

CFA METHOD DRILLING AND FORMING OF CONCRETE PILES

THROUGH-HOLE DRILLING HEADS TYPE OWK-4600, OWK-3600, OWK-2400

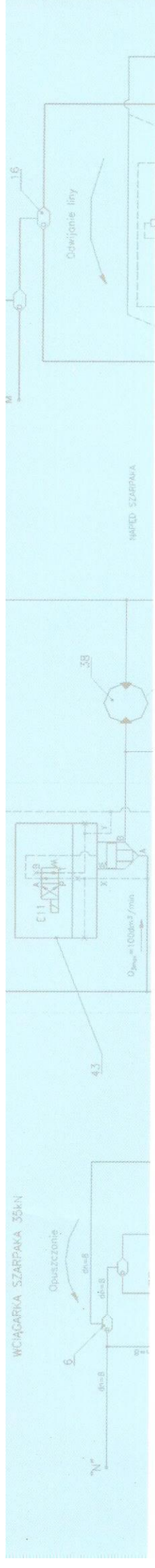
OWK type CFA rotating excavator heads manufactured by BIPROMASZ



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OWK BIPROMASZ type rotating heads are strong and compact drive units for professional drilling and piling activities. As the heads have been introduced for operation since 2007, they are recognised by their users as reliable equipment for heavy duties. They are distinguished not only by their high torque, efficiency, stable bearing and failure-free operation. The advantage of OWK BIPROMASZ type rotating drilling heads is about providing the said machines with:

- a through spindle and rotary joint – with passage typical for pumping concrete, i.e. DN100 and DN125;
- a possibility to suspend them on the excavator arm or to run them along the drilling mast guide.

Depending on the parameters of relevant excavators, the heads can be used to drill holes of a diameter up to 1000 mm to the maximum depth of 17 m. The most frequently used configuration is that of an OWK head suspended on a mobile wheel excavator with a 6-m long CFA BIPROMASZ auger of 500, 600 diameter or on a caterpillar excavator with a 8-m long auger of 800 mm diameter. With this method, piles are made faster and cheaper than with classic piling machines. More importantly, they can be applied in areas not accessed by such piling machines, since the axis of a hole drilled by OWK type heads is located at a great distance from the carrier chassis.

The most popular OWK type units are as follows:

- **OWK-4600** – torque 46kNm – rotary joint, DN125 passage
- **OWK-3600** – 36kNm torque – rotary joint, DN125 passage
- **OWK-2400** – torque 24kNm – rotary joint, DN100 passage

Examples of use:

I. **Provision of foundations on concrete piles** formed with the CFA method – the construction site of the Netto supermarket in Gdańsk and two Bipromasz machines:



An OWK-4600 type CFA excavator rotating head suspended from a Hyundai wheel excavator operates on an unstable embankment, where it is required to reinforce and prepare the ground in order to provide access for a caterpillar piling machine – a WSC-81 Bipromasz excavator piling machine in the background.

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II. Provision of concrete piles in the CFA technology – an OWK-3600 type CFA excavator rotating head – piles are used as foundations of noise barriers



An OWK-3600 type CFA excavator rotating head suspended from a Volvo EW180 wheel excavator – road works on a national road near Słupsk



An OWK-3600 type CFA excavator rotating head suspended from a Volvo EW180 wheel excavator – ul. Bukowska, Poznań