

WORKING FACE MANIPULATOR PM 15

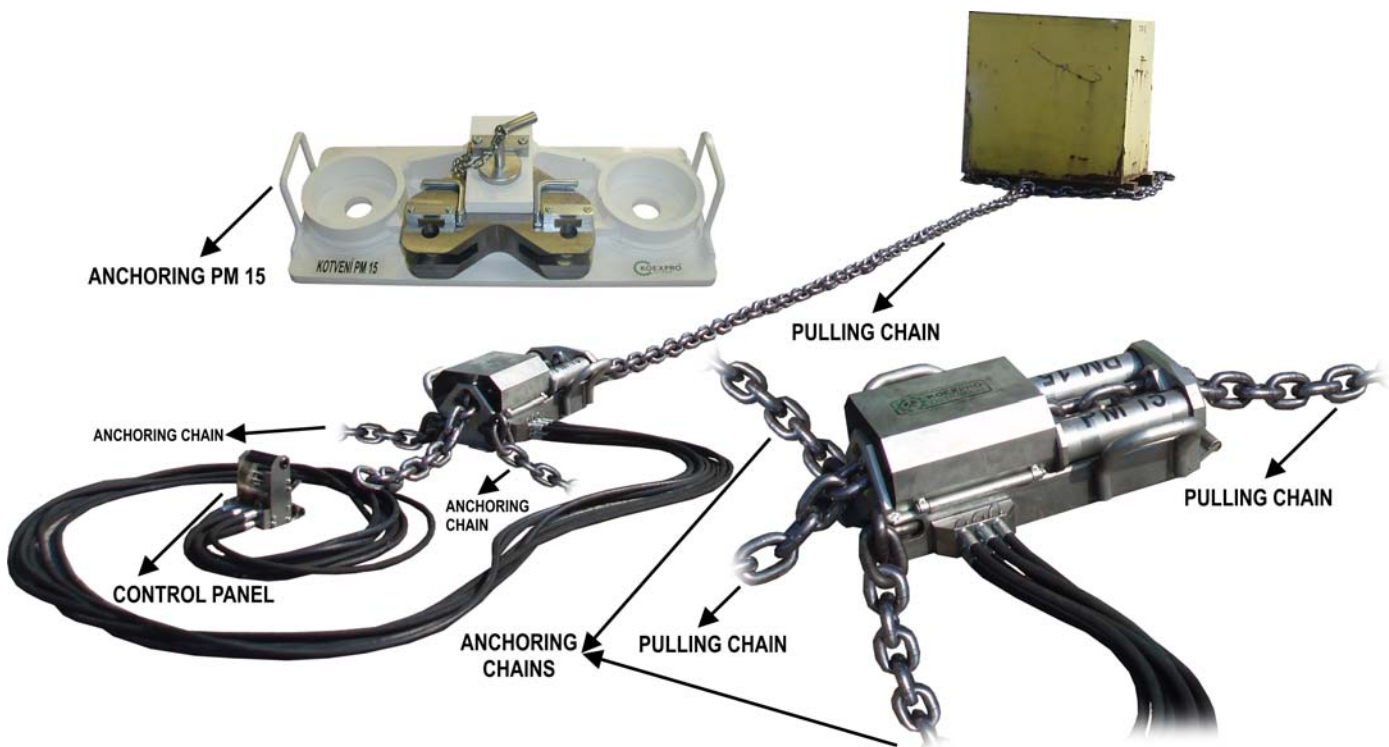
Use and description:

Working face manipulator **PM 15** (hereinafter only manipulator) is a towing equipment intended for handling with heavy loads – shifting, slight turning, positioning etc. Among others it is possible to use it for handling operation in mine working faces. The drive consists of two motion hydraulic cylinders, water emulsion HFA or hydraulic oil with viscosity $46 \text{ mm}^2 \cdot \text{s}^{-1}$ at 40°C are the working medium.

The manipulator is anchored in two ways:

- with anchoring chains to the load to be shifted. The chain is fastened to the “fixed point” designed to withstand the towing force of 150 kN. In this way the manipulator is moving together with the load to this fixed point. This system is ensured by the customer on conditions that the safety regulations are met.
- with anchoring chains fastened to the anchoring equipment PM 15. This equipment is ensured through two bolts installed in the floor, which are pressed with two hydraulic props, e.g. SH with min. loading capacity 200 kN. The bolts length must be in the floor so that the base plate is in direct contact with the floor. The load is towed towards the manipulator.

The manipulator is controlled by the operator through the control panel located on the safe place. The manipulator is delivered in two parts- the manipulator itself and the control panel. These parts are connected with hoses of necessary length ca $3 \div 5$ m. Based on the customer’s requirement it is possible to deliver the anchoring equipment PM 15.



**Characteristics:**

Type		PM 15	PM 15
Working medium		emulsion HFA with min. 1.5% concentration	hydraulic liquid having a viscosity of $46 \text{ mm}^2 \cdot \text{s}^{-1}$ at 40°C
Nominal towing force	kN	150	75
Towing speed max.	m/min	6	4
Medium operation pressure	MPa	32	16
Moving step depending on the chain pitch	mm	132	132
Working cylinders stroke	mm	142	142
Chain type		DIN 5684-8	DIN 5684-8
Hose connection	mm	DN10 STECK	DN 10 STECK
Dimensions	mm	ca 220x365x688	ca 220x364x680
Weight	kg	ca 65.0	ca 60.0

Type marking:

PM 15
 PM WORKING FACE MANIPULATOR
 15 1/10 of the nominal towing force in kN

The product has been designed and constructed as the equipment group I (mine), category M2 according to the Directive 94/9/EC-ATEX of the European Parliament and of the Council and meets the requirements for using in areas with "hazardous atmospheric conditions 2" according to EN 1127-2+A1 on condition that all national regulations of the employer's country are fulfilled.

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