



ZAKŁAD BUDOWY MASZYN DOŚWIADCZALNYCH Sp. z o.o.
41-708 Ruda Śląska, ul. Pawła 6

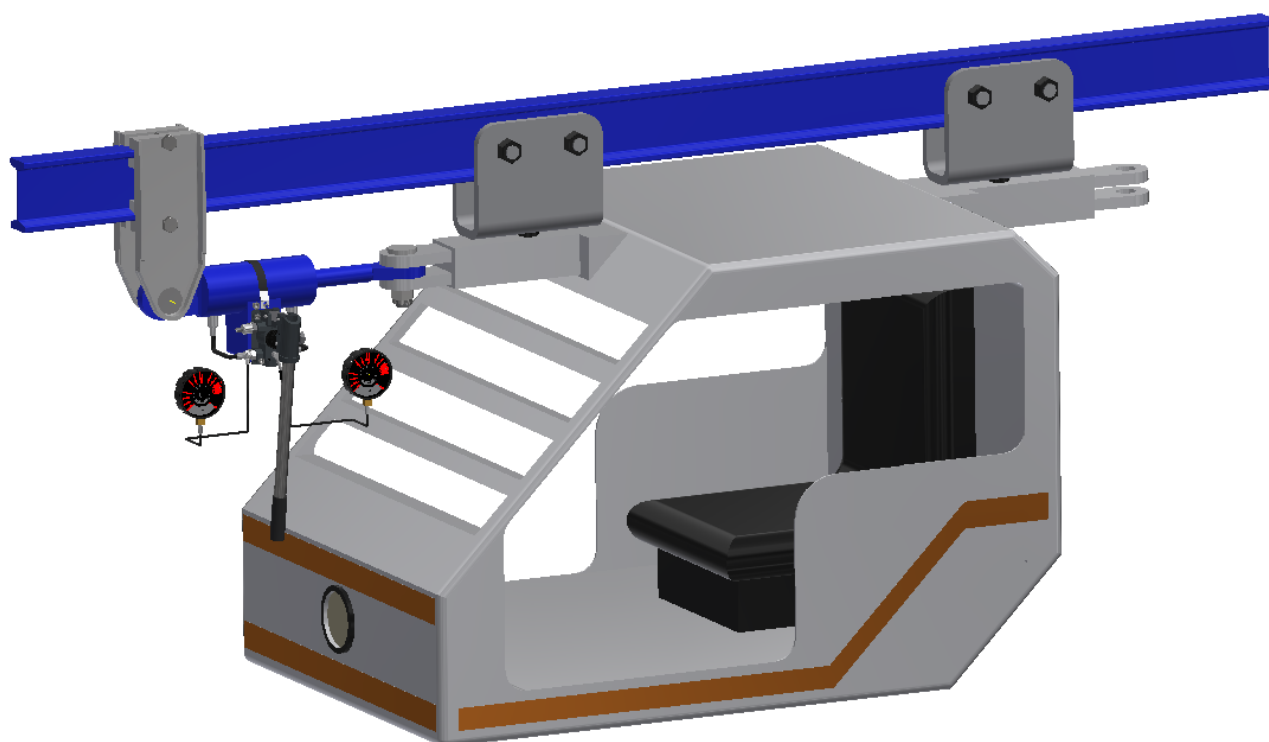
Specification Sheet
Instruments for measuring braking force

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Specification Sheet

Instruments for measuring braking force

Type Z-kN15, Z-kN18, Z-kN24, Type Z-kN15/z, Z-kN18/z, Z-kN24/z



Manufacturer:

Zakład Budowy Maszyn Doświadczalnych [*Experimental Machinery Building Plant*]
ZBMD Sp. z o.o.
41-708 Ruda Śląska
Ul. Pawła 6



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1 General description

Instruments of Z-kN series are used for controlling static braking force of all types of brake trolleys, diesel, electric and pneumatic overhead locomotives as well as shunting tractors.

The instrument may be used in underground mines in methane fields, in excavations categorised as class "a", "b" or "c" methane explosion hazard and class A or B coal dust explosion hazard.

Any other use of the static braking force monitoring device that goes beyond the use specified above shall be considered as misuse. In this case, the manufacturer shall not be liable for any resulting damage.

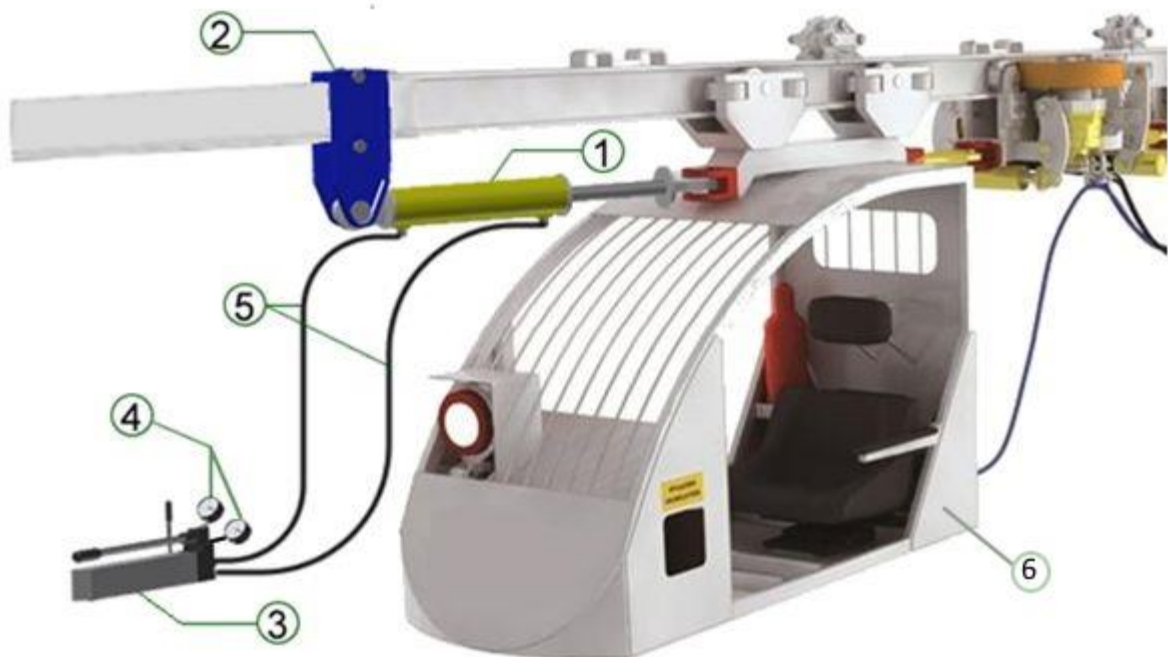
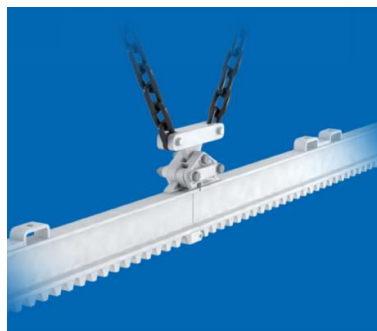


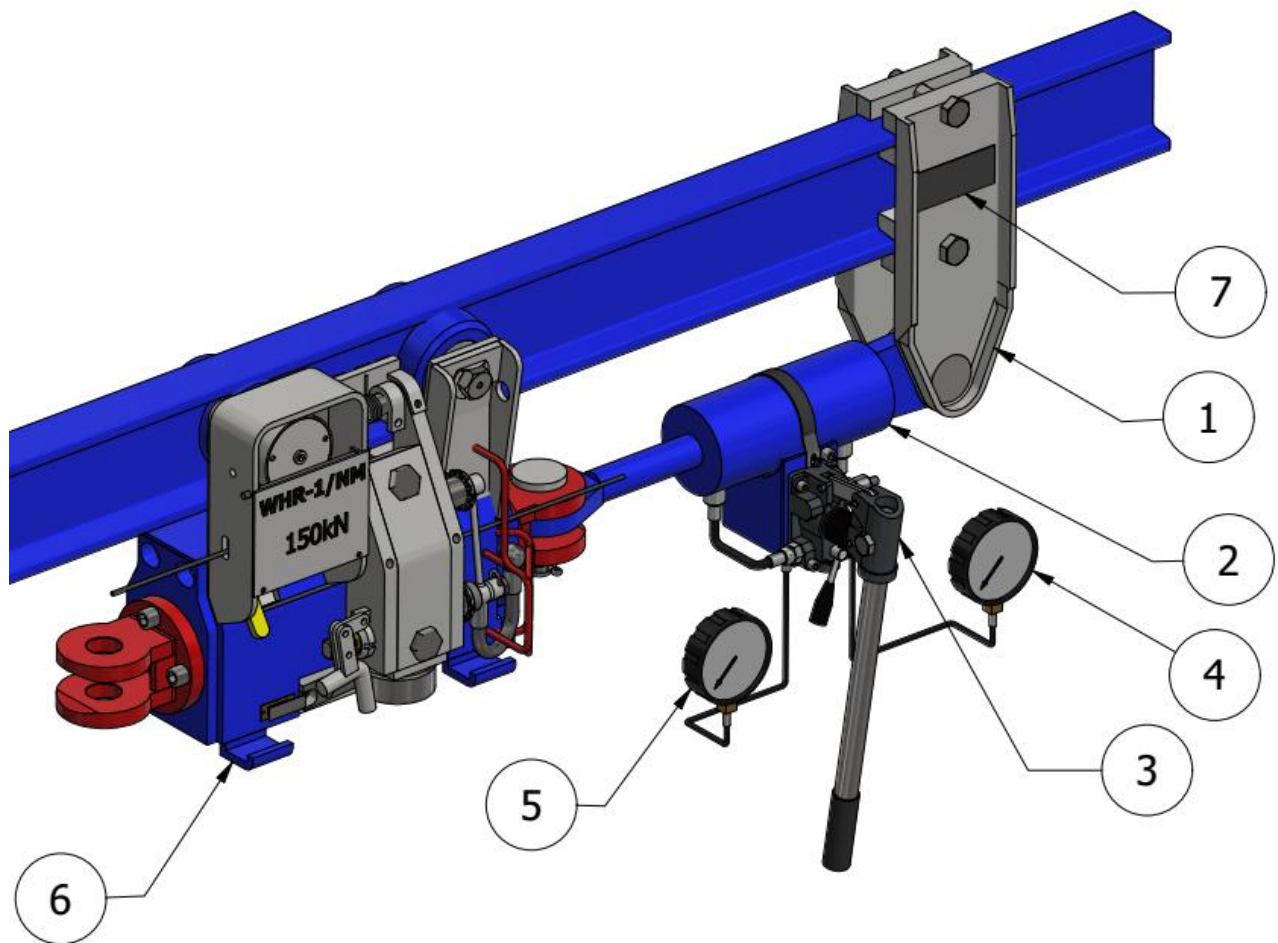
Fig. 1



It is also possible to use the instrument on a toothed rail.

2 Instrument components (fig.no.1)

1. hydraulic cylinder for pulling and braking force.
2. holder for straight or rack rail.
3. hydraulic hand pump.
4. pressure gauges calibrated in kN.
5. connection wires.
6. example of a device during a test (overhead trolley)



3 Design of the Z-kN/z instrument Fig. 2

1. Holder mounted on rail,
2. Actuator,
3. Cylinder-mounted pump
4. Pressure gauge scale in kN
5. Pressure gauge scale in kN
6. Example of a device fastened to the instrument (brake trolley)
7. Rating plate.

4 Technical data

No	Specification	Type	Size
1	Maximum pulling and pushing force	Z-kN 15	150kN at 25MPa working pressure
		Z-kN 18	180kN at 36MPa working pressure
		Z-kN 24	240kN at 48MPa working pressure
2	Weight of pump ZPH70	kg	9
3	Weight of pump ZPH40	kg	7
4	Own weight of handle and actuator	kg	35,8
5	Pump capacity ZPH70	cm/cycle ³	1,3-2,3
6	Pump capacity ZPH40	cm/cycle ³	2,5
7	Hydraulic fluid, tank capacity	HL-40/68	2,20 l.
8	Connection socket pin diameter	mm	40
9	Rail profile	I	155 according to DIN

5 Packaging





5 Scope of delivery

Delivery includes:

- complete Z-kN instrument of the type in question,
- user's manual,
- warranty card,
- a declaration that the product meets the technical requirements.

6 Product ordering

The braking force measuring instrument can be ordered from:

Zakład Budowy Maszyn Doświadczalnych Sp. z o.o. ul.

Pawła 6; 41-708 Ruda Śląska

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