

PAVUS, a.s. Authorized Body 216 Prosecká 412/74, 190 00 Praha 9 – Prosek, Czech Republic Decision on Authorization No. 3/2018 from 24th October 2018

PRODUCT CERTIFICATE

No. 216/C5a/2019/0031

issued for

manufacturer: KOMA MODULAR s.r.o., Říčanská 1191, 763 12 Vizovice, okr. Zlín ID: 46966170

place of manufacture: KOMA MODULAR s.r.o., Říčanská 1191, 763 12 Vizovice, okr. Zlín

> product country of origin: Czech Republic

Authorized Body 216 confirms, pursuant to article § 5a of Government Order No. 163/2002 Coll., which lays down technical requirements for selected construction products, as amended by Government Order No. 312/2005 Coll. and Government Order No. 215/2016 Col. (hereinafter referred to as Government Order No. 163/2002 Coll.), that in case of the construction product:

RESIDENTIAL AND SANITARY CONTAINER KOMA, Type C3

The Authorized Body AB 216 has reviewed documents submitted by the manufacturer, performed the initial type testing of the product specimen and initial audit in the place of manufacture, assessed the factory production control by manufacturer and has found out that this product fullfils the requirements determined by technical regulations that relate to the essential requirements given in the Construction Technical Approval No. S-216/C5a/2019/0031 dated 1st March 2019 issued by the AB 216 with validity until 31st March 2022 (hereinafter referred to as "CTA").

The Authorized body 216 has found out, that the factory production control by the manufacturer complies with the appropriate technical documentation and ensures that the products put on the market meet the requirements laid down in the above-mentioned CTA and comply with the appropriate technical documentation according to article § 4, paragraph 3 of the above-mentioned Government Order.

An integral part of this product certificate is the Certification Report No. P-216/C5a/2019/0031 dated 4th March 2019, which contains conclusions of findings, verifications, test results and general description of the certified product, necessary for its identification.

This certificate remains valid as long as the requirements stated in the CTA referred to hereinabove or the manufacturing conditions in the factory and factory production control of the products by the manufacturer, are not significantly modified or the Authorized Body amends or cancels the certificate.

This certificate supersedes and cancels the Certificate No. C-PAVUS-16/0039 dated 29th February 2016, issued by AB 216.

The Authorized Body AB 216 performs surveillance of proper factory production control by the manufacturer and assessment that product performance complies with CTA according to article § 5a paragraph 2 of Government Order No. 163/2002 Coll. at least once every 12 months.

The Authorized Body will issue a report for the audit and send it over to the manufacturer.

Prague, 4th March 2019

Jaroslav Dufek

Managing Director of PAVUS, a.s. AB 216

Assessed properties of the certified product are stated on the other side of this certificate

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Assessed performance of the certified product

Monitored / declared property	Identified (request) classification standard	Required/declared level	Findings/Classification	Conformity assessment
		Construction type DP3:		12.12.12.12
Fire resistance	ČSN 730810	REW 45 (i→o) REI 15-ef (o→i) REI 30-ef (o→i) REW 45 (i→o) REI 45-ef (o→i) REI 45- REW 15 REW 15 REI 15 R 15 to R 45	- load bearing wall – basic design, thermal stress from inside: REW 45 (i→o) as fire closed area - load bearing wall – basic design, thermal stress from outside: REI 15-ef (o→i) without protection of load bearing steel construction on external side REI 30-ef (o→i) with protection of load bearing steel construction made by CETRIS boards of thickness 10 mm on external side - load bearing wall – strengthened design, thermal stress from inside: REW 45 (i→o) as fire closed area - load bearing wall – strengthened design, thermal stress from outside: REI 45-ef (o→i) with protection of load bearing steel construction made by CETRIS boards of thickness 16 mm on external side	Conforms ¹⁾
			- load bearing doubled internal fire separation wall, thermal stress from inside REI 45	Conforms 1)
			- doubled ceiling construction REI 45	Conforms 1)
			- roof construction with thermal stress from bottom side - REW 15 as fire closed area;	Conforms
			adapted roof construction - REI 15 -Load bearing steel construction, thermal stress from inside, time of fire resistance depends on thickness of board KNAUF RED (GKF) according to the table:	
			Fire resistance Required thickness of Knauf - RED	Conforms 1)
			R 15, R 30 1 × 12,5 mm	
			R 45 1 × 18,0 mm	
		Construction type DP1:		
		R 15	- unprotected internal steel stairs R 15	Conforms
		R 30	- internal steel stairs protected by boarding R 30	Conforms
	EN 13501-2	RE 60 (i→o) / REI 30 (i→o)	- external load bearing wall — basic design, thermal stress from inside: RE 60 (i→o) / REI 30 (i→o)	Conforms 2)
		REI 60	- Ceiling and floor construction, thermal stress from the bottom: REI 60	Conforms 3)
Reaction to fire	EN 13501- 1+A1	steel, insulation ROCKWOOL	A1 to D-s2, d0	Conforms
		SDK board	A2-s1, d0	
		chipboard and laminated board	D-s2, d0	
		- internal steel stairs - other constructions	DP1 – for internal steel stairs and constructions adapted for classification DP1 DP2, DP3 – other constructions	Conforms
Construction	ČSN 73 0810	Construction type DP2 REI 45 (i→o) or REW 15(i→o) REI 15-ef (o→i), REI 30-ef (o→i) REI 15 Construction type DP1 REI 30 (i→o) or REW 30(i→o) REI 15-ef (o→i), REI 30-ef (o→i) REI 30	Construction adapted to DP2 type: External load bearing wall – thermal stress from inside: REI 45 (i→o) REW 15 (i→o) as fire closed area - Thermal stress from outside: REI 15-ef (o→i) without protection of load bearing steel construction from outside REI 30-ef (o→i) Roof construction – thermal stress from bottom side: REI 15 Construction adapted to DP1 type: External load bearing wall – thermal stress from inside: REI 30 (i→o) REW 30 (i→o) as fire closed area - Thermal stress from outside: REI 15-ef (o→i) without protection of load bearing steel construction from outside REI 30-ef (o→i) with protection of load bearing steel construction from outside and by CETRIS board of thickness 10 mm Roof construction – thermal stress from bottom side REI 30 Construction between roof and floor – thermal stress from bottom side REI 30	Conforms ⁴⁾
Airborne sound insulation of external wall of container	ČSN 73 0532	min $D_{is,2m,n,w}(C;C_{tr}) = 32(-2;-8) dB$	min. $D_{ts,2m,n,w}(C;C_{tr}) = 32 (-2;-8) dB$	Conforms
Airborne sound insulation of doubled external wall between containers	ČSN 73 0532	$R'_{w}(C;C_{tr}) = 47 (-7;-15) \text{ dB}$	$R'_{w}(C;C_{tr}) = 47 (-7;-15) dB$	Conforms
Airborne and impact sound insulation of the ceiling construction between containers	ČSN 73 0532	$R'_{w}(C;C_{l'}) = 59 (-5;-12) dB$ $L'_{n,w} = 56 dB$	R' _w (C;Ctr) = 59 (-5;-12) dB L' _{n;w} = 56 dB	Conforms

The CTA No. S-216/C5a/2019/0031 is valid until 31st March 2022.

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Jaroslav Dufek Managing Director of PAVUS, a.s. - AB 216

¹Valid under the terms stated in PKO-15-068, see [10], cl. 2 of the protocol on certification.

²Valid under the terms stated in PK2-02-06-009-C-2, see [9], cl. 2 of the protocol on certification.

³Valid under the terms stated in PK2-03-04-002-C-2, see [8], cl. 2 of the protocol on certification.

⁴Valid under the terms stated in PKO-15-076, see [11], cl 2. of the protocol on certification.