IMM 120 TD

stavus a.s.

Suspended mining locomotive

IMM 120 TD

Locomotive IMM 120 TD is a tractive means for transport of train set on monorail suspension lane (profile I 155) aprooved type in horizontal line and also during inclines of elevation or declining about 30°. Locomotive is set together as multipart. It consists of engine part, two separate cabines and additional separate tractive units muttualy connected by linkage.

Locomotive is driven by forced induction engine with a special adjustements which ensure extremely low level of harmful substances coming from burnt gas. Burnt gases from the engine go through water filter of exhaust box which cooles it down and entraps undesirable mechanical parts.

Locomotive has a hydrostatic transmission of the power. Regulative hydrogenerator powers hydromotors of the tractive units. Tractive unit is equipped with one or two pairs (power DUO) of power wheels. Hydraulic operated brake is one component of tractive unit with one pair of power wheels. One or both cabines are equipped with the brake. By various combination of the power units tensile force of 60 kN,80 kN, 100 kN, 120 kN or 160 kN is attainable. All configurations and components of the locomotive described are engineered to meet safety requirements for construction to use machine in atmosphere with high explosive danger. (ČSN EN 1834-2/ group I category M2).

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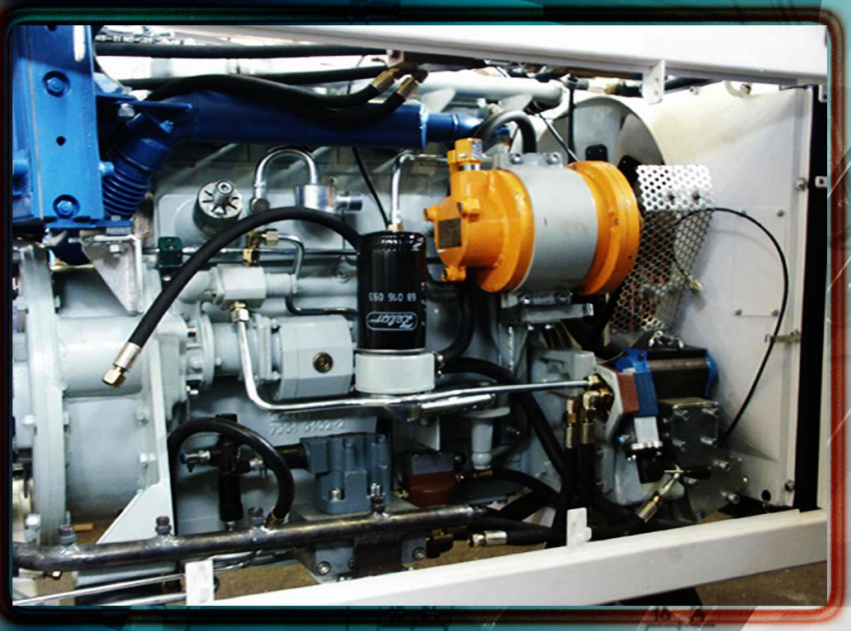
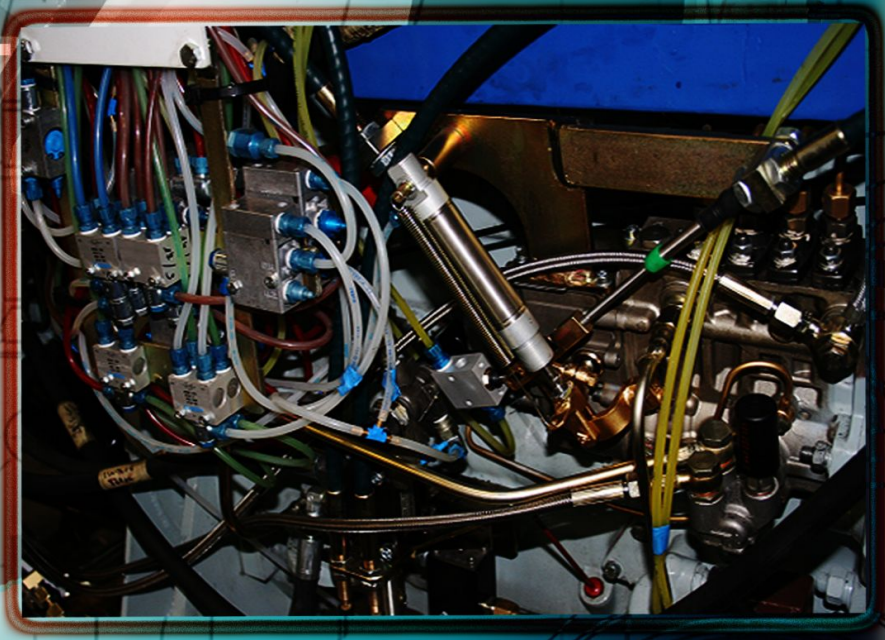
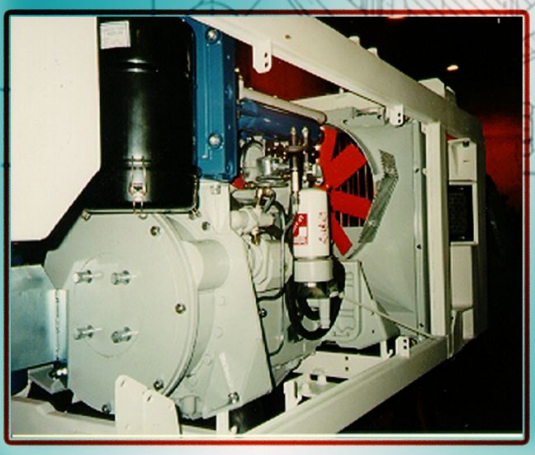
Engine	
Engine Type	JOHN DEERE 6068 TF150
Engine specification	four-stroke, in-line, forced-induction 6 cylinder OHV, direct injection
Max. power	120 kW
Rated motor speed	36,6 s^{-1}
Number of cylinders	6
Volume of cylinders	6800 cm^3
Compression ratio	17,5
Cylinder liners	wet
Head of cylinder	one integer
Distribution	OHV
Minimum mesurable fuel usage	238+ -2,5% $g.kW^{-1}.h^{-1}$
Air cleaner	dry
Cooling	forced, water based
Lubrication - type	forced-feed, circulating with wet engine case
Coolant volume	80 l
Tank capacity	90 l
Engine oil volume	20 l
Engine weight	635 kg
Engine starter	hydraulic
Exhaust pipes	water - cooled



Proportions and weights of basic configuration - 4 traction units with brake and 1 cabin with brake	
Lenght (mm)	
- total	10 177 mm
- engine part	3848 mm
Height (mm)	
- under monorail	1 200 mm
- total width	800 mm
Service weight	**5620 kg**





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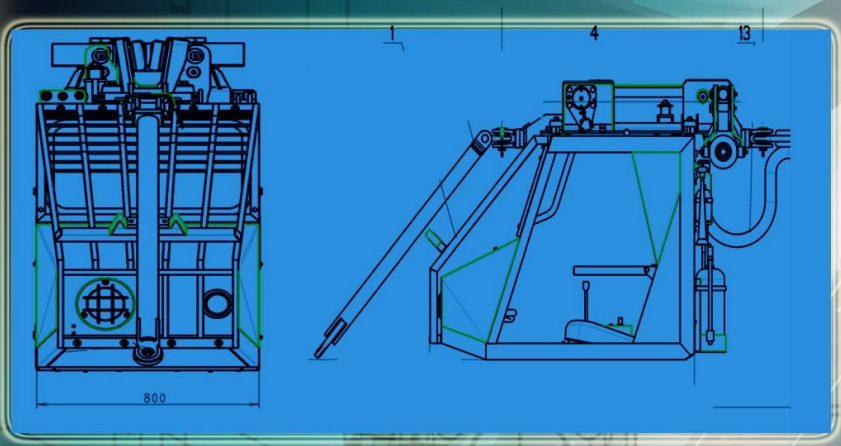
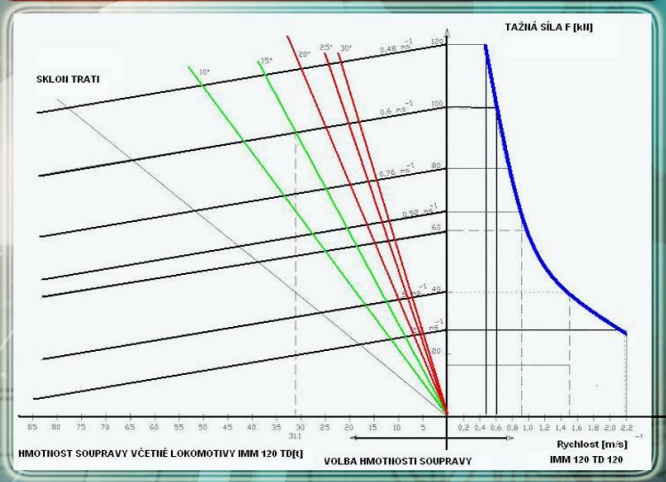
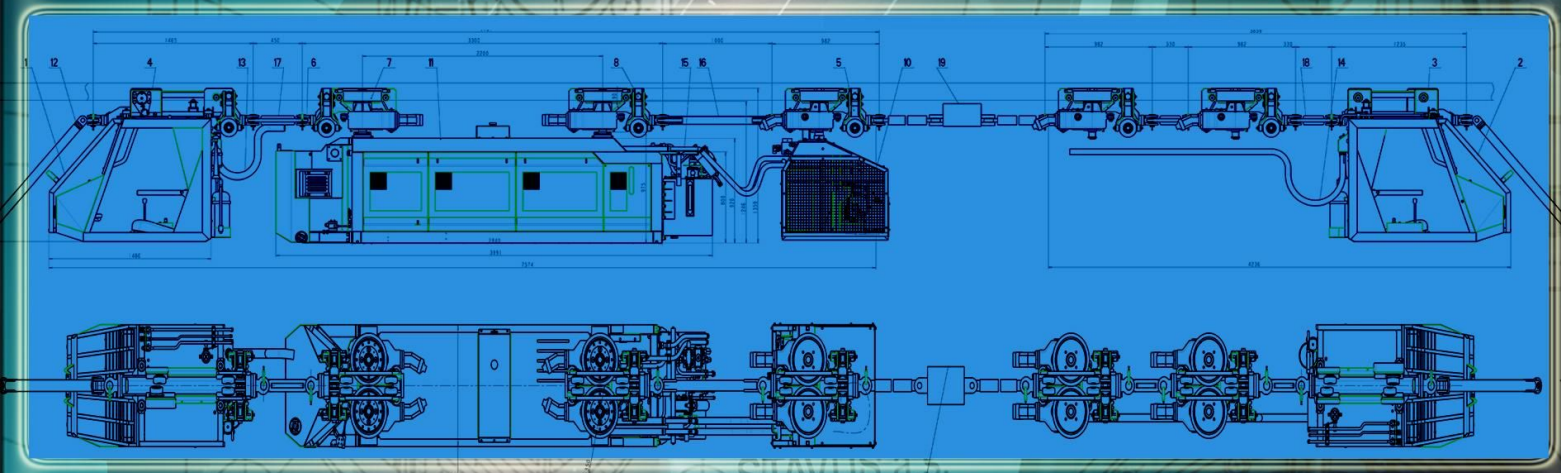
Traction values					
Maximum tensile force					
	60 kN – 10 %	80 kN – 10 %	100 kN – 15 %	120 kN - 15%	160 kN - 15%
Maximum weight of train set including Locomotive (under pressure of 32 Mpa)					
Incline 10^0	25 t	34 t	42 t	50 t	66 t
Incline 25^0	12,3 t	16,2 t	21 t	24 t	32 t
Conveying speed (max 2 m/sec.)					
Minimum curve radius					
Horizontal	4 m				
Vertical	8 m				
Max. inclination of suspension lane	30^0				







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