



ICC-ES Evaluation Report ESR-3985

Issue May 2022

This report is subject to renewal May 2023.

DIVISION: 06 00 00 —WOOD, PLASTICS AND COMPOSITES

Section: 06 52 00 —Plastic Structural Assemblies

REPORT HOLDER:

BUZON PEDESTAL INTERNATIONAL S.A.

EVALUATION SUBJECT:

BUZON PEDESTALS – DPH, BC AND PB SERIES

1.0 EVALUATION SCOPE

Compliance with the following codes:

- 2018, 2015 and 2012 *International Building Code*® (IBC)

Properties evaluated:

- Structural
- Durability
- Fire classification

2.0 USES

The Buzon Pedestals – DPH, BC and PB Series are adjustable vertical structural elements used in raised-deck systems that can be installed over new and existing construction over a noncombustible roof deck; or on grade applications.

3.0 DESCRIPTION

3.1 General:

The Buzon Pedestals are placed directly on the roof assembly or on grade, to support the deck's wood horizontal members and deck consisting of either wood deck tiles or concrete, stone or ceramic pavers, to create a raised-deck system that provides a level walking surface. The base of the pedestals are not mechanically fastened or adhesively attached to the supporting structure. See Figure 1 for pedestal components and details

3.2 Materials:

3.2.1 Buzon Pedestals and Accessories:

The Buzon Pedestals are available in different series: DPH, BC and PB. Each pedestal consists of plastic support base, plastic vertical structural couplers, and plastic load bearing

top cap; and are installed with a variety of accessories used to provide lateral bracing, vertical support, slope leveling compensation, and tile restraint to the top cap. Each component (pedestal and accessory) is a molded high-density copolymer polypropylene product. The pedestals, when used in the raised-deck system, are adjustable with height ranging from 0.67 inch (17 mm) to 42.13 inches (1070 mm). See Figures 1-3 for details.

3.2.1.2 CC1 Classification: The polypropylene (PP) FR plastic material complies with the Class CC1 specifications in IBC Section 2606.4. The resin plastic material has a self-ignition temperature of greater than 650°F (343°C).

3.2.1.3 CC2 Classification: The PP201-20 Black polypropylene plastic material complies with the Class CC2 specifications in IBC Section 2606.4. The resin plastic material has a self-ignition temperature of greater than 650°F(343°C).

3.2.2 Deck pavers and Tiles:

3.2.2.1 Ceramic Pavers

The raised-deck systems consisting of Buzon Pedestals can be used with ceramic pavers. The ceramic pavers shall meet a minimum flexural strength of 5,000 psi (34.5 MPa) determined by testing in accordance with EN ISO 10545-2. Each paver shall come in minimum nominal thickness of 0.75 inches (19.1 mm).

3.2.2.2 Concrete Pavers

The raised-deck systems consisting of Buzon Pedestals can be used with concrete pavers.

3.2.2.3 Stone Slab Pavers

The raised-deck systems consisting of Buzon Pedestals can be used with stone slab (natural stone) pavers.

3.2.2.4 Wood Tiles

The raised-deck systems consisting of Buzon Pedestals can be used with wood tiles. The wood tiles shall be produced from naturally durable wood, as defined in IBC Section 202. Each tile is constructed with nominal 1-inch (25.4 mm) wood planks with reinforced bracing made from the same wood planks. For surface-burning characteristics, each wood tile used with Buzon Pedestals shall meet the minimum requirement of a flame-spread index of 75 or less and a smoke-developed index of 450 or less.

4.0 DESIGN AND INSTALLATION

4.1 Installation:

Installation of the Buzon Pedestals must comply with this report and the manufacturer's published installation instructions. The manufacturer's published installation instructions must be available at the jobsite at all times during installation. When the manufacturer's published installation instructions differ from this report, this report governs.

The Buzon Pedestals must be installed on roofs with minimum slopes of ¼:12 (2 percent slope) and must be installed over new and existing construction with a code-complying noncombustible (concrete or metal) roof deck; or over on-grade applications.

The supporting substrate must be clear of debris prior to layout of Buzon Pedestals. Based on the predetermined vertical height of the raised-deck system, the pedestals consist of the plastic base supports being screwed into the plastic load bearing top caps or screwed into multiple couplers with load bearing top caps. The plastic load bearing top cap must use adjustable plastic tabs to provide support and restraint to different sized deck pavers or tiles. For finished level heights greater than 24 inches (609.6 mm), Buzon pedestals must be laterally braced using two wired hooks that are tied adjacently to each couplers' bracing tabs to ensure lateral stability.

4.2 Design:

The raised-deck systems consisting of Buzon Pedestals as described in Section 3.2.1 have allowable load capacities when pedestals are installed at the maximum center-to-center spacing of 24 inches (609.6 mm); see Table 1 for allowable loads. See Tables 2-4 for the allowable pedestal axial load capacities for each pedestal series.

4.3 Fire Classification: New and Existing Construction Installed on a Noncombustible Roof Deck: The raised-deck system, consisting of Buzon Pedestals installed with nominal 24 inch by 24 inch (609.6 mm by 609.6 mm) square naturally durable wood tiles, ceramic, concrete, or stone pavers, as described in Sections 3.2.2.1 through 3.2.2.4 and installed in accordance with Section 4.1 of this report, is recognized as a Class A roofing assembly in accordance with ASTM E108.

5.0 CONDITIONS OF USE

The Buzon Pedestals described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1 Installation must comply with this report, the manufacturer's published installation instructions, and the applicable code. When the manufacturer's published installation instructions differ from this report, this report governs.
- 5.2 The ability of the roof structure/assembly or exterior supporting structure to resist the applicable loads imposed by the raised-deck system must be determined by a registered design professional to the satisfaction of the building official.

- 5.3 The ability of the roof structure/assembly or exterior supporting structure to provide adequate drainage after installation of the raised-deck system must be determined by the registered design professional to the satisfaction of the code official.
- 5.4 Perimeter containment must be installed around the perimeter of the raised-deck system and at all ramps and/or walkway areas as determined by a registered design professional. The perimeter containment must comply with requirements in the report, must be designed by a registered design professional, and subjected to approval by the code official.
- 5.5 Evaluation of pedestrian deck panels/pavers to be installed with Buzon Pedestals as noted in Sections 3.2 of AC423 are outside the scope of this evaluation report.
- 5.6 Evaluation of fasteners that connect the deck panel/paver to Buzon Pedestals as noted in Section 3.3 of AC423 is outside the scope of this evaluation report.
- 5.7 Evaluation of raised-deck systems consisting of Buzon Pedestals is limited to Risk Category II structures having a maximum mean roof height of 33 feet (10 m) in Exposure B areas subjected to a maximum ultimate wind speed of 115 mph (185 km/h). For raised-deck systems installed in other locations and buildings, the wind resistance must be determined by a registered design professional to the satisfaction of the building official.
- 5.8 Evaluation of raised-deck systems consisting of Buzon Pedestals is limited to structures assigned to Seismic Design Categories A and B, where the component importance factor is 1.0. Evaluation of structures assigned to Seismic Design Categories C through F is outside the scope of this evaluation report.
- 5.9 The Buzon Pedestals are manufactured under a quality control program with inspections by ICC-ES.

6.0 EVIDENCE SUBMITTED

- 6.1 Data in accordance with the ICC-ES Acceptance Criteria for Raised-deck Systems Installed over Roof Assemblies or Exterior Supporting Structures (AC423), dated June 2018 (editorially revised August 2020).

7.0 IDENTIFICATION

- 7.1 Product labeling shall include, the name of the report holder and the ICC-ES mark of conformity. The ICC-ES evaluation report number (ESR-3985) may be used in lieu of the mark of conformity. The label shall include "FR" for polypropylene FR resin material complying with Section 3.2.1.2, when applicable.
- 7.2 The report holder's contact information is the following:

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FIGURE 1 – BUZON PEDESTALS – DPH SERIES



FIGURE 2 – BUZON PEDESTALS – BC SERIES



FIGURE 3 – BUZON PEDESTALS – PB SERIES

TABLE 1 - ALLOWABLE LOAD CAPACITIES OF RAISED-DECK SYSTEMS¹

TILE TYPE WITH BUZON PEDESTALS	ALLOWABLE LIVE LOAD (PSF)	DEAD LOAD OF SYSTEM (PSF)
WOOD TILES ²	59	4.32
CERAMIC ³	106	9.02

For SI: 1 psf = 4.88 kg/m²

¹Buzon pedestals are installed at the maximum center-to-center spacing of 24 inches (609.6 mm).

²Wood tiles must comply with Section 3.2.2.4.

³Ceramic pavers must comply with Section 3.2.2.1.

TABLE 2 - ALLOWABLE AXIAL COMPRESSIVE LOAD CAPACITY - DPH SERIES (lbf) ^{1,2,3}

PEDESTAL SERIES	HEIGHT OF PEDESTAL (mm)	AXIAL LOAD - CENTERED ON TOP CAP	AXIAL LOAD - 1/2 LOADED ON TOP CAP	AXIAL LOAD - 1/4 LOADED ON TOP CAP
DPH-F17	17	3612	2398	1394
DPH-F28	28	3177	2608	1319
DPH-1	28	1606	863	463
DPH-02	36	1071	689	384
DPH-02-PH5	44	1002	599	336
DPH-2	53	1094	712	337
DPH-2-PH5	57	1199	712	366
DPH-3	78	989	652	434
DPH-3-PH5	79	1161	712	404
DPH-4-PH5	108	1439	922	517
DPH-5-PH5	175	1229	862	517
DPH-6-PH5	285	1124	839	532
DPH-7-PH5	400	1026	772	472
DPH-8-PH5	515	1034	764	472
DPH-9-PH5	625	922	749	449
DPH-10-PH5	740	907	712	502
DPH-11-PH5	850	869	667	442
DPH-12-PH5	960	862	689	442
DPH-13-PH5	1070	862	667	442

For units: 1 mm = 0.0394 inch, 1 lbf = 0.45 kg

¹For finished heights greater than 600 mm, two hooks must be installed at the pedestal couplers' bracing tabs to ensure lateral bracing.

²The uniform gravity load capacity reported in Section 4.2 of this report shall not be exceeded.

³The allowable axial compressive load was determined using a Factor of Safety of 3.0.

TABLE 3 - ALLOWABLE AXIAL COMPRESSIVE LOAD CAPACITY - BC SERIES (lbf)^{1,2,3}

PEDESTAL SERIES	HEIGHT OF PEDESTAL (mm)	AXIAL LOAD - CENTERED ON TOP CAP	AXIAL LOAD - 1/2 LOADED ON TOP CAP	AXIAL LOAD - 1/4 LOADED ON TOP CAP
BC-0	11	2302	1334	749
BC-1	14	11053	6025	2982
BC-02	40	689	449	255
BC-2	55	1131	742	487
BC-3	85	967	652	345
BC-4	140	1124	869	494
BC-5	200	1071	847	539
BC-6-INV	240	832	667	412
BC-7	360	1065	884	554
BC-8-INV	465	787	704	472
BC-9-INV	630	787	659	457
BC-10-INV	795	802	623	419
BC-11-INV	965	727	629	390
BC-12-INV	1130	772	622	360

For units: 1 mm = 0.0394 inch, 1 lbf = 0.45 kg

¹For finished heights greater than 600 mm, two hooks must be installed at the pedestal couplers' bracing tabs to ensure lateral bracing.

²The uniform gravity load capacity reported in Section 4.2 of this report shall not be exceeded.

³The allowable axial compressive load was determined using a Factor of Safety of 3.0.

TABLE 4 - ALLOWABLE AXIAL COMPRESSIVE LOAD CAPACITY - PB SERIES (lbf)^{1,2,3}

PEDESTAL SERIES	HEIGHT OF PEDESTAL (mm)	AXIAL LOAD - CENTERED ON TOP CAP	AXIAL LOAD - 1/2 LOADED ON TOP CAP	AXIAL LOAD - 1/4 LOADED ON TOP CAP
PB-00	15	4124	2262	1266
PB-S18	28	1606	863	463
PB-01	42	730	442	261
PB-1	60	1075	594	414
PB-2	90	1253	710	393
PB-3	145	1186	838	444
PB-4	245	1131	849	429
PB-5	315	777	725	406
PB-6	367	778	723	493
PB-7	480	1070	794	569
PB-8	595	832	727	629
PB-9	715	902	665	467
PB-10	830	773	661	586
PB-11	955	820	613	611

For units: 1 mm = 0.0394 inch, 1 lbf = 0.45 kg

¹For finished heights greater than 600 mm, two hooks must be installed at the pedestal couplers' bracing tabs to ensure lateral bracing.

²The uniform gravity load capacity reported in Section 4.2 of this report shall not be exceeded.

³The allowable axial compressive load was determined using a Factor of Safety of 3.0.

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BUZON PEDESTAL INTERNATIONAL S.A.

EVALUATION SUBJECT:

BUZON PEDESTALS – DPH, BC AND PB SERIES

1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Buzon Pedestals – DPH, BC and PB Series, described in ICC-ES evaluation report ESR-3985, have also been evaluated for compliance with the code noted below.

Applicable code edition:

- 2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see Sections 2.1.1 and 2.1.2 below.

2.0 CONCLUSIONS**2.1 CBC:**

The Buzon Pedestals – DPH, BC and PB Series, described in Sections 2.0 through 7.0 of the evaluation report ESR-3985, comply with CBC Chapters 16 and 26, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report and the additional requirements of CBC Chapters 16, 17 and 26, as applicable.

2.1.1 OSHPD:

The applicable OSHPD Sections and Chapters of the CBC are beyond the scope of this supplement.

2.1.2 DSA:

The applicable DSA Sections and Chapters of the CBC are beyond the scope of this supplement.

This supplement expires concurrently with the evaluation report, issued May 2022.

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1.0 REPORT PURPOSE AND SCOPE**Purpose:**

The purpose of this evaluation report supplement is to indicate that Buzon Pedestals – DPH, BC and PB Series, recognized in ICC-ES evaluation report ESR-3985, has also been evaluated for compliance with the code noted below.

Applicable code edition:

- 2020 *Florida Building Code—Building*

2.0 CONCLUSIONS

The Buzon Pedestals – DPH, BC and PB Series, described in Sections 2.0 through 7.0 of ICC-ES evaluation report ESR-3985, complies with the *Florida Building Code—Building*. The design requirements must be determined in accordance with the *Florida Building Code—Building*. The installation requirements noted in ICC-ES evaluation report ESR-3985 for the 2018 *International Building Code*® meet the requirements of the *Florida Building Code—Building*.

Use of the Buzon Pedestals – DPH, BC and PB Series for compliance with the High-Velocity Hurricane Zone provisions of the *Florida Building Code—Building* or the *Florida Building Code—Residential* has not been evaluated, and is outside the scope of this supplemental report.

For products falling under Florida Rule 61G20-3, verification that the report holder's quality assurance program is audited by a quality assurance entity approved by the Florida Building Commission for the type of inspections being conducted is the responsibility of an approved validation entity (or the code official when the report holder does not possess an approval by the Commission).

This supplement expires concurrently with the evaluation report, issued May 2022.