



PAVUS, a.s.

Order number:

Z220210419

**FIRE CLASSIFICATION APPROVAL
OF FIRE RESISTANCE
No. PKO-21-076**

for product

**ACO Access Cover Uniface
(AAC UNIFACE GS/FR, AAC UNIFACE SS/FR)**

Sponsor: ACO Industries k.s.
Havlíčková 260
582 22 Příbyslav
Czech Republic

Normative documents:

- ČSN 73 0810 Fire protection of buildings - General requirements
- ČSN EN 1363-1 Fire resistance tests - Part 1: General requirements
- ČSN EN 1634-1+A1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows

Fire classification approval consists of 13 pages.

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This fire classification approval is prepared based on contract of work No. Z220210419 concluded between the customer, the company ACO Industries, k.s., and the contractor, the company PAVUS, a.s.

1 TECHNICAL PRODUCT DESCRIPTION

The subjects of fire classification approval are access covers ACO Access Cover (AAC) Uniface with fire board PROMATECT®-H: namely AAC UNIFACE GS/FR, AAC UNIFACE SS/FR and AAC UNIFACE AL/FR.

The thermal exposure is from the bottom side of the cover lid, opening of the cover is from the thermal exposure. The access covers are filled with concrete C35/45, fraction 8/16, thickness 70 mm and reinforced mesh made of ribbed steel rod ϕ 8 mm, with mesh size (100 x 100) mm and they are cover from the bottom side by thermal insulating calcium-silicate board PROMATECT®-H. The thickness of board PROMATECT®-H is at least 25 mm for covers AAC UNIFACE GS/FR and AAC UNIFACE AL/FR and thickness of the board at least 20 mm for covers AAC UNIFACE SS/FR. Around the perimeter of cover lid there is self-adhesive intumescent seal PROMASEAL®-XT 1.8 SK, width (2 x 10) mm; thickness 1.9 mm for AAC UNIFACE GS/FR and AAC UNIFACE AL/FR, thickness 2.5 mm for AAC UNIFACE SS/FR. Covers AAC UNIFACE GS/FR and AAC UNIFACE SS/FR have glued in an EPDM seal ϕ 10 mm around the perimeter of the frame into the pressed groove. The AAC UNIFACE AL/FR covers have internal and external EPDM seals ϕ 4.5 mm and ϕ 8 mm glued into the grooves in the cover lid.

The cover lid AAC UNIFACE GS/FR is open with three hinges on one side, the AAC UNIFACE SS/FR and AAC UNIFACE AL/FR lids are removable without hinges. Covers are without mounting of the gas struts and the opening assistant mechanism.

Covers AAC UNIFACE GS/FR and AAC UNIFACE AL/FR can be installed in a reinforced concrete ceiling structure and the AAC UNIFACE SS/FR cover can also be installed in a light assembled ceiling structure.

Allowed dimensional variants of access covers are listed in Tab. 3.1, Tab. 3.2 and Tab. 3.3 of this document, including the article numbers of the manufacturer's products.

Manufacturer: ACO Industries k.s., Czech Republic.

1.1 AAC UNIFACE GS/FR – steel cover, opening clearance (600 x 600) mm

Description of frame construction:

- cover frame with dimensions (710 x 710 x 101) mm made of 4 profiles bent from galvanized steel sheet (1.0037) thickness 2.0 mm (supplier Feron a.s., Czech Republic) into the required shape (55 x 83 x 27) mm and welded together in the corners in the form of a half-groove - ridge height 74 mm and width approx. 55 mm for CL (cover lid) mounting;
- in the corners on the "lock" side of the frame there is a hole with pressed rivet nut M8 (4 nuts) to secure a closed CL;
- one row of microporous EPDM sealing ϕ 10.0 mm (supplier Jolana Fabíková JOFA, Czech Republic) glued with an adhesive like Chemoprene (supplier Henkel ČR spol. s r.o., Czech Republic) around the perimeter into the pressed groove of the frame (at the places of contact with the lid);
- on each side of the frame there are welded 2 steel (1.4301) anchors (126 x 25 x 1.0) mm (total 8 pieces of anchors) with a spacing of 460 mm (125 mm from the frame edges); frame with anchors fixed into fresh concrete mixture of the ceiling panel;
- frame dimensions: (710 x 710 x 101) mm
- frame without surface coating.

Description of cover lid construction (CL):

- CL (without half-groove) in the shape of a pool with dimensions (698 x 698 x 72.5) mm made of sheet (1.0037) thickness 2.0 mm bent into "L" profiles of required shape (55 x 72.5) mm welded in corners, bottom of CL (with hole ϕ 6 x 13.0 mm for bolts M12x50) made of sheet (1.0226) with dimensions (623 x 623) mm and thickness 2 mm welded by spot welds with spacing of approx. 200 mm;
- in corners there is a welded steel (1.0037) corner piece (supplier SPO-Zlín, Czech Republic) (36.5 x 36.5) mm, length 71 mm with a hole for an Allen screw M8x70 to secure and release CL;
- in holes (6x ϕ 13.0 mm) in the pool bottom in the vicinity of CL corners there are 4 screws M12x50 with washer with spacing of 504 mm and 444 mm (97 mm and 127 mm from the edges of the lid)

and in holes in the CL axis there are 2 screws with spacing 344 mm (177 mm from the lid edge) for fixing the lower frame with CSB;

- CL pool filled with concrete mixture C35/45 fraction 8/16, thickness 70 mm, with reinforcing mesh (supplier Ladislav Brázda, Žďár nad Sázavou, Czech Republic) (680 x 680) mm made of ribbed steel (1.0037) rods \varnothing 8.0 mm with mesh size (100 x 100) mm, all rod contacts are welded;
- fire resistant filling on the bottom (thermal exposed) side of CL is from one layer of calcium-silicate board (CSB) PROMATECT®-H (supplier Promat s.r.o., Czech Republic), with dimensions (571 x 571) mm, thickness 25 mm (with holes) and mass density 870 kg/m³; CSB mounted in bottom steel (1.0037) CL frame which is welded from "L" profiles (18 x 25 x 2.0) mm with corner stiffeners (50 x 100) mm, thickness 2.0 mm with holes for bolts M12x50 and with steel stiffener (40 x 544) mm, thickness 2.0 mm in CL frame axis (290 mm from the CL frame edges) with holes for bolts M12x50; around the perimeter between CL frame and CSB there is nonflammable sealing NM8370 (supplier Ulbrich Hydroautomatik s.r.o., Czech Republic);
- fire resistant board CSB with steel „L“ CL frame is mounted on the bottom steel part of CL on 6 bolts M12x50 and fastened by using bolt nuts and washers;
- around the external perimeter of steel „L“ CL frame there are glued two rows of intumescent self-adhesive fire sealing PROMASEAL-XT 1.8 SK, width 2x 10 mm and thickness 1.9 mm;
- CL total thickness: (72.5 + 25) mm (CL + CSB);
- CL secured in the closed position using 4 Allen screws M8x70 (supplier Fábory CZ, s.r.o, Czech Republic) with the possibility of opening - tilting off CL (after unfastening 4 Allen screws) using a service key (without the possibility of opening - tilting off CL from inside, i.e. from the side of the shaft);
- CL pool dimensions: (698 x 698 x 72.5) mm;
- CL total dimensions: (698 x 698 x 97.5) mm (CL and CSB);
- CL with the possibility of opening - tilting from the outside after loosening of 4 Allen screws using a service key (without the possibility of unhinging of CL);
- CL without surface coating.

Total specimen dimensions: (710 x 710 x 101) mm

Specimen opening clearance: (600 x 600) mm

Specimen weight: 157.0 kg

Manufacturer: ACO Industries k.s.

Detailed description of access covers AAC UNIFACE GS/FR is mentioned in test report, see [1], chap. 2 of this document.

1.2 Access cover AAC UNIFACE SS/FR – stainless steel cover, opening clearance (1000 x 1000) mm

Description of frame construction:

- cover frame with dimensions (1110 x 1110 x 82.5) mm made of "L" profiles from stainless steel 1.4301/EN 1253-4), thickness 2.0 mm bent into the required shape with diameters (82.5 x 54.8) mm, welded together in the corners with holes with pressed rivet nut M8 (4 nuts);
- two rows of EPDM sealing \varnothing 10.0 mm (supplier GUMEX, spol. s r.o., Czech Republic) glued around the perimeter into the pressed groove of the frame (at the places of contact with the lid);
- installation of frame in the ceiling structure is on mounting cog, width 60 mm, height 110 mm around the whole perimeter, contact surfaces and perimeter joints with dimensions 10 ÷ 15 mm between cover lid and ceiling construction are sealed with fire resistant acrylic sealant SOUDAL type Firecryl FR (manufacturer SOUDAL N.V., Belgium);
- frame dimensions: (1110 x 1110 x 82.5) mm;
- frame opening clearance: (1000 x 1000) mm;
- frame without surface coating.

Description of cover lid construction (CL):

Cover lid consists of two parts:

- steel body with filling from reinforced concrete mixture in the upper part of the lid;
- steel CL frame with thermal insulating calcium-silicate board in the bottom part of the lid;
- lid body with dimensions (1098 x 1098 x 72.5) mm made of perimeter "L" profiles from stainless steel 1.4301 /EN 1253-4), thickness 1.5 mm bent into required shape with dimensions (72.5 x 58.0) mm, welded in corners with corner parts (supplier FABORY CZ HOLDING s.r.o., Czech Republic), length 70.5 mm with holes for lid fastening to frame by bolts; the bottom part of lid body from sheet with dimensions (1023 x 1023) mm and thickness 1.5 mm welded by spot welds with spacing

approx. 200 mm; lid body without surface coating; lid body filled with concrete mixture C35/45 fraction 4/8, thickness 70 mm, with reinforcing mesh (supplier Ladislav Brázda, Žďár nad Sázavou, Czech Republic) made of ribbed steel rods \varnothing 8.0 mm with mesh size (100 x 100) mm, all rod contacts are welded;

- to the bottom part of the lid there are welded by spot welds corner plates (69 x 119 x 2.0) mm and steel flat plate with width 40 mm and thickness 2.0 mm in axis of the width and height of the lid bottom (forming a cross with dimensions (944 x 944) mm), on each corner plate there is a welded threaded rod M12x45 /DIN 975/A (supplier FABORY CZ HOLDING s.r.o., Czech Republic) and on the steel cross there are welded 8 threaded rod with span 3 x 300 mm in distance 20 mm and 50 mm from the cross ends (in total of 12 threaded rods); on the bottom side of cover lid there is fixed on a threaded rod a calcium-silicate board (CSB) PROMATECT®-H (supplier Promat s.r.o., Czech Republic), with dimensions (971 x 971) mm, thickness 20 mm (with holes) and mass density 870 kg/m³ with intumescent self-adhesive fire sealing PROMASEAL-XT 1.8 standard (supplier Promat s.r.o., Czech Republic), thickness 1.8 mm with area weight 1.8 kg/m²; boards are fixed by fastening on the steel frame with holes on threaded rods by using 12 nuts M12 and washers; frame with dimensions (980 x 980) mm mounted from "L" profiles (18 x 25) mm from stainless steel with thickness 2.0 mm and steel flat plates with width 40 mm and thickness 2.0 mm, they are welded to the frame in axis of the width and height (forming a cross with dimensions (944 x 944) mm);
- around the frame perimeter of steel there are glued two rows of intumescent self-adhesive fire sealing PROMASEAL-XT 1.8 SK (supplier Promat s.r.o., Czech Republic), width 2x 10 mm and thickness 2.5 mm;
- the bottom cover edge is at distance 93 mm from the bottom edge of ceiling structure.

Cover lid dimensions: (1098 x 1098 x 99.5) mm

Total specimen dimensions: (1110 x 1110 x 99.5) mm

Specimen weight: 262.0 kg

Description of light assembled load bearing ceiling structure Rigips:

(ceiling structure with opening composed of system elements Rigips)

- load-bearing construction from 5 rows of galvanized profiles Rigips UA100 - /ČSN EN 14195/ - A1 - KKP/Z100/U/40/100/40/2.0 mm: 4 horizontal rows from UA profiles have length 3500 mm, the fifth row from UA profiles is in the ceiling axis and in the place of opening for cover mounting with length 2 x 12500 mm; the construction is strengthened along the opening by two profiles UA100 which are put together into the "I" shape by using a pair of screws M8x20 /DIN 933/ nuts and washers (8.4 x 25) mm with span approx. 825 mm; on the shorter side there are UA100 profiles put into galvanized system profiles Rigips UW100 - /ČSN EN 14195/ - A1 - KKP/Z100/U/40/100/40/0.6 mm and they are connected by self-drilling screws Rigips LB (4.2 x 13) mm;
- the edges of opening are from UW100 profiles - /ČSN EN 14195/ - A1 - KKP/Z100/U/40/100/40/0.6 mm and UA50 profiles - /ČSN EN 14195/ - A1 - KKP/Z100/U/40/48,8/40/2.0 mm and they create cog - width 60 mm and height 110 mm for free cover mounting without anchors, profiles are screwed to load-bearing structure by steel angles Rigips and a pair of screws M8x20, nuts and washers 8.4 x 25; visible parts of UW and UA profiles around the opening perimeter are covered by segment from boards Glasroc F /EN 15283-1/ GM-F H1 A1 / (Saint-Gobain Construction Products CZ, a.s., division Rigips, Czech Republic), thickness 1 x 20.0 mm and screwed by screws TB (3.5 x 45) mm (Tamadex s.r.o., Czech Republic) with span approx. 250 mm; joints between segment around the opening perimeter are sealant by fire resistant acrylic sealant SOUDAL type Firecryl FR; cover opening in the ceiling is created as axially and centrally symmetrical at distance 400 mm from longitudinal edges of ceiling structure and 1250 mm from the edges of shorter sides of ceiling structure;
- cladding from bottom side of construction is from two layers of gypsum fiber board Glasroc F /EN 15283-1/ GM-F H1 A1 with a total thickness of 2 x 20.0 mm, cladding boards are layered with spacing and overlapping the joints at least about 200 mm and they are screwed to steel profiles of construction by self-drilling screws TB (3.5 x 55) mm (Tamadex s.r.o., Czech Republic) with span approx. 350 mm in the first layer of boards and with span approx. 230 mm in the second layer of boards; joints between cladding boards are without sealing;
- spaces and steel profiles of ceiling structure are not filled by insulation.

Total dimension of ceiling structure: (1800 x 3500 x 140) (width x length x height)

Opening clearance: (1000 x 1000) mm

Total height of ceiling structure: 140 mm (height with visible upper part of specimen: 200 mm)

Manufacturer: ACO Industries k.s.

Detailed description of access covers AAC UNIFACE SS/FR mounted in light ceiling structure is mentioned with the description of ceiling structure in test report, see [2], chap. 2 of this document.

2 OVERVIEW OF THE USED MATERIALS

2.1 Technical standards and Regulations

- ČSN 73 0810 Fire protection of buildings - General requirements
- ČSN EN 1363-1 Fire resistance tests - Part 1: General requirements
- ČSN EN 1634-1+A1 Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 1: Fire resistance test for door and shutter assemblies and openable windows
- Commission Decision 2000/605/ES establishing the list of products belonging to Classes A “No contribution to fire”, dated 2020-09-26

2.2 Test reports, classification reports, test results used for this classification and technical documents

- [1] Test report of fire resistance No. Pr-20-2.046n, issued by PAVUS, a.s., Testing lab Veseli nad Lužnicí, dated 2020-07-01
- [2] Test report of fire resistance No. Pr-19-2.202n, issued by PAVUS, a.s., Testing lab Veselí nad Lužnicí, dated 2020-02-10
- [3] Technical sheet PROMATECT®-H, Fire protective construction board, issued by Promat, 06/2019
- [4] Catalog ACO Product Catalogue, ACO Access Cover UNIFACE, PAVING, SOLID, issued by ACO Industries k.s., Q1/2020
- [5] Installation manual ACO Access Covers – UNIFACE (NM12382), issued by ACO Industries k.s., Q1/2018
- [6] Declaration of change of product names, issued by ACO Industries k.s., dated 2021-12-14

Tab. 2.1 Test reports

Serial No.	Name of the Laboratory Address Accreditation number	Sponsor	Report number Date of test Date of issue	Standard
[1]	PAVUS, a.s. Testing lab Veseli nad Lužnicí Czech Republic	ACO Industries k.s. Havlíčková 260 582 22 Přebyslav Czech Republic	Pr-20-2.046n 2020-02-17 2020-07-01	ČSN EN 1363-1:2013 with regards to ČSN EN 1634-1+A1 :2019
[2]			Pr-19-2.202n 2019-11-11 2020-02-10	

Tab. 2.2 Stress conditions and test results

Testing procedure, Report Number, Date of issue	Parameter	
<p>[1] ČSN EN 1363-1 with regards to ČSN EN 1634-1+A1 Pr-20-2.046n 2020-07-01</p>	Thermal conditions Direction of fire exposure	<i>Standard temperature / time curve from bottom side, opening outwards from the furnace</i>
	Designation Type of access cover Dimensions – opening clearance Description Supporting construction	<i>specimen No. 05 AAC UNIFACE GS/FR ²⁾ (AAC UNIFACE 2.0 GS) (600 x 600) mm (width x height) with PROMATECT[®]-H, with concrete and reinforcing mesh rigid supporting construction with high density</i>
	Integrity (E) - cotton pad - gap gauges - sustained flaming	<i>134 minutes, no failure 134 minutes, no failure 134 minutes, no failure</i>
	Insulation (I₁) - average temperature - maximum temperature - max. temp., supplementary procedure - maximum temperature on frame 180°C	<i>134 minutes, no failure 134 minutes, no failure 134 minutes, no failure unmeasured ¹⁾</i>
	Insulation (I₂) - average temperature - maximum temperature - maximum temperature on frame 360°C	<i>134 minutes, no failure 134 minutes, no failure unmeasured ¹⁾</i>

Testing procedure, Report Number, Date of issue	Parameter	
<p>[2] ČSN EN 1363-1 with regards to ČSN EN 1634-1+A1 Pr-19-22.202n 2020-02-10</p>	Thermal conditions Direction of fire exposure Designation Type of access cover Dimensions – opening clearance Description Supporting construction	<i>Standard temperature / time curve from bottom side, opening outwards from the furnace specimen No. 01 AAC UNIFACE SS/FR ²⁾ (AAC UNIFACE 2.0 SS) (1000 x 1000) mm (width x height) with PROMATECT®-H, with concrete and reinforcing mesh light assembled ceiling supporting construction Rigips</i>
	Integrity (E) - cotton pad - gap gauges - sustained flaming	124 minutes, no failure 124 minutes, no failure 124 minutes, no failure
	Insulation (I₁) - average temperature - maximum temperature - max. temp., supplementary procedure - maximum temperature on frame 180°C	124 minutes, no failure 124 minutes, no failure 124 minutes <i>unmeasured ¹⁾</i>
	Insulation (I₂) - average temperature - maximum temperature - maximum temperature on frame 360°C	124 minutes, no failure 124 minutes, no failure <i>unmeasured ¹⁾</i>
	Note: ¹⁾ Temperatures on door frame were not measured due to reasons given in ČSN EN 1634-1+A1 cl. 9.1.2.3. ²⁾ Company ACO Industries k.s. provide a declaration of product identity, see [6], chap. 2.2 od this document. Only the trade name of the access covers has changed: - AAC UNIFACE GS/FR = formerly AAC UNIFACE 2.0 GS - AAC UNIFACE AL/FR = formerly AAC UNIFACE AL - AAC UNIFACE SS/FR = formerly AAC UNIFACE 2.0 SS	

3 RANGE OF TEST RESULTS EXTENSION

ČSN EN 1634-1+A1 does not apply to closures mounted into a horizontal structure (ceiling, roof, etc.); the rules for direct field of application of test results for closures built into a horizontal structure were determined with regards to ČSN EN 1634-1:2009. At this moment there are no currently valid rules for the extended application of test results for these closures. Therefore, the extension of test results is performed based on technical evaluation of the structure.

3.1 Loading of access covers

Fire resistance classification of access covers is applied and is valid only for mechanically unloaded access covers in the opposite direction than the direction of fire load. Fire resistance classification of covers is for integrity and for insulation with thermal action from below EI (a←b).

3.2 Material of access covers

Access covers AAC UNIFACE are tested in material variants: galvanized steel (AAC UNIFACE GS/FR), stainless steel (AAC UNIFACE SS/FR) and aluminum (AAC UNIFACE AL/FR).

3.3 Dimensions (width x length) of access covers

Permitted dimensional variants of access covers, including article numbers and manufacturer's description, are listed in Tab. 3.1 to Tab. 3.3 of this document. Tested covers dimensions (width x height) are the maximum, they cannot be increased. Reduction of dimensions is possible.

(After the expiration of this document, the decrease in dimensions will be allowed only if the tested minimum required dimension is presented. Only then will be the range of covered dimensions between the minimum and maximum tested dimension allowed.)

The number and type of anchors, including their spacing and distance from the edge of the cover, do not need to be assessed. Access covers AAC UNIFACE SS/FR and AAC UNIFACE AL/FR are without anchors. Access cover AAC UNIFACE GS/FR with dimensions of opening clearance (601 - 1000) x (601 - 1000) mm have 3 anchors (110 x 30 x 3) mm with a maximum spacing of 396 mm on one of the longer sides, 2 anchors (126 x 25 x 1) mm with a maximum spacing of 775 mm on the other of the longer sides and 2 anchors (126 x 25 x 1) mm with a maximum spacing of 762 mm on both shorter sides. Covers with dimensions (300 - 600) x (300 - 600) mm have 2 x anchors (126 x 25 x 1) mm with a maximum spacing of 460 mm on all sides of the cover. According to the installation instructions [5], see chap. 2 of this document, the anchors are used primarily for easier installation of the cover during concreting. The load-bearing capacity of the cover is ensured by concreting under the entire circumference of the assessed cover.

3.4 Height of access covers

For access covers AAC UNIFACE GS/FR and AAC UNIFACE SS/FR the height of the cover frame (door frame) is 82.5 mm and the height of the cover lid can be 70 mm, 110 mm and 140 mm. The tested height of the cover is 70 mm, i.e. the cover with the smallest possible thickness of the concrete layer. Increasing in the height of the cover lid, i.e. possible increase in the height of the concrete layer will not have any negative effect on the value of fire resistance. From the installation instructions dealing with the readiness of the shaft it is clear that since the cover frame is completely underconcreted in its entire width, it is not necessary to assess the weight increase from the concrete filling to the AAC UNIFACE GS/FR cover anchor system, see [5], chap. 2 of this document.

For access covers AAC UNIFACE AL/FR uniform height of the cover frame (door frame) is 72.5 mm and the height of cover lid is 70 mm.

Tab. 3.1 Allowed dimension variants for access covers AAC UNIFACE GS/FR

Article No.	Description of access cover ³⁾
AAC UNIFACE 2.0 GS – with PROMATECT®-H, min. th. 25 mm	
447879	ACO Access Cover UNIFACE W300 L300 H70 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
447880	ACO Access Cover UNIFACE W400 L400 H70 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
447881	ACO Access Cover UNIFACE W400 L600 H70 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
447882	ACO Access Cover UNIFACE W450 L450 H70 #E1120#, LC M125, EN1253-4, 1.0037, hot-dip galv.
447883	ACO Access Cover UNIFACE W500 L500 H70 #E1120#, LC M125, EN1253-4, 1.0037, hot-dip galv.
447884	ACO Access Cover UNIFACE W600 L600 H70 #E1120#, LC M125, EN1253-4, 1.0037, hot-dip galv.
447893	ACO Access Cover UNIFACE W450 L450 H110 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
447894	ACO Access Cover UNIFACE W500 L500 H110 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
447895	ACO Access Cover UNIFACE W600 L600 H110 #E1120#, LC N250, EN1253-4, 1.0037, hot-dip galv.
Note.: ³⁾ W – opening width in mm L – opening length in mm H – cover lid height in mm LC – load class according to ČSN EN 1253-4 (L15, M125, N250). From the point of view of fire resistance is the classification E and EI from below for mechanically unloaded covers.	

Tab. 3.2 Allowed dimension variants for access covers AAC UNIFACE SS/FR

Article No.	Description of access cover ³⁾
AAC UNIFACE 2.0 SS – with PROMATECT®-H, min. th. 20 mm	
447908	ACO Access Cover UNIFACE W300 L300 H70 #E1120#, LC N250, 1.4301
447909	ACO Access Cover UNIFACE W400 L400 H70 #E1120#, LC N250, 1.4301
447910	ACO Access Cover UNIFACE W400 L400 H70 #E1120#, LC N250, 1.4301
447911	ACO Access Cover UNIFACE W400 L400 H70 #E1120#, LC N250, 1.4301

447912	ACO Access Cover UNIFACE W400 L400 H70 #EI120#, LC N250, 1.4301
447913	ACO Access Cover UNIFACE W600 L600 H70 #EI120#, LC M125, 1.4301
447914	ACO Access Cover UNIFACE W600 L600 H70 #EI120#, LC M125, 1.4301
447915	ACO Access Cover UNIFACE W600 L600 H70 #EI120#, LC M125, 1.4301
447917	ACO Access Cover UNIFACE W635 L635 H70 #EI120#, LC L15, 1.4301
447918	ACO Access Cover UNIFACE W700 L700 H70 #EI120#, LC L15, 1.4301
447919	ACO Access Cover UNIFACE W800 L800 H70 #EI120#, LC L15, 1.4301
447920	ACO Access Cover UNIFACE W800 L800 H70 #EI120#, LC L15, 1.4301
447921	ACO Access Cover UNIFACE W1000 L1000 H70 #EI120#, LC L15, 1.4301
447922	ACO Access Cover UNIFACE W450 L450 H110 #EI120#, LC N250, 1.4301
447923	ACO Access Cover UNIFACE W500 L500 H110 #EI120#, LC N250, 1.4301
447924	ACO Access Cover UNIFACE W600 L600 H110 #EI120#, LC N250, 1.4301
447925	ACO Access Cover UNIFACE W600 L600 H110 #EI120#, LC N250, 1.4301
447926	ACO Access Cover UNIFACE W600 L600 H110 #EI120#, LC N250, 1.4301
447927	ACO Access Cover UNIFACE W635 L635 H110 #EI120#, LC M125, 1.4301
447928	ACO Access Cover UNIFACE W700 L700 H110 #EI120#, LC M125, 1.4301
447929	ACO Access Cover UNIFACE W800 L800 H110 #EI120#, LC M125, 1.4301
447930	ACO Access Cover UNIFACE W800 L800 H110 #EI120#, LC M125, 1.4301
447931	ACO Access Cover UNIFACE W1000 L1000 H110 #EI120#, LC M125, 1.4301
447932	ACO Access Cover UNIFACE W635 L635 H140 #EI120#, LC N250, 1.4301
447933	ACO Access Cover UNIFACE W700 L700 H140 #EI120#, LC N250, 1.4301
447934	ACO Access Cover UNIFACE W800 L800 H140 #EI120#, LC N250, 1.4301
447935	ACO Access Cover UNIFACE W800 L800 H140 #EI120#, LC N250, 1.4301
447936	ACO Access Cover UNIFACE W1000 L1000 H140 #EI120#, LC N250, 1.4301

Note.: ³⁾ W – opening width in mm

L – opening length in mm

H – cover lid height in mm

LC – load class according to ČSN EN 1253-4 (L15, M125, N250). From the point of view of fire resistance is the classification E and EI from below for mechanically unloaded covers.

3.5 Thickness of fire board PROMATECT®-H

Access covers AAC UNIFACE GS/FR and AAC UNIFACE AL/FR are tested in rigid supporting construction with calcium-silicate board PROMATECT®-H, thickness 25 mm. Cover AAC UNIFACE SS/FR is tested in light supporting construction with PROMATECT®-H, thickness 20 mm. Increase in thickness of board for covers AAC UNIFACE SS/FR (from 20 mm to 25 mm) will not have negative influence on the value of fire resistance. Decrease in thickness of the board for covers AAC UNIFACE GS/FR and AAC UNIFACE AL/FR (from 25 mm to 20 mm) is not allowed.

3.6 Supporting construction

Cover AAC UNIFACE SS/FR was tested in a light prefabricated ceiling structure, see [2], chap. 2 of this document. Covers AAC UNIFACE GS/FR and AAC UNIFACE AL/FR were tested in ceiling construction with high density form concrete and steel reinforcement with total thickness 190 mm, see [1], chap. 2 of this document. From the test results for covers from different materials of frames and cover lids and with fire board PROMATECT®-H it is clear that the type of supporting structure in which they are installed does not have a significant effect on the achieved values of fire resistance. These resulting values of fire resistance correspond to the duration of the test. During all of the mentioned tests, no failure of monitored criteria occurred, i.e. for AAC UNIFACE GS/FR and AAC UNIFACE AL/FR in reinforced concrete ceiling the test time is 134 minutes (cover with board PROMATECT®-H, thickness 25 mm), for AAC UNIFACE SS/FR in light prefabricated construction the test time is 124 minutes (cover with board PROMATECT®-H, thickness 20 mm). The test results for covers AAC UNIFACE SS/FR in a light prefabricated structure can also be used for classification of the same covers AAC UNIFACE SS/FR in a rigid supporting structure with a high bulk density.

4 PRODUCT CLASSIFICATION

Unloaded access covers without the gas struts and the opening assistant mechanism AAC UNIFACE GS/FR mentioned in Tab. 3.1, access covers AAC UNIFACE SS/FR mentioned in Tab. 3.2 and access covers AAC UNIFACE AL/FR mentioned in Tab. 3.3 of this document with thermal exposure from the bottom are classified in accordance with ČSN 73 0810 according to the following combinations of properties parameters and fire resistance classes

- Access cover AAC UNIFACE GS/FR

E 120 / EI₁ 120 / EI₂ 120 ⁴⁾

- max. opening clearance dimensions (300 – 600) x (300 - 600) mm
- with fire board PROMATECT®-H, min. thickness 25 mm
- mounted in rigid ceiling supporting construction
- without mechanical load from above

- Access cover AAC UNIFACE SS/FR

E 120 / EI₁ 120 / EI₂ 120 ⁴⁾

- max. opening clearance dimensions (300 – 1000) x (300 - 1000) mm
- with fire board PROMATECT®-H, min. thickness 20 mm
- mounted in light mounted or rigid ceiling supporting construction
- without mechanical load from above

Note: ⁴⁾ Classification is valid only for products which are manufacture in company ACO Industries k.s., Czech Republic.

5 CONSTRUCTION TYPE DETERMINATION ACCORDING TO ČSN 73 0810

Construction type is determined based on material composition of elements according to ČSN 73 0810. Access Cover AAC UNIFACE consists of:

- galvanized steel or stainless steel or aluminium frame construction and cover lid construction
- on the bottom side of cover lid is PROMATECT®-H board, thickness 20 mm or 25 mm
- pool of cover lid is filled with concrete with reinforced mech or without filling

According to Commission Decision 2000/605/EC, the reaction to fire class of elements made of concrete, iron, steel, stainless steel, aluminium and aluminium alloys is **A1**.

According to the Technical Data Sheet, see [3], chap. 2 of this document is the fire reaction class of the fire-resistant board PROMATECT®-H **A1**.

Other materials (e.g. sealing) are present in a minimal amount and do not have negative effect on heat development.

This fire classification approval proves that the access cover AAC UNIFACE GS/FR, AAC UNIFACE SS/FR and AAC UNIFACE AL/FR can be evaluated according to ČSN 73 0810, cl. 3.2 as a construction type

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6 FIELD OF APPLICATION

ČSN EN 1634-1+A1:2019 does not apply to closures built in a horizontal constructure (ceiling, roof, etc.), therefore there are no rules for direct application of test results for closures built in a horizontal structure. There are currently no rules for the extended application of test results for these closures.

Conditions for mounting of fire resistance access covers in rigid construction or light mounted load bearing ceiling were determined with regards to ČSN EN 1634-1+A1 on the same structures for which one or more changes listed below were made and which are such that the structure with its rigidity and stability still complies with the relevant standard:

- materials and construction of fire resistance cover shall be the same and the manner of operation shall not be changed;
- the number of leaves shall not be changed;
- the thickness of cover shall not be reduced;
- if the surface coating is not expected to contribute to fire resistance, different coatings are permitted and may be applied;
- the number of stiffening elements for mounting of fire resistance covers to the supporting structures may be increased, but shall not be reduced, and the distance between the fastening elements may be reduced, but shall not be increased;
- the number of hinges and pins may be increased, but shall not be reduced;
- allowed dimension variants including the classification of fire resistance are given in chap. 3.2 of this document;
- the fire resistance of access covers in a rigid standard support construction with high bulk density can be applied to covers installed in the same way in ceilings with the same or greater bulk density and thickness than with which it was tested;
- the supporting structure of access cover in a light mounted loadbearing ceiling construction, see description in chap. 1.2 of this document, has no area of direct field of application.

7 VALIDITY OF FIRE CLASSIFICATION APPROVAL

This fire classification certificate is valid until **2024-12-22**, provided that there are no changes to the product and / or legal and technical regulations applicable to the product.

The extension of this document is conditioned by testing the required minimum dimensions separately for the required types of access covers (see chap. 3.3).

The client may request the issuing organization to review the effect of the changes on the validity of the classification.

This Approval is valid only as a whole; each page has to be provided with the identification number and page number of the total number of pages. This Approval does not substitute either the type of approval or the certification of products.

Elaborated by:



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Checked by:



Jana BUCHTOVÁ

Approved by:



Jan TRIPES
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Prague, 2021-12-22



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