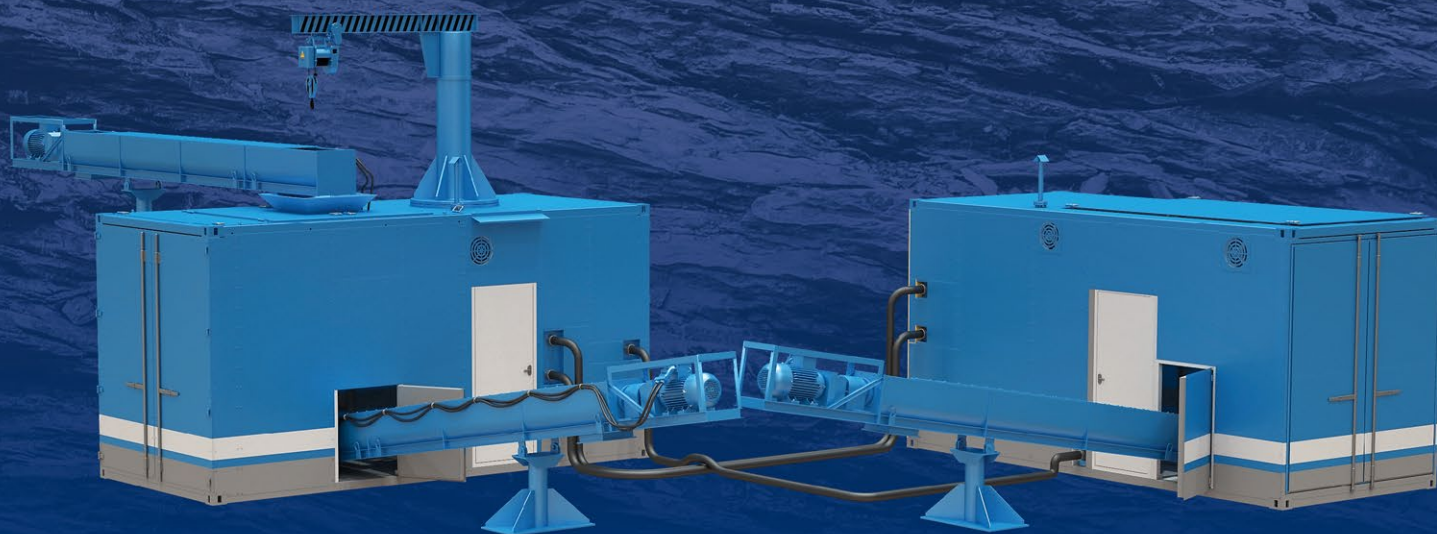




## NEFTEKAMSK MACHINERY PLANT OF SPECIAL EQUIPMENT



**MK 1200-X-XX-X-XXXX-XX**

- PRODUCT MODIFICATION
- CLIMATIC VERSION ACCORDING TO GOST 15150-69
- AVAILABILITY OF ADDITIONAL DRILLING EQUIPMENT  
(C – centrifuge, D – degasser, A - absent)
- MAXIMUM PRODUCTIVITY OF VERTICAL CENTRIFUGE
- DESIGN TYPE  
(container, modular, unit)
- BASIC DESIGNATION OF PRODUCT

### MOBILE CUTTINGS DRYER

## MK 1200-K-40-Ts-KhL1-0

#### DESIGNATION

The mobile cuttings dryer is a set of equipment designed to separate cuttings into solid (dry cuttings) and liquid (centrifuge centrate) phases. The complex includes two blocks of the type of a 20-foot container, made in the Arctic version, for the possibility of operating the equipment in the regions of the Far North.

#### THE PRINCIPLE OF OPERATION OF THE EQUIPMENT

The main element of the mobile cuttings dryer (hereinafter - MCD) is a vertical sludge dryer unit located in the first container (hereinafter - the VD unit), for the subsequent treatment of the centrifuge

centrate, a horizontal centrifuge unit is used located in the second container (hereinafter - the HC unit). The units are interconnected by technological lines. Dry sludge is removed using screw conveyors of various lengths (the length of the working part of the conveyor is agreed with the Customer).

#### DESCRIPTION OF THE OPERATION OF THE VD UNIT

The VD unit is designed according to the type of a 20-foot anti-vandal container with insulated walls of the "sandwich panel" type, at least 100 mm thick.

The maximum overall dimensions (L x W x H) do not exceed 6058 x 2540 x 3080 mm, which allows the equipment to be transported on federal roads without restrictions. For the convenience of dismantling the equipment, in addition

# MK 1200-K-40-Ts-KhL1-O

to the swing gates on the end sides, the unit also has a removable roof section (Appendix 2).

After separation of the liquid and solid phases by a vertical dryer, centrate enters the receiving tank. To prevent centrate freezing, an explosion-proof electric heating element is placed in the tank. The tank is equipped with a paddle mixer, a cleaning hatch and a maintenance hatch. To collect leaks, the floor is sloped towards the eco-pallet..

## Hydraulic piping of the VD unit allows to:

- pump centrate from the accumulative tank by screw pumps to the HC unit to a horizontal centrifuge;
- supply centrate to the inlet of the vertical dryer to dilute the incoming sludge.

The piping of screw pumps ensures their interchangeability in case of failure of one of them. The piping between the units is made in the form of flexible sleeves using CamLock type quick-detachable connections.

To dismantle the screen panel of the vertical dryer, the hinged doors equipped with gas lifts are provided in the upper part of the unit. The screen panel is lifted using a cantilever-slewing crane with a lifting capacity of 1 t.

## DESCRIPTION OF THE OPERATION OF THE HC UNIT

The HC unit is designed in the form of a 20-foot anti-vandal container with insulated walls of the "sandwich panel" type, at least 100 mm thick.

The maximum overall dimensions (L x W x H) do not exceed 6058 x 2540 x 3050 mm, which allows the equipment to be transported on federal roads without restrictions.

Depending on the need, the design of the unit allows to place screw conveyors on two opposite sides of the block. For the convenience of dismantling of the equipment, in addition to the swing gates on the end sides, the unit also has a removable roof section (Appendix 3).

The centrate from the HC unit enters a horizontal centrifuge, which removes sludge with low specific gravity from the solution. The purified solution enters the storage tank with a volume of 2.5 m<sup>3</sup>. The tank is equipped with a paddle mixer, a cleaning hatch and a maintenance hatch. To prevent centrate freezing, an explosion-proof electric heating element is placed in the tank. To collect leaks, the floor is sloped towards the eco-pallet.

The hydraulic piping of the HC unit allows to simultaneously pump the solution:

- from the storage tank with screw pumps to the tank of the vertical dryer in the VD unit for diluting of the centrate;
- into the line for flushing the annular space of the vertical dryer;
- to the capacitive park of the drilling rig.

The piping of screw pumps ensures their interchangeability in case of failure of one of them.

## TECHNICAL SPECIFICATIONS

Parameter		Value
Overall sizes of the unit (LxWxH)	m	9 x 9 x 5
Unit overall dimensions in working condition	m	20 x 9.5 x 5.7
Total power consumption of the VD unit	kW	max, 130
Total power consumption of the HC unit	kW	max, 95
Power consumption	V, Hz	380 V, 50 Hz
Dryer performance	t/h	20-30
Horizontal centrifuge performance	m <sup>3</sup> /h	30-45
Screw pump performance	m <sup>3</sup> /h	4.0 - 40
Total weight of the VD unit	t	max, 14
Total mass of HC unit	t	no more than 13

In connection with continuous centrifuge improvement work in order to increase reliability and performance, changes may be made to the design that are not stated in this description.



**Manufacturer: NKMZ-ST, Ltd.**

19 Magistralnaya St., Neftekamsk, Republic of Bashkortostan, 452683, Russia  
Tel. +7 (34783) 2-02-02, 2-00-13, 7-02-39 | www.nkmzst.ru, st@nkmz.ru