

TECHNICAL SPECIFICATIONS

confirms the suitability for use in the construction in the European Union and the following characteristics of the product under the name

in the field and on the terms set out in this Specification

Marousel

Chairman of the Board

A/E Grzegorz Baranowski

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Gdańsk January 30, 2015

TECHNICAL SPECIFICATIONS contains 9 pages + 11 pages of drawings. The text of this document should be used only in its entirety. Publication or distribution in any other form, and/or fragments of the document requires the written permission of the manufacturer.

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1.0. NATURE OF SPECIFICATION.

Technical Specifications is a document drawn up for products not subject to the requirements of Art. 9, paragraph 1 of the Act of 16.04.2004 on Construction Products (Journal of Laws No. 92/2004, pos. 881), which allows the evaluation of and issuing of the Declaration of Utility Performance of DD PEDESTALS (confirming the conformity of the products of this document) in order to present them to buyers.

2.0. SUBJECT OF SPECIFICATION.

The subject of the Technical Specification supports are DD PEDESTALS, adjustable pedestals manufactured by DECK-DRY Poland Company Ltd., Poland 80-307 Gdańsk st. Abrahama 48.

Technical Specification of DD PEDESTALS includes continuously adjustable (screw) pedestals in the range of 30 - 3000 mm and unregulated with a height of 8.0 cm, (or the same stacked "one on top of the other" as regulated "stepwise" with height of 8.0 cm = n wherein n \leq 6) and used for : mounting (support) of concrete or stone patio plates, joists of wooden terraces, grating, pavement construction floors, sidewalks, etc., for use inside and outside of buildings, terraces, loggias, balconies, squares, also partially or fully roofed, etc.

DD PEDESTALS are made of polypropylene (ethylene propylene copolymer), containing stabilizers, characterized by Vicat softening point temperature VST 95 and an average thermal shrinkage of ≤ 0.13%.

Assortment of DD PEDESTALS adjustable pedestals presented in the following Table No. 1

nr		type of DD PEDESTALS 1	height range DD PEDESTALS mm		\overline{n}
				from	to
			1		
2	DDP 01			30	45
3	DDP 02			45	70
4	DDP 03			70	120
5	DDP 04			120	220
6	DDP 04 + DS DECK-DRY PEDESTALS 00	+ DISTANCE		220	3000

¹ - special order can be made brackets DD PEDESTALS FLAME RETARDANT (DD PEDESTALS FR)

² - n (≤ 6) x 8 mm



Ad. DDP 01. - DD PEDESTALS adjustable (regulated "smooth") types: DDP 01-04 + DS consist of :

- load-bearing body (foot) of the area. 233.3 cm² (minus the area of the hole in the foot 50.2 cm² = 183.1 cm²), reinforced with 8 vertical rib diaphrams, with four base plate holes for the drainage of water from the upper surface of the foot,
- main head with thread, with a load-bearing surface of 76.9 cm² enhanced with small vertical ribs with a height of 2 mm and a hole for attaching the detachable diaphragm rib (used to obtain the regular slits between laid elements of the terrace),
- a screw nut for "smooth" height adjusting of the pedestals; height adjustment is done manually,
- basic components of adjustable pedestals are shown in Figure 1-9; figure 10 and 11 shows examples of applications.

3. PURPOSE, SCOPE AND CONDITIONS OF USE OF DD PEDESTALS.

DD PEDESTALS are designed to support / for the installation of concrete, stone or wood terrace plates, wooden terrace joists, grating, pavement structure floors, sidewalks, etc. for use inside and outside of buildings, terraces, loggias, balconies, squares, also partially or fully roofed, etc.; for use in single-family and multi-family buildings, collective residential, sports and utilities buildings.

Particularly, DD PEDESTALS are predisposed for use in areas exposed to the direct impact of external weather conditions, in terms of ambient temperature of - 40° C to + 95° C.

DD PEDESTALS should be used on stable substrates, such as :

- on concrete (screed) plates, uninsulated for anti-water or anti-damp or insulated for anti-water or anti-damp,
- i.e. on substrates, which constitute as anti-water insulation, such as tar paper or insulation foil (on these substrates it is recommended to apply an additional support layer of the above mentioned insulation papers directly under the DD Pedestals)
- on stone or wooden plates,
- on concrete blocks / pavers,
- on compated and/ or stabilized ground,
- on openwork concrete slabs,
- on extruded polystyrene (styrodur),
- on other types of stable floors,

on substrates that enable drainage of rainwater or of water puddles/ spills on the terrace.

4.1. TECHNICAL AND UTILITY FEATURES. REQUIREMENTS

4.2. Type of material.

DD PEDESTALS are made of polypropylene, formed by injection molding and extrusion (ethylene propylene copolymer), containing stabilizers and antioxidants according to PN-EN ISO 183-1:2000. On special request, DD PEDESTALS are made of not flammable material, used for injection molding.

4.3. Vicat softening point temperature

Vicat softening point temperature of polypropylene, determined according to PN-EN ISO 306:2006, should not be lower than 95 VST.

4.4. Thermal stability (shrinkage).

Resizing of DD PEDESTALS when subject to warming at a temperature of 100°C for the time of 60 min. should not be greater than 0.5%.

4.5. Shape and dimensions.

The shape and dimensions of DD PEDESTALS are set out in Figure and Table. No. 1 Deviations of dimensions do not exceed the no-tolerance dimensions, as defined in Class C by PN-EN 22768-1:1999.

4.6. Design and finishing.

The surfaces are suitably provided DD PEDESTALS smooth, equal, respectively, excluding significant cracks, large blisters, such embedded foreign bodies and other defects that prevent the use of DD PEDESTALS. Line is permitted to merge forms, however, do not cause loss of strength in use. DD PEDESTALS have respectively uniform in color, similar to the pattern of the manufacturer.

4.7. Resistance to statistical load pressure

DD PEDESTALS are resistant to a load pressure no less than that specified in table. No. 2, exerted over the entire surface, regardless of the height (within the permissible range), and the adjustment of DD PEDESTALS.

Tab. no. 2.

nr	type of DD PEDESTALS 1	DD PEDESTALS height adopted for measurement	central max load kN
1			
2	DDP 01	40	13,05
3	DDP 02	60	11,13
4	DDP 03	110	10,67
5	DDP 04	210	10,88
6	DDP 04+DS DECK-DRY PEDESTALS 04 + DISTANCE	285	11,18

¹ - special order can be made brackets DD PEDESTALS FLAME RETARDANT (DD PEDESTALS FR) \rightarrow p. no 4.8.

4.8. Impact resistance.

DD PEDESTALS are not destroyed or damaged as a result of impact of a subject falling from a height of 10 m. with a weight of 1,0 kg.

4.9. Anti-fire requirements.

On special order can be made brackets DD PEDESTALS FLAME RETARDANT (DDP FR 00-04), meet the requirements of reaction to fire class Bs, d0 and class of fire resistance of roof covering as an element of building with the required fire resistance class "A" and "B". Material DD PEDESTALS FR - polypropylene non-flammable applied through injection molding.

5.0. PACKING, STORAGE, TRANSPORT

Products are shipped in single packaging or packaged, securing DD PEDESTALS against

mechanical damage. Finished goods are stored and transported in accordance with the Instruction of the Manufacturer, as to maintain their technical properties. Each package is accompanied by a label containing at least the following information: name and address of the Manufacturer, the name and designation of the product, the basic data of the product, no. of Declaration of Utility Performance.

6.1. DECLARATION OF UTILITY PERFORMANCE

6.2. General principles.

Technical Specifications is a document drawn up for products not subject to the requirements of Art. 9, paragraph 1 of the Act of 16 April 2004 on Construction products (Journal of Laws No. 92/2004, pos. 881). It is a description of the characteristics of the product which evaluates the conformity of the products with the standards and the Declaration of Utility Performance in order to present the product to recipients.

Technical and functional properties of the products are certified by the Manufacturer of the product. The

basis for conformity assessment are:

- Initial type testing,
- Factory production control.

6.3. Initial type testing.

Initial type testing is testing confirming the required technical and operational properties, performed before placing the product on the market.

Initial type-testing includes:

- 3.a. Vicat softening point of polypropylene,
- 3.b. thermal stability of polypropylene,
- 3.c. the shape and dimensions of the product,
- 3.d. pressure resistance statiscal load,
- 3.e. impact resistance.

6.4. Factory production control

Factory production control includes:

- 4.a. specification of materials and inspection of documents confirming their properties in accordance with the requirements specified in section 4,
- 4.b. control and testing in the process of production and testing of finished products (section 6.4.) carried out by the Manufacturer in accordance with a prescribed test plan and according to the rules and procedures specified in the documentation of factory production control, adapted to the production technology and aimed to obtaining the required product properties.

Control of production ensures that the product is in conformity with the Technical Specifications. Inspection results are systematically recorded. The records must confirm that the products meet the criteria for assessing compliance with the standards. Each batch of products is uniquely identified in the test records and merchant documents.

6.5. Testing of finished products.



Testing of finished products includes checking the shape and dimensions and the quality of fit and finish of DD PEDESTALS.

6.6. Frequency of testing.

Testing of finished products should be carried out in accordance with a prescribed test plan, but not less frequently than every batch of products. Size of the batch of products should be specified in the documentation of factory production.

6.7. Checking the Vicat softening point temperature.

The test is performed according to EN ISO 306:2006. The test results are compared with the requirements according to point 4.2.

6.8. Checking the thermal stability.

The test is performed according to EN 479:1997. The results are compared with the requirements according to point 4.3.

6.9. Shape and dimensions.

Checking the shape is done by visual inspection of the pedestals with the naked eye in a well-lit room at a distance of about 0.5 m and compared with the corresponding drawings. Checking the dimensions is performed using universal measuring instruments, ensuring measurement accuracy resulting from research by point 4.4.

6.10. Checking the fit and finish.

Checking the fit and finish is done by visual inspection of the pedestals with the naked eye in a well-lit room at a distance of about 0.5 m for compliance with the requirements for point 4.5.

6.11. Checking resistance to statistical load pressure.

The test is performed according to EN ISO 604:2006. The results are compared to impart to the requirements set out in point. 4.6.

6.12. Checking for impact resistance..

The test is performed according to EN 477:1997. The test results are compared with the requirements for point. 4.7.

6.13. Sampling for testing.

Test samples taken at random, in accordance with PN-N-03010: 1983.

6.14. Evaluation of test results

Manufactured products are considered to be in accordance with this Specification, if the results of all tests are positive.

7.0 FORMAL AND LEGAL FINDINGS.

7.1. Usefulness and designation of DD PEDESTALS in construction.

Usefulness of DD PEDESTALS for use in construction is set out by the Technical Specification, which is a document provided to recipients of the products.

CE marking is an indication of the product of the product meeting the legal requirements of the Union European, allowing the free movement of goods in the European market. by placing CE mark on the product, the manufacturer declares that the product complies with all relevant This article applies to the legal requirements necessary to obtain the CE mark, thus providing the opportunity to sell the product in the EEA Economic - EEA (ang. European Economic Area - EEA), which includes 28 countries EU Member States, EFTA countries - Iceland, Norway and Liechtenstein and Turkey.

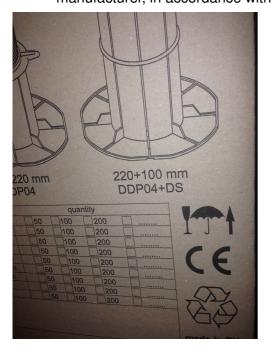
CE marking is mandatory in the European Economic Area EEA (EEA).

The manufacturer of the product is placed on the product, the CE mark, the mandatory inspection compliance, the creation of technical documentation and signing the EU declaration of conformity.

The rules on labeling:

- Has been marked with the CE mark against the introduction into the market,
- The manufacturer on his own responsibility checked that the EU Directive relate to the product,
- Product marketed is in conformity with the provisions of all relevant directives and subject properly carried out conformity assessment procedure
- The manufacturer has drawn EU declaration of conformity and CE marking affixed on the product,

- CE marking has been affixed to the product (the packaging and declaration) by the manufacturer, in accordance with its legal format visibly, legibly and indelibly.





Fot. 1.

Fot. 2 - a way of marking the product.

7.2. Violations of rights.

Technical Specifications does not infringe the rights resulting from the



provisions on the protection of industrial property rights, in particular Proclamations of 13 June 2003 on the publication of the consolidated text of the Act of 30 June 2000 - Industrial Property Law (Journal of Laws No. 119, item. 1117).

7.3. Responsibility of the Manufacturer.

The Manufacturer issuing the Technical Specification assumes responsibility for any infringement of exclusive and / or purchased rights. The Technical Specification does not exempt the Manufacturer from responsibility for the proper quality of products and for holding building contractors liable of proper application.

7.4. Content published prospectuses and advertisements.

Content published prospectuses and advertisements and other documents related to and other documents related to marketing and construction use of DD PEDESTALS should contain information about this Technical Specification.

8.0. **EXPIRY**.

Technical Specification is valid until 31 June 2017, the validity of the Specification can be renewed for successive periods and updated if any of the parameters change.

9.0. ADDITIONAL INFORMATION.

Standards and related documents:

EN 477:1997 - Profiles of unplasticized polyvinyl chloride (PVC-U) for windows and doors. Determination of resistance of the main sections on the impact of the falling weight.

EN 479:1997 - Profiles of unplasticized polyvinyl chloride (PVC-U) for the production of windows and door. Determination of thermal shrinkage.

EN 22768-1:1999 - General tolerances. Tolerances of linear and angular dimensions without individual tolerance indications.

BS EN ISO 306:2006 - Plastics. Thermoplastics. Determination of the Vicat softening point method (VST).

EN ISO 604:2006 - Plastics. Determination of compression behavior.

EN ISO 1873-1:2000 - Plastics. Polypropylene (PP) molding and extrusion. System and basis for classification.

PN-C-89110.06:1075 - Products from plastic. Flaws of technological injection products. PN-

N-03010:183 - Statistical quality control. Random selection of sample products.



www.ddpedestals.eu contact@ddpedestals.eu

DDP Pedestals Range

revised 2013-08-01

General Comment to all DD Pedestals technical sheets:

All assembly must be done in accordance with DD Pedestals product specifications.
 Depended state of the product specifications.
 Persented crawings are not to scale.
 For further information and support please visit www.dapedesals.eu or send message to contact@ddpedestals.eu.
 Manufacturer register the right to amend product changes aimed for its improvement without pre information.

DDP 120-220 mm

30 - 45

N က

DDP 02 DDP 01

DDP 03 DDP 04

4 4

[mm]

name

no.

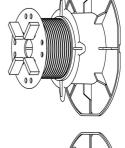
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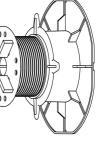
DDP00

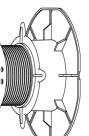
DD PEDESTALS - Pedestals range

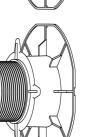
150-550 **DDP 70-120 mm** 70-120 **DDP 45-70 mm** √ 0∠-97 120 - 220 45 - 70 70 - 120

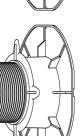
DDP 30-45 mm 30-42



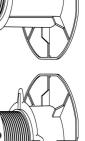


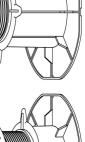


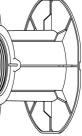














#01 - DDP Pedestals Range



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DDP product line

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item view	item name	sizes	description
	DDP00	Base plate diameter: 109mm Height: 8 mm	DDP 00 - pedestals for levelling low heights 8mm
	DDP Base 01	Base plate diameter:168mm Height:17 mm	DDP Base 01 - lowest base for adjustable pedestal.
	DDP Base 02	Base plate diameter: 168mm Height: 32 mm	DDP Base 02 - low base for adjustable pedestal.
	DDP Base 03	Base plate diameter: 168mm Height: 57 mm	DDP Base 03 - middle base for adjustable pedestal.
	DDP Base 04	Base plate diameter: 168mm Height: 107 mm	DDP Base 03 - highest base for adjustable pedestal.
	DDP Distane sleeve	Height: 100 mm	Distance sleeve for expanding height of the pedestal.
	DDP Screw	Height: 19 mm 44 mm 53 mm 100 mm	Screw with top base.
	DDP Screw Ring		Screw ring to adjust height of the pedestal

#02 - PRODUCT LINE - listing



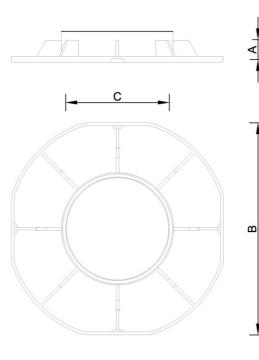
www.ddpedestals.eu contact@ddpedestals.eu

DDP Base 02 technical sheet 04

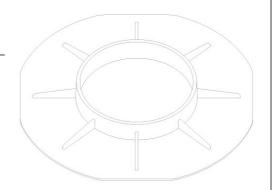
revised 2013-08-01

DDP Base 02

The lower base in DD Pedestal System. Each DDP Base is being set on the construction base.



DDP Base 01 - technical dimensions [mm]		
no.	name	dim. [mm]
Α	height	32
В	base plate diameter	168
С	internal diameter	82
-	material thickness	2



General Comment to all DD Pedestals technical sheets:

- 1. All assembly must be done in accordance with

- 1. All assembly must be done in accordance with DD Pedestals product specifications.
 2. Presented drawings are not to scale.
 3. For further information and support please visit www.ddpedesals.eu or send message to service@ddpedestals.eu
 4. Manufacturer register the right to amend product changes aimed for its improvement without pre information.

#04 - DDP Base 02 technical sheet



www.ddpedestals.eu contact@ddpedestals.eu

DDP Base 03 technical sheet

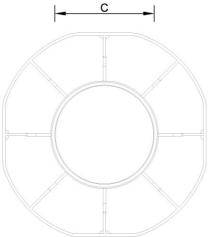
The middle base in DD Pedestal System. Each DDP Base is being set on the

revised 2013-08-01



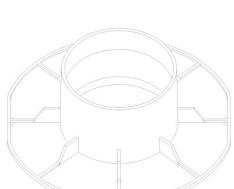
DDP Base 03

construction base.





DDP Base 01 - technical dimensions [mm]			
no.	name	dim. [mm]	
Α	height	57	
В	base plate diameter	168	
С	internal diameter	82	
-	material thickness	2	



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#05 - DDP Base 03 technical sheet



DD Pedestals® - Proffesional Support System

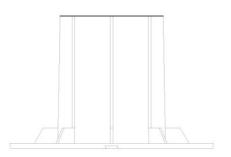
by DD Group International

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DDP Base 04 technical sheet

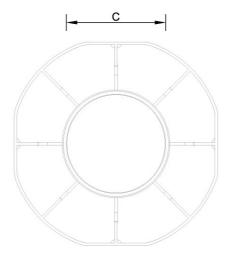
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DDP Base 04

The highest base in DD Pedestal System. Each DDP Base is being set on the construction base.



7	$\overline{\Gamma}$
В	

DDP Base 01 - technical dimensions [mm]		
no.	name	dim. [mm]
Α	height	107
В	base plate diameter	168
С	internal diameter	82
	material thickness	2

General Comment to all DD Pedestals technical sheets:

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 2. Presented drawings are not to scale.
 3. For further information and support please visit www.ddpedesals.eu or send message to service@ddpedestals.eu
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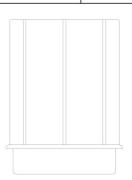
#06 - DDP Base 04 technical sheet

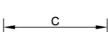


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DDP distance sleeve technical sheet

revised 2013-08-01





DDP Base 01

Distance sleeve for expanding height of the pedestal.







DDP Base 01 - technical dimensions [mm]			
no.	name	dim. [mm]	
Α	height	100	
В	base plate diameter	168	
С	internal diameter	82	
	material thickness	2	

General Comment to all DD Pedestals technical sheets:

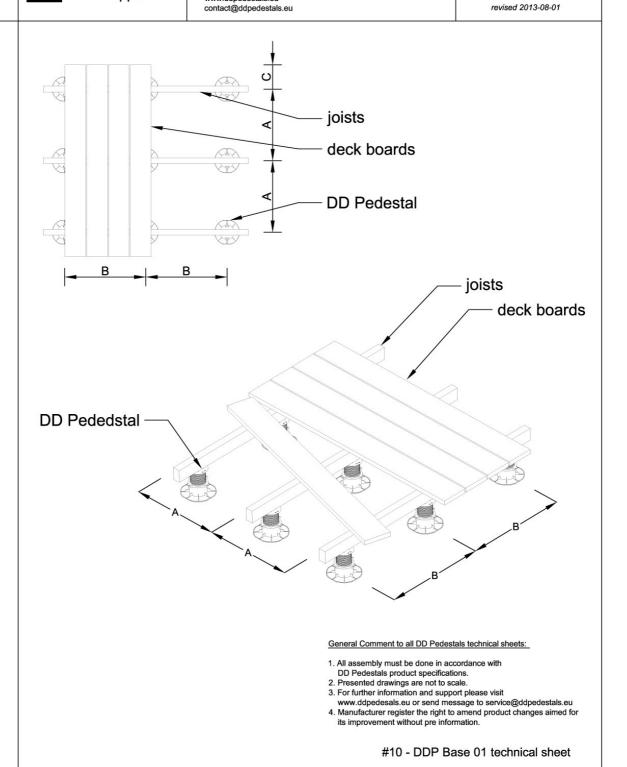
- All assembly must be done in accordance with DD Pedestals product specifications.
 Presented drawings are not to scale.
 For further information and support please visit www.ddpedesals.eu or send message to service@ddpedestals.eu
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#07 - Distance Sleeve technical sheet



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WOOD terrace technical sheet

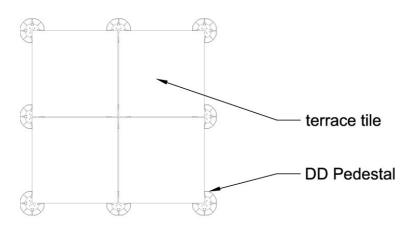


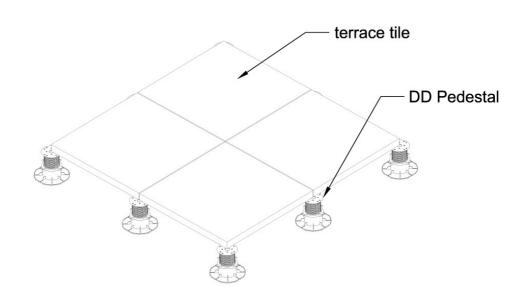


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Stone tiles technical sheet

revised 2013-08-01





General Comment to all DD Pedestals technical sheets:

- 1. All assembly must be done in accordance with
- DD Pedestals product specifications.

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 4. Manufacturer register the right to amend product changes aimed for
- its improvement without pre information.

#11 - DDP Base 01 technical sheet