

Technical characteristics

Sinking equipment. Mine winders with bicylindroconical drums.

Mine winders with a single bicylindroconical split drums are designed for single-layer rope winding on the double-skip and double-cage hoists as well as on counterweight-fitted single-vessel hoists used at the deep mines.

A distinctive feature of these machines is that the bicylindroconical shape of the drum allows to balance the hoist system (to eliminate or reduce the effect of the head rope weight) without using the balancing rope. A bottom rope secured on the wedged part of the drum may be wound only up to the drum slit, i.e., up to the rearrangeable part of the drum. A top rope attached to the rearrangeable part of the drum passes through the drum slit.

Machines may be provided either with the right-hand or left-hand drives. However, their design does not differ (the left part of the drum is wedged, the right is rearrangeable one) but in both cases the right-hand rope shall be the top one, and the left-hand rope shall be the bottom one. The winder shall be installed towards the head frame pulleys so that the axis of top rope pulley plane of rotation is offset 100 to 150 mm from the drum slit plane towards the wedged part of the drum thus providing normal rope passing through the slit from the rearrangeable part of the drum to the wedged one.

The wedged part of the drum (comprising of a small-diameter cylinder, a cone and a large-diameter cylinder) is rigidly connected to the tube shaft while the rearrangeable part (made up of the small-diameter cylinder and the cone) is capable of relative angular displacement.

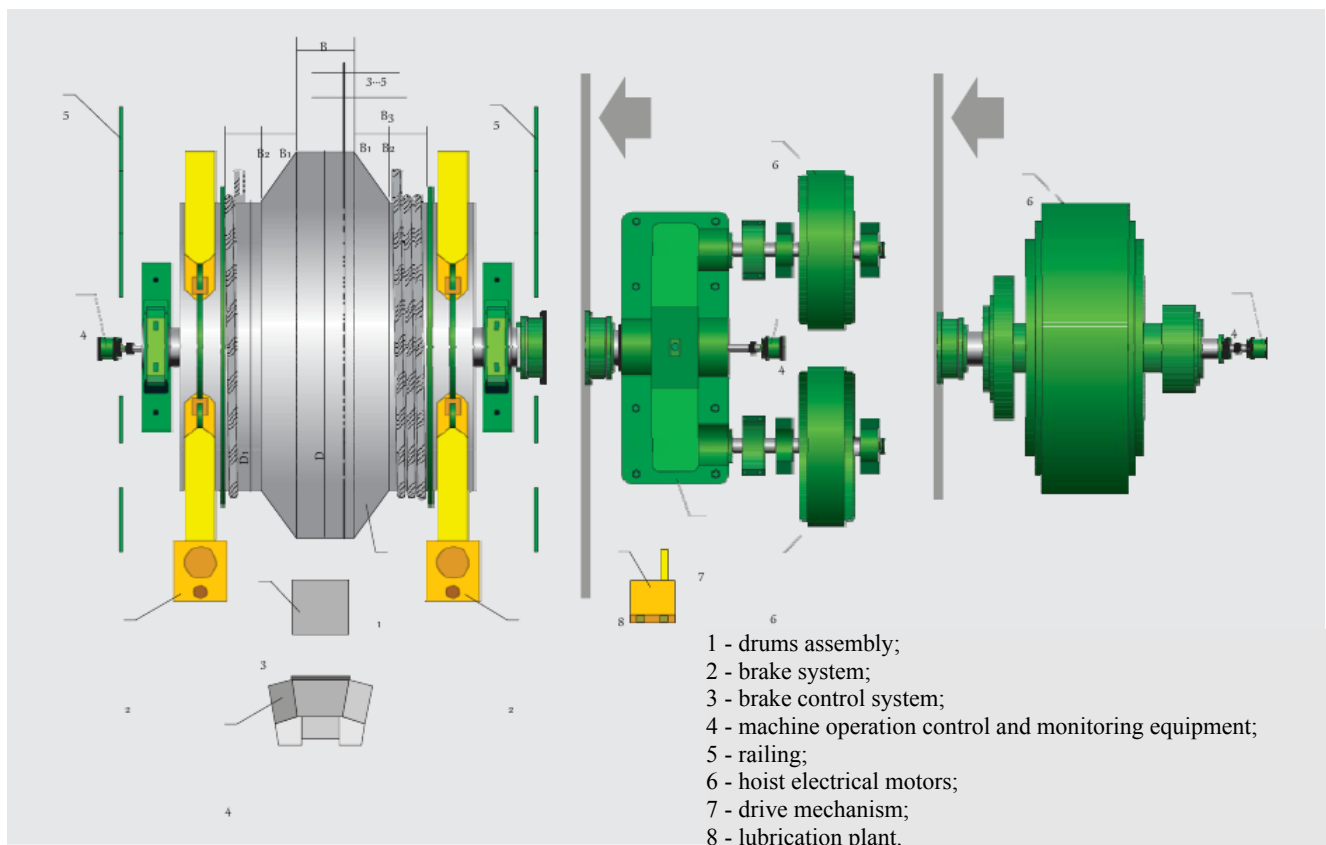
The rearrangeable part of the drum is provided on the tube shaft being carried by the roller support (roller bearings). It may be secured towards the wedged part of the drum through the tooth-type spring-loaded air-operated uncoupling device.

Rope length may be set by rearranging the drum – by rotating its wedged part regarding the rearrangeable part of the drum being braked.

When using double-vessel hoists, one or more adjoining levels may be concurrently serviced. In this case a distance between the levels shall not exceed the rope operating length on the rearrangeable part of the drum.

A single-vessel counterweight-fitted hoist permits to service several levels without limiting a distance there between.

The БЦК type mine winders are provided with the radial-block brakes.



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MINE WINDERS WITH BICYLINDROCONICAL SPLIT DRUMS AND REDUCTION DRIVES

Technical characteristics

Type of mine winder	D, mm	D1, mm	B, mm	B1, mm	B2, mm	B3, mm	n of rope layers	P _{ст} , kN no more than	P, kN no more than	V, m/s no more than	Weight, t
БЦК-9/5x2,5	9000	5000	2500	1000	840	150	1	400	320	16	360

MINE WINDERS WITH BICYLINDROCONICAL SPLIT DRUMS AND GEARLESS DRIVES

Technical characteristics

Type of mine winder	D, mm	D1, mm	B, mm	B1, mm	B2, mm	B3, mm	n of rope layers	P _{ст} , kN no more than	P, kN no more than	V, m/s no more than	Weight, t
БЦК-9/5x2,5	9000	5000	2500	1000	840	150	1	400	320	16	290
БЦК-8/5x2,7	8000	5000	2700	1000	870	100	1	630	480	16	380
БЦК-8/5x2,5	8000	5000	2500	1000	870	100	1	630	480	16	330
БЦК-8/5x2	8000	5000	2000	1000	870	100	1	630	480	16	315
БЦК-8/5x1,7	8000	5000	1700	1000	870	100	1	630	480	16	310

Comments:

Machine weight is tentative. Weight will be rectified when making the contracts for manufacturing and supply of the machines.

We are ready to consider manufacturing of machines of any other sizes (at customers' options).