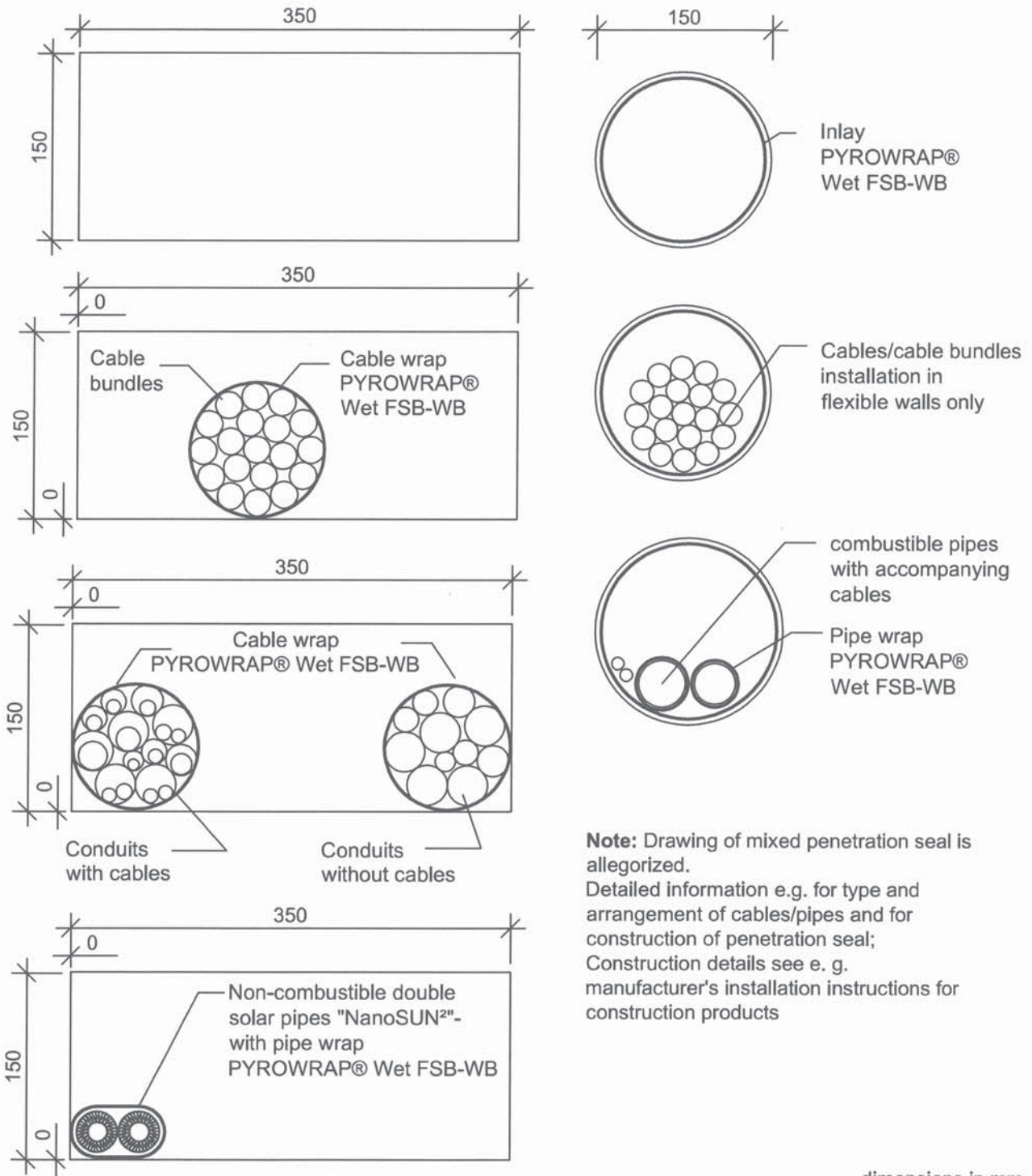
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 60**
Use as part of a cable penetration seal with mineral wool;
Description of the passing through installations

Annex 27

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 32



Note: Drawing of mixed penetration seal is allegorized. Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal; Construction details see e. g. manufacturer's installation instructions for construction products

dimensions in mm

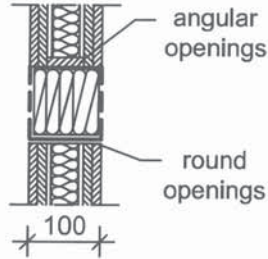
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
 Use as part of a cable penetration seal with mineral wool;
 Wall installation - view




Annex 28

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



Legend

-  Flexible wall
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  reveal or cable/pipe wrap PYROWRAP® Wet FSB-WB
-  First support

Measures at passing through installations:

Details of the installation - see table annex 32

Blank penetration seal



Cables, cable bundle



Conduits



round opening in construction element

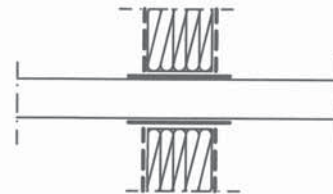
Conduits



NanoSUN² - double solar pipe



Combustible pipe



Construction details see installation instructions
dimensions in mm

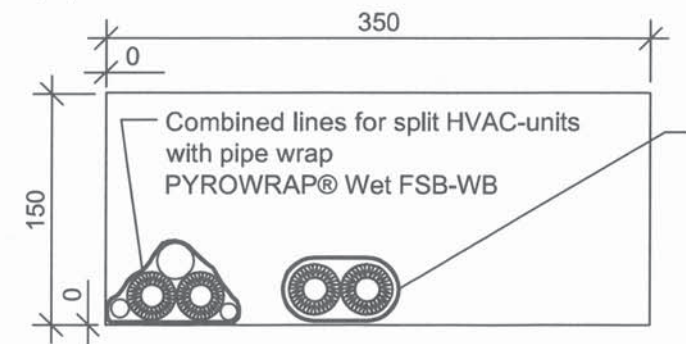
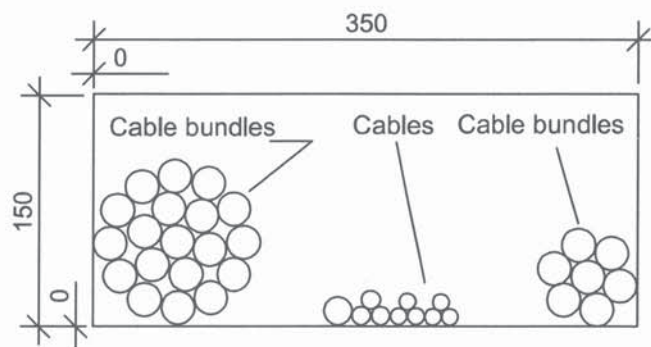
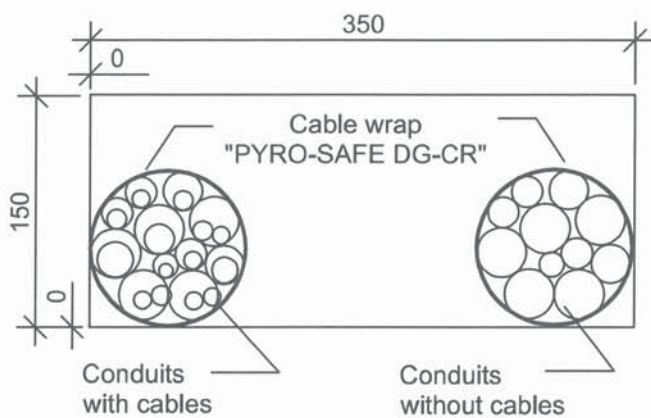
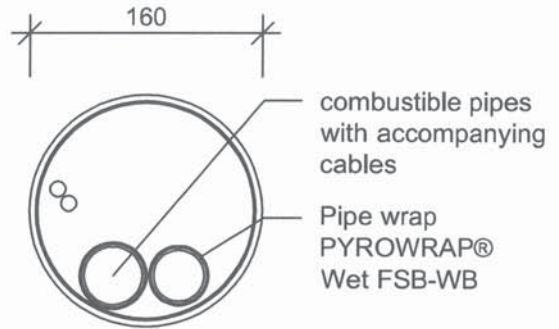
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
Use as part of a cable penetration seal with mineral wool;
Wall installation - section view

Annex 29

Cable penetration seal "PYROPLATE® Fibre CM"

Details of the installation - see table annex 32



Note: Drawing of mixed penetration seal is allegorized.
Detailed information e.g. for type and arrangement of cables/pipes and for construction of penetration seal;
Construction details see e. g. manufacturer's installation instructions for construction products

Non-combustible double solar pipes "NanoSUN2"- with pipe wrap PYROWRAP® Wet FSB-WB

dimensions in mm

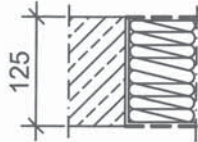
"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
Use as part of a cable penetration seal with mineral wool;
Floor installation - view




Annex 30

Cable penetration seal "PYROPLATE® Fibre CM"

Arrangement:



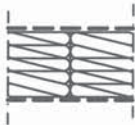
Legend

-  Rigid floor
-  Mineral wool stuffing (average density approx. 200 kg/m³)
-  Ablative coating PYROCOAT® ASX
-  Cable or pipe wrap PYROWRAP® Wet FSB-WB

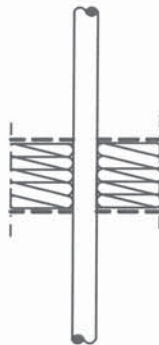
Measures at passing through installations:

Details of the installation - see table annex 32

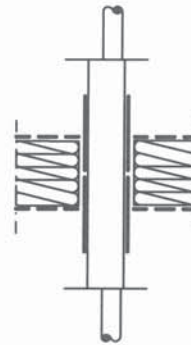
Blank penetration seal



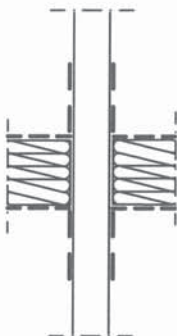
Cables, cable bundle



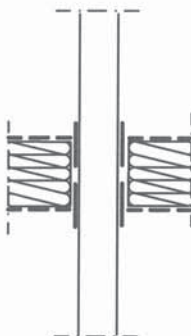
Conduits



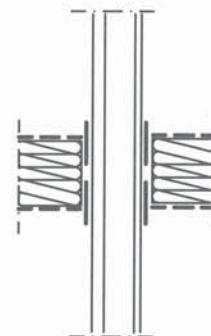
NanoSUN² - double solar pipe



Combustible pipe



"Combined lines for split HVAC-units



Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
Use as part of a cable penetration seal with mineral wool;
Floor installation - section view

Annex 31

Cable penetration seal "PYROPLATE® Fibre CM"

Scope	Type of installation	Short description
Flexible wall or floor	Cables	Round openings: Cable bundles according to EN 1366-3: 2009-7
		Angular openings: Cable bundles according to EN 1366-3: 2009-7 with "PYROCOAT® ASX" (ablative coating) or with cable wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Conduits, flexible	Flexible conduits according to EN 61386-22:2004 + A11:2010 (U/U) made of PE-HD according to EN 1519-1:1999 and DIN 8074/DIN 8075:201, single or bundled, with cables or without cables, with pipe wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Conduits, rigid	rigid conduits according to EN 61386-21:2004 + A11:2010 (U/U), made of any plastics, with cables or without cable
	Combustible pipes made of plastic	Pipes made of PVC-U according to EN 13291-1:2014; DIN 8061/ DIN 8062:2009 (U/U), with pipe wrap "PYROWRAP® Wet FSB-WB "
	"NanoSUN ^{2m} "- double or single solar pipes produced by Aktarus Group SRL	Special pipes consisting of non-combustible pipes (U/U) with pre-assembled local sustained insulation and integrated accompanying cable, with pipe wrap "PYROWRAP® Wet FSB-WB"
Floor	Cables	Cables according to EN 1366-3: 2009-7
	"Klimasplit"- line combination ("Tubolit DuoSplit", "Tubolit Split" produced by Armacell Enterprise GmbH & Co. KG)	consisting of two copper pipes (U/U) with pipe insulation made of PE foam according to EN 14313, plastic pipe made of PVC-U according to EN 1329-1: 2004; DIN 8061/DIN 8062: 2009 (U/U) and up to two accompanying cables with pipe wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)
	Conduits, flexible	Flexible conduits according to EN 61386-22:2004 + A11:2010 (U/U), made of PE-HD according to EN 1519-1:1999 and DIN 8074/DIN 8075:201, single or bundled, with cables or without cables, with pipe wrap "PYROWRAP® Wet FSB-WB" (intumescent fabric)

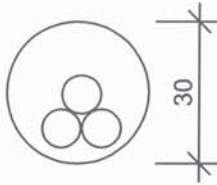
Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
Use as part of a cable penetration seal with mineral wool;
Description of the passing through installations

Annex 32

Cable penetration seal "PYROPLATE® Fibre CM" (without mineral wool stuffing) in wall and floor



Legend

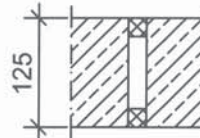
-  Flexible wall
-  Rigid wall
-  Rigid floor
-  Sealing with ablative coating
PYROCOAT® ASX
-  First support

Arrangement:

Wall



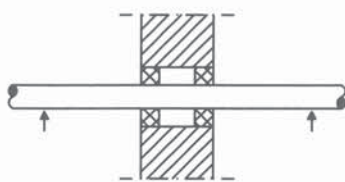
Floor



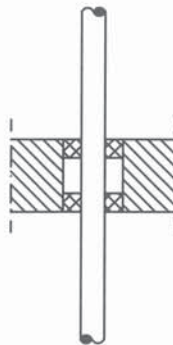
Measures at passing through installations:

Wall

Cables



Floor



Scope	Type of installation	Short description
Wall/Floor	Cables	Cables according to EN 1366-3: 2009-7

Construction details see installation instructions
dimensions in mm

"PYROCOAT® ASX"

Detailed information for the confirmation of fire resistance **EI 90**
Use as part of a cable penetration seal without mineral wool;
View, section view, description of the passing through installations

Annex 33



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