

WALKING DRAGLINES

 URALMASHPLANT

Features:

Easy erection, maintenance, repairs and overhauls of the equipment, high reliability, enhanced availability, high maneuverability, wide technological possibilities.



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Parameters	ESH 11.75	ESH 20.90	ESH 15.100	ESH 25.90	ESH 24.95	ESH 40.100
Bucket capacity, m ³	11	20	15	25	24	40
Boom length, m	75	90	100	91	95	100
Boom angle, degrees	32	32	32	32	32	32
Suspended load (max.), tf	33	63	47	77	77	125
Cycle duration (cat. I material), s	56	60	60	60	60	60
Dumping height, m	30,6	38,5	45	37,5	39	40
Digging depth, m	38	42,5	46	47	50	47
Dumping radius, m	71,4	83	91,5	85,4	88,8	94,8
Revolving frame rear clearance, m	1,45	1,61	1,61	1,6	1,6	2,44
Base diameter, m	10,8	14,5	14,5	15,3	15,3	18
Specific ground pressure when operating/ in travel, MPa	0.087/0.145	0.105/0.24	0.105/0.24	0.103/0.187	0.105/0.19	0.137/0.2
Shoe size (LxW), m	11.6x1.9	13x2.5	13x2.5	14x2.9	14x2.9	17.2x3.96
Working weight, t	840	1690	1710	1900	1960	3310
Hoist mechanism power, kW	2x500	2x1120	2x1120	2x1120	2x1120	4x1120
Swing mechanism power, kW	2x260	4x250	4x250	4x250	4x250	4x600
Drag mechanism power, kW	2x500	2x1120	2x1120	2x1120	2x1120	4x1120
Propel machinery power, kW	500	2x400	2x400	2x630	2x630	2x630
Main transformer power, kW	1250	2x1600	2x1600	2x1600	2x1600	2x2250
Power supply voltage, kV	6	6	6	6	6	10

These machines are used in open pit mining (coal, shale, ferrous and nonferrous metal ores, gold, raw materials for chemical industry, refractories etc.) being designed for stripping overburden with direct dumping either into the mined-out space or to the pit side. Walking draglines may transport the material over relatively long distances.

When mining rocky material, partial or whole blast-loosening is required.

Walking draglines operate reliably in the temperature range from minus 50° to plus 40° C.

We offer the draglines in 6 standard sizes with bucket capacity of 11...40 m³ and boom length of 75...100 m, including modifications with low specific ground pressure.

The high performance of walking draglines is achieved thanks to the following specific technical features:

- the boom is a triangular three-dimensional construction made of tubular elements. The top dragline boom chord is preliminarily compressed with a force, exceeding the tension caused by the working loads. This increases the fatigue strength of the structure, its reliability and service life;
- the base and revolving frame consist of segments connected by high-strength bolts, thus decreasing erection costs and time;
- the hydraulic walking mechanism provides smooth moving and high maneuverability of the machine. Depending on the model the walking mechanism may be provided with two or four walking shoes;
- the smallest dragline model has a mechanical four-link crank driven walking mechanism with DC electric drive;

- the swinging mechanism may be equipped with a different number of planetary or conventional gear cases;
- large dragline models have gearless drive of swinging mechanism with 4, 6 or 8 low-speed electric motors;
- roller circle with tapered rollers and forged rails;
- two operator's cabins enable control either from the left or the right side depending on particular conditions in the pit-face. The cabins are designed in compliance with the latest requirements of ergonomic standards and are comfortable to work in;
- automatic lubrication system ensures durability of the dragline mechanisms and units with minimum power loss for friction and provides for the saving of lubricants;
- the main units are driven by DC motors of a «Motor-Generator» system with thyristor converter excitation control. A modification with a compact IGBT-based AC drive (frequency converter – induction motor system) is also possible;
- the microprocessor-based information and diagnostic system base allows monitoring the dragline output, electric power consumption, setting parameters, loading and ventilation of electric machines, and temperature of bearings and field windings; the electric machines and control systems are designed especially for the draglines.