



INSTRUCTIONS MANUAL FOR VIBRATORY HOPPERS TYPE - PD5, PD 40, PD80, PD 150.



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MANUFACTURING NO.

1. INTENDED USE

Vibratory hopper is intended for linear transfer of not orientated components by vibration. Its major aim of use is refilling bowl feeder. It is used as storage of not orientated components.

Vibratory hopper works in common ambient conditions, with temperature from +5 to +35°C

2. WARNINGS

2.1 Do not connect the feeder to the power supply network without proper supplying controller provided for this purpose.

2.2 Do not pour any liquid on the feeder during its cleaning.

2.3 Any maintenance and repair operations should be done only if the power supply plug is taken out from the power supply network socket.

2.4 Do not operate the feeder before it is set on rubber shock absorbers (12) located in the base.

2.5 Do not use feeders in any explosive atmosphere.

2.6 Do not use feeder without electromagnet cover (9).

2.7 The weight of components load can't exceed the maximum (table 1).

2.8 The electromagnetic field! People with fitted cardiac pacemakers have to keep distance of 0,5 meters from the vibratory feeder.

3. DESIGN DESCRIPTION

Vibratory hopper consist of following parts:

Feeder is equipped in set of flat springs (made from steel or plastic) and electromagnet with regulated gap.

Volume of hopper depends on type (table 1).

Vibratory hopper is equipped with feeding track.

Equipping of vibratory hopper with mounting plate depends on hopper type (table 1).

Electronic controllers with step-less feed speed control are supplied in various versions depending on individual arrangements made with the customer.

There is additional manual for controllers.

Feeder is equipped in 4 pieces of absorber.

Feeder need to be mount to device by holes into bottom of absorber (PD5, PD40) or by holes into mounting plate (PD80, PD150).

4. TECHNICAL DATA

For standard feeder technical parameters see table no. 1.

5. FEEDER STARTING

Feeder is supplied with controller.

To start feeder please insert controller plug into electrical socket 230V/50Hz.

Press the start button and set transmission performance by knob.

6. CONTROLLERS

Supply the feeders only from controllers intended for cooperation with vibratory feeders.

Preferred controllers are delivered with the feeder.

The controllers delivered may possess extensive functional options described in the manufacturer's instructions.

The frequency of supply vibrating feeder must be adjust to frequency of mechanical vibrations for each feeder type (see tab.1).

7. MAINTANCE

Vibratory hopper hasn't got any lubrication points and doesn't require any special maintaining operations during exploitation.

In the event of occurrence of noise exceeding 70dB (without any elements in the hopper) or reduction of speed, please check:

- Size of „S” electromagnet operating gap (for recommended gap to be applied in given feeder type – see Table 1 Technical Data).
- Flat springs (11) fixing.
- Flat springs (11) condition – replace any broken spring.
- Electromagnet cover fixing.
- If feeder is blocked by direct touch with any other device.
- Fixing of hopper and feeding track to feeder drive (for PD5 and PD40).
- Fixing of hopper to mounting plate (for PD80 and PD150).
- Check hopper and track condition.

Electromagnet covers (9) must be removed to check size of operating gap “S”, fixing of flat springs and their condition.

- In the case of completely lack of vibration, it is necessary to change electromagnet or controller.

8. STORAGE AND TRANSPORT

Transport the feeder on board any covered means of transport.

Linear feeder please transport packed in box.

Keep the feeders in closed rooms to protected them against influence of weather conditions.

Ambient temperature: +5 to +35°C.

9. LIST OF DRAWINGS AND DOCUMENTS ATTACHED

- **Drawing 1** – vibratory hopper PD 40.
- **Drawing 2** – vibratory hopper PD 150.
- **Drawing 3** – vibratory drive PL 3 to PD feeders.
- **Drawing 4** – vibratory hopper PD 5.
- **Drawing 5** – vibratory drive PL2 to PD feeders.
- **Table 1** – standard technical parameters.
- **Table 2** – list of important parts.
- Wiring diagram.
- EC Declaration of Conformity.

10. SERVICE PROVIDED BY

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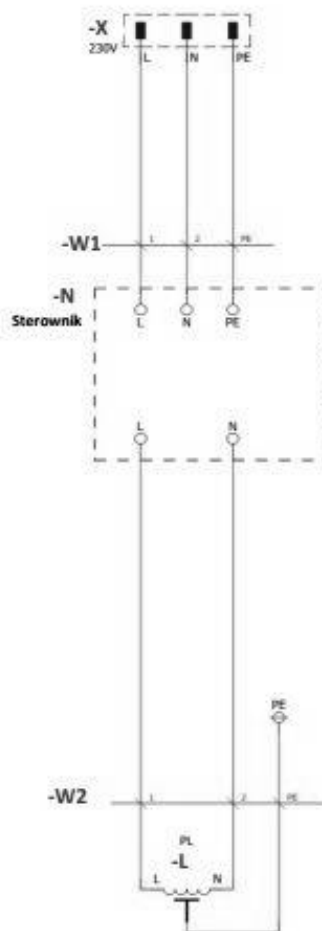
TAB.1. STANDARD TECHNICAL PARAMETERS.

Characteristics	Unit	PD 5	PD20/PD 40	PD80	PD 150
Mass	kg	7	30/33	70	80
Hopper volume	dm ³	5	20/40	80	150
Length of feeding track	mm	380	550	600	650
Maximum load	kg	15	60	150	150
Power supply	V/Hz	230/50	230/50	230/50	230/50
Absorbers (46°Sh)	mm	B15x15	B30x20	B30x20	B30x20
Flat springs	≠ mm	1,5	3	3	3
Mounting plate	-	NO	NO	YES	YES
Mounting	-	Holes into absorbers	Holes into absorbers	Holes into mounting plate	Holes into mounting plate
Mounting to table	-	4 x M5	4 x M8	4xØ12,5	4xØ12,5
Operating gap S	mm	0,7	0,8	0,8	0,8
Bolts to regulate operating gap	-	2 x M5	2 x M8	2 x M8	2 x M8
Power max.	VA	25	90	90	90
Drive type	-	PL2	PL3	PL3	PL3
Vibrating frequency	1/min	6000	3000	3000	3000

TAB.2. IMPORTANT PARTS LIST.

Drawing pos.	Name	Qty.
1.	Hopper	1
2.	Linear drive PL3/PL2	1
3.	Feeding track	1
4.	Stop plate	1
5.	Mounting plate	1
6.	Bracket	2
7.	Lower support	1
8.	Upper support	1
9.	Cover	2
10.	Electromagnet	1
11.	Flat spring	6
12.	Absorber	4
13.	Bolt to regulate	2
14.	Weight	1

SCHEMAT ELEKTRYCZNY PODŁĄCZENIA PODAJNIKA WIBRACYJNEGO



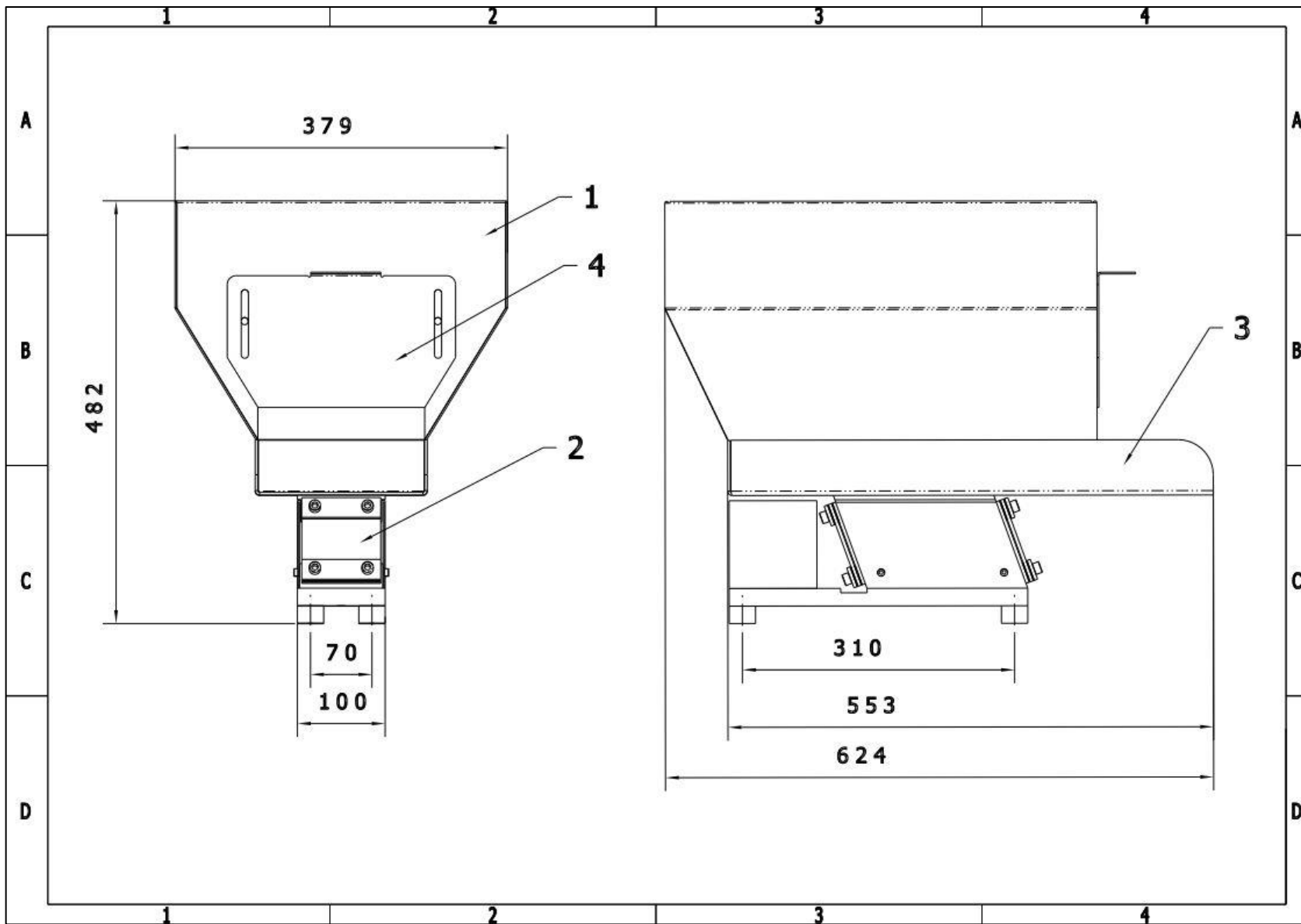
Zastosowane oznaczenia:

-L – elektromagnes

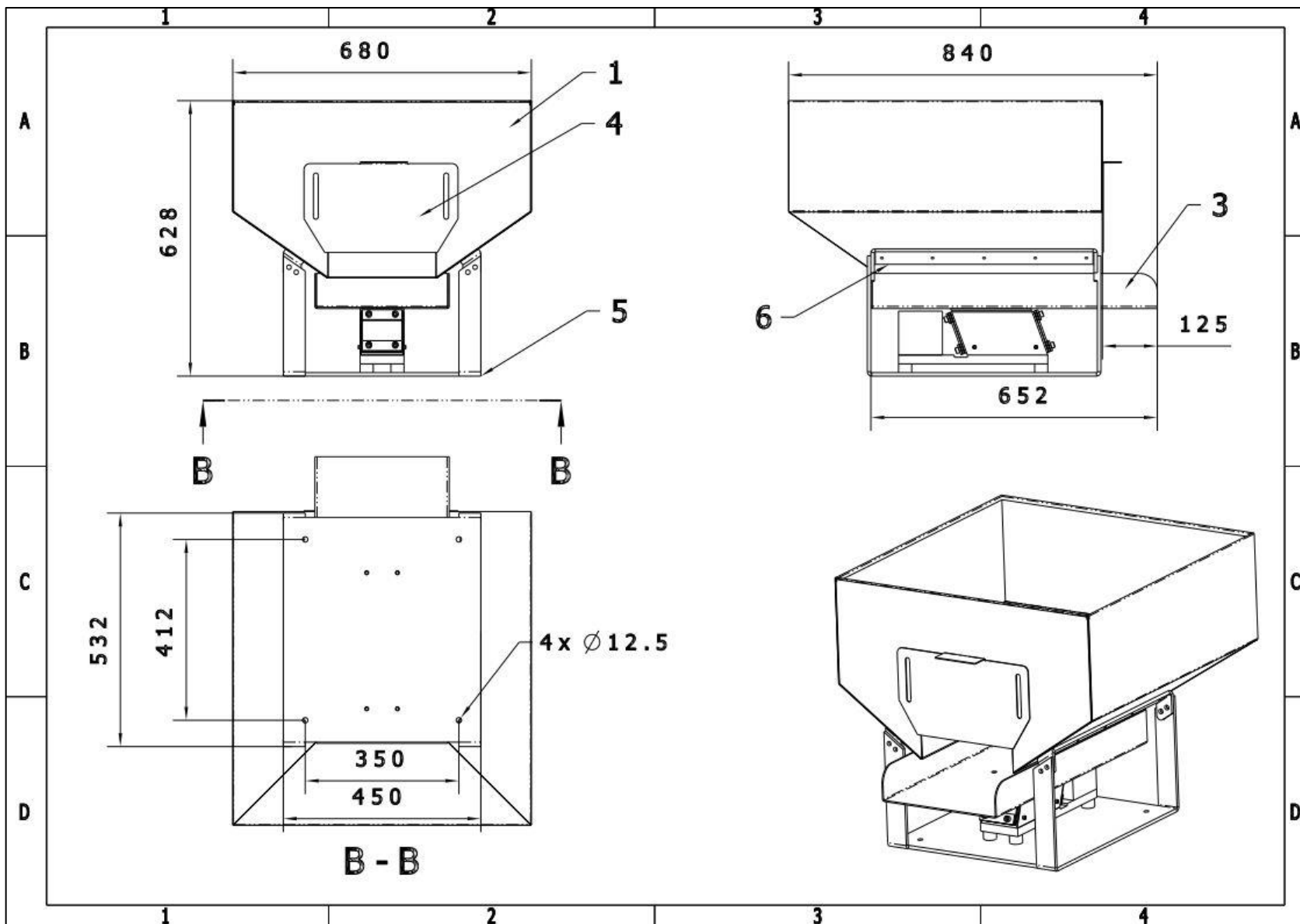
-N – sterownik

-X – wtyczka

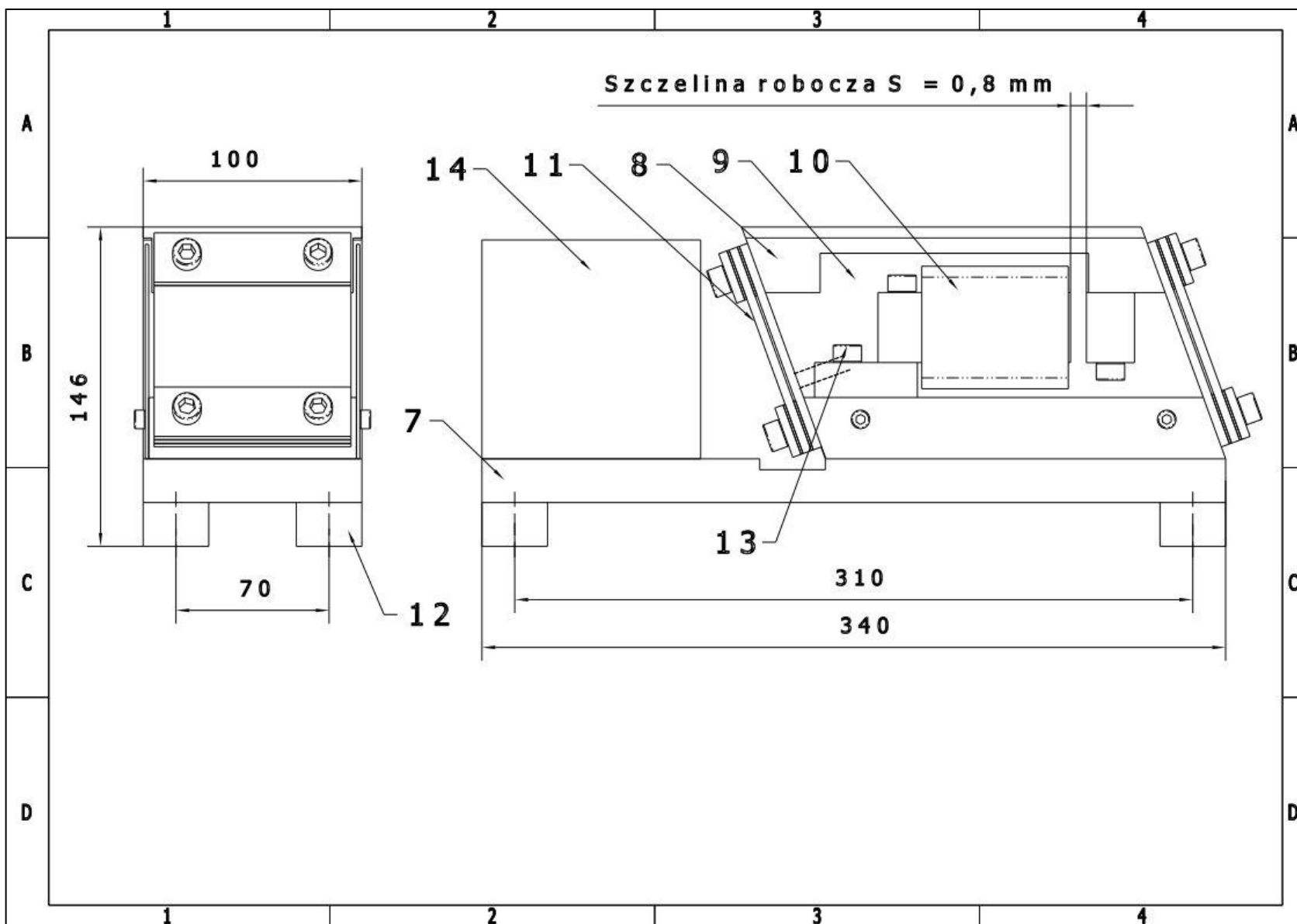
-W1, W2 – przewód



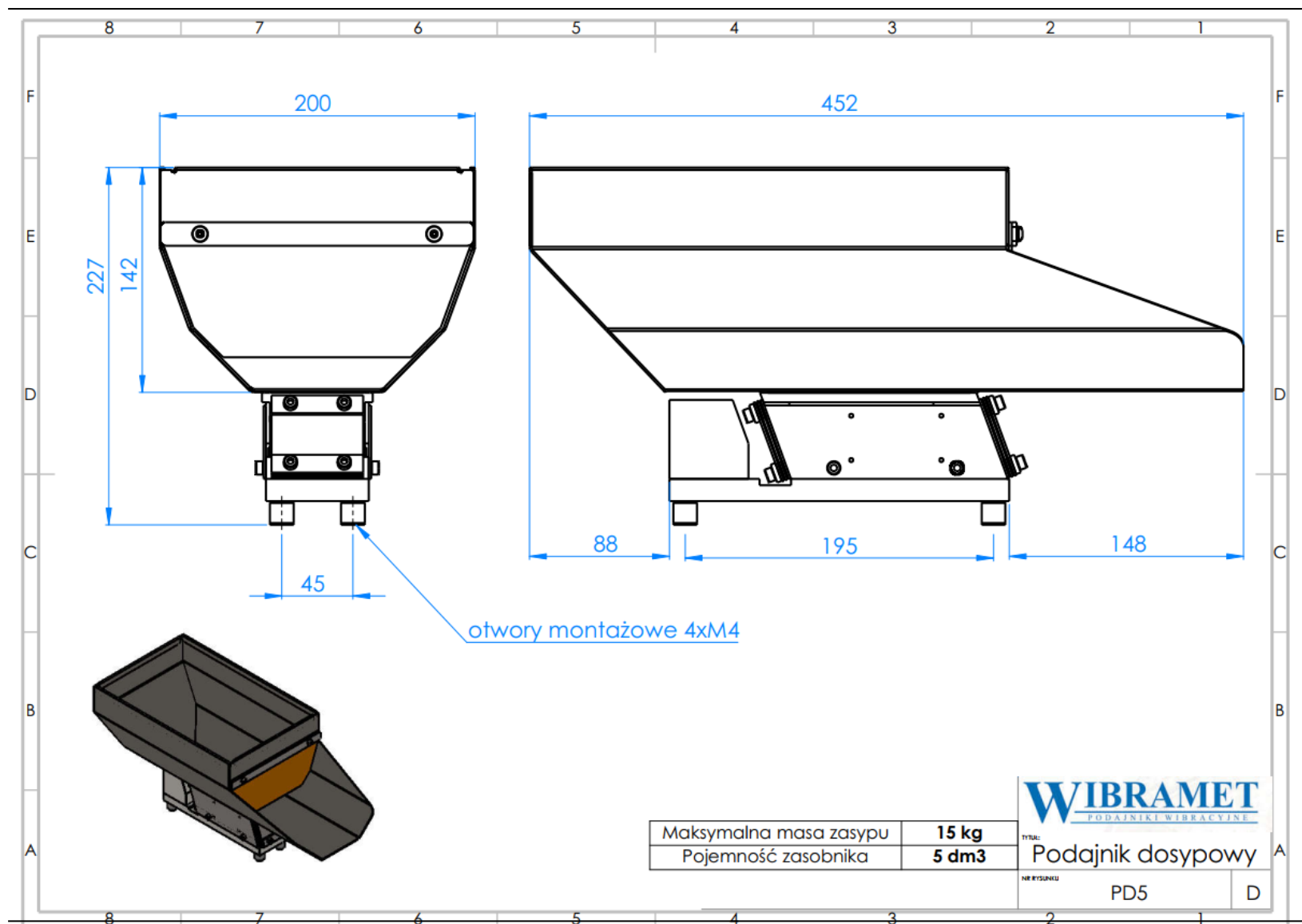
DRAWING 1. VIBRATORY HOPPER PD40.



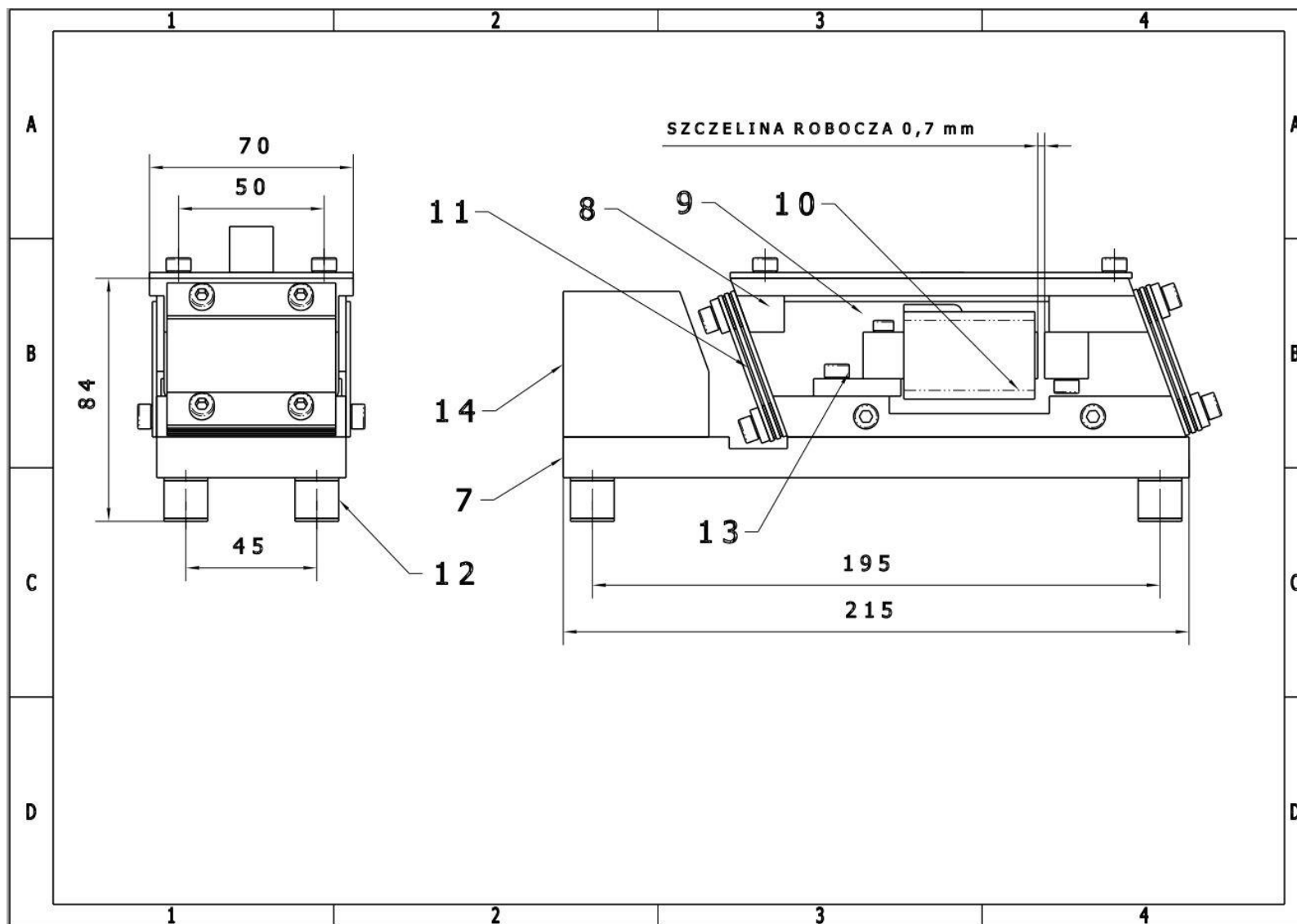
DRAWING 2. VIBRATORY HOPPER PD150.



DRAWING 3. VIBRATORY DRIVE TO PD40, PD80, PD150.



DRAWING 4. VIBRATORY HOPPER PD 5.



DRAWING 5. VIBRATORY DRIVE TO PD5.