

ALTA

HORIZONTAL TRANSPORT

MINE HIGH-CAPACITY AUTOMATIC DISCHARGE WAGON

VSV 3,3

VSV 5,3

VSV 10



Utilization:

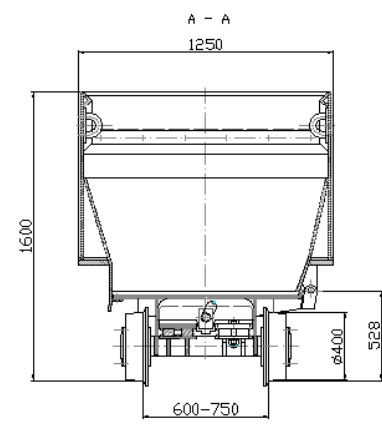
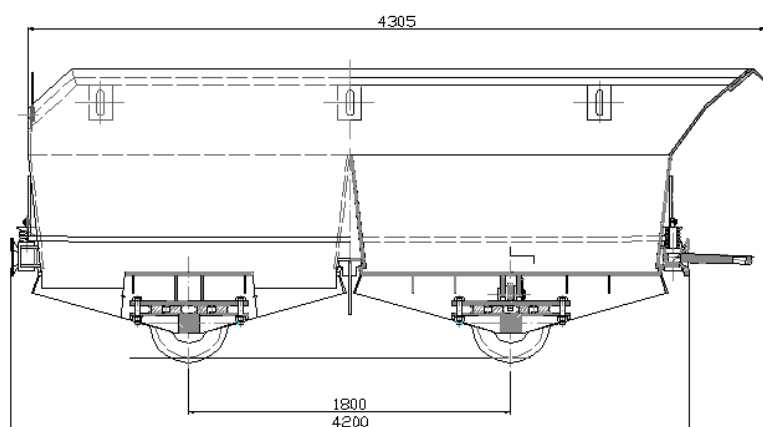
The high-capacity automatic discharge wagon type VSV is dedicated for rock transportation of maximum apparent density 1,2 t/m³ in an integrated train set with continuous charge during run in the charging station and discharge during through-passage in the automatic discharge ramp above the skip silo.

<u>Technical Parameters:</u>	VSV 3,3	VSV 5,3	VSV 10
Volume	3,3 m ³	5,3 m ³	10 m ³
Dimensions (mm)	1100x1470x3200	1250x1600x4200	1600x1800x6000
Wheel Base (mm)	1300	1800	2500
Wheel Track (mm)	600 – 750	600 – 750	900 – 1000
Tractive Force	40 kN	40 kN	
Maximum Speed	18 km/hour	18 km/hour	20 km/hour
Empty Wagon Weight	1730 kg	2330 kg	5000 kg

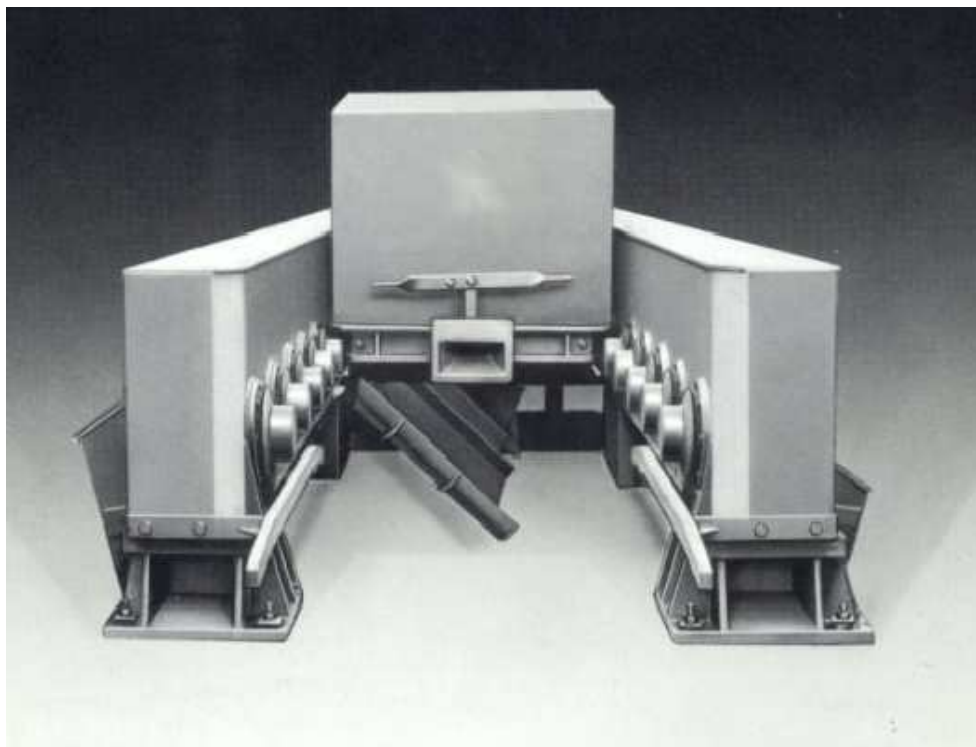
Description:

The wagon consists of the all-welded bucket, two floor plates with spring-loaded axle wheel set, a coupling gear and a tow bar. In the bottom the bucket has two discharge holes that close two independent floor plates. The floor plates are connected with the bucket side with hinges for full opening of the floor plates including the wheel axles. The wagon coupling gear enables automatic connecting of wagons, the disconnecting must be done manually. For continuous wagons charging without coal siftings the buckets fronts are lapped over one another with a nose. The sloping sides improve the wagons discharging and reduces sticking. The wagon spring loading is made with help of rubber disc springs performing also the function of swing axle in the cross direction. The swing axle copies the rail yard asperity and evenly distributes impulses to the rubber springs. This kind of the spring loading improves the run characteristics of the wagon and reduces the noise level.

Picture of the Configuration VSV 5,3 with the Main Dimensions:



Discharge Station for VSV-Wagons Type VS VSV

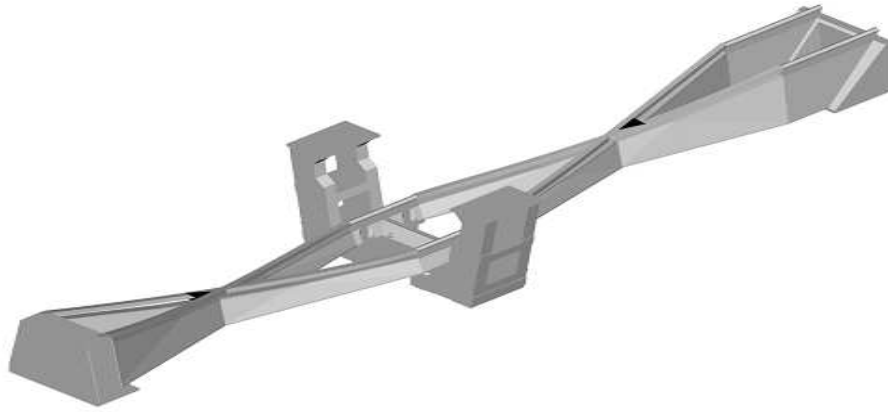


Utilization:

The discharge station serves for automatic discharge of wagons in a skip silo during the continuous run of the train-set. According to the mine-floor technology the station is designed as unidirectional or bidirectional, single-curvilinear or double-curvilinear, for wagon types 3,3 or 5,3 or 10.

Technical Parameters:

	VS VSV 3,3	VS VSV 5,3
Discharge station type		
The main beam length (mm)	9 000	10 600
Length of traverse curve-part (mm)	8 500	9 450
The main beam height (mm)	900	1 045
Pulleys passage spacing (mm)	1 120	1 275+5
Max. locomotive weight (tonnes)	12	15
Discharge station weight (kg)	13 000	15 000
Undercarriage gauge (mm)	600	600
Station design - according to curves:	single-curvilinear with left-side discharge single-curvilinear with right-side discharge double-curvilinear	
- accord. to passage:	one- or bi-directional	
Passage speed (recommended) (m/s)	0,3-0,4	max. 0,8



Description:

The discharge station is formed by two longitudinal bearers with traverse pulleys, the curve-part, the console and facilities. The bearers repose upon the silo structure and they overlap the silo diameter. They are manufactured as a closed frame structure. The supporting pulleys for the passage of the wagons and the locomotive are inserted in the bearers with respective spacing. In the center of the bottom part there are screw-holding-fixtures for the console mounting.

The curve-part is formed by a closed box-bearer with the shape of truncated cone, its upper part is equipped with turn-off round logs. The shape of the curve-part depends on the tilting bottom and the undercarriage of the used automatic discharge wagon. The curve-part borders repose upon the silo steel-structure, in the middle it is suspended on the console upon the bearers. The curve-part edges concur with the mine rail-track.

The console is formed with rolling sectional bars. Via the upper connecting plate it is fixed to the bearers, the curve-part is reposed upon its bottom part. The facilities consist of the discharge station covering, eventually with manual cleaning of wagons and dust sprinkling.

Function:

The train set with automatic discharge wagons runs through the discharge station as one complete, i.e. without wagons disconnecting. The locomotive and wagons are brought over the silo on the traverse pulleys in the station bearers. The curve-part performs the function of discharge control. It consists of three sections: the first section opens the bottom following the curve, the second one guarantees dwell time by the full open bottom and the third section closes the bottom back to the wagon bucket. The train set arrives inertially to the station, after leaving the station it is pulled with the locomotive. On customer's request, the passage of wagon through the station can be assured with hydraulic shunter, then the locomotive does not pass through the station.



HOISTING WINCHES WITH PNEUMATIC AND ELECTRIC DRIVE

Winch VTA 1000

is determined for lifting and transfer of materials, machines and machinery equipment in underground mines in horizontal direction as well as in slant adits.

Technical Parameters:

Max. drawing force	10,8 kN	
Rope length for diam. 12,5 mm		390 m
Rope length for diam. 14 mm		310 m

Winch VP 40, VPEP for Putting Out Supports

is determined for putting out timber supports or mechanical equipment, i.e. for work requiring great drawing force and low speed of the rope moving.

Technical Parameters:

	VP 40	VPEP
Max. drawing force	58,2 kN	47 kN
Rope length for diam. 18 mm	35 m	100 m
Rope length for diam. 20 mm	135 m	

Auxiliary Winch VPO

The winches VPO are manufactured in versions P1, P2 and P3 and they are determined for steel border suspension during shafts and staple pits sinking as well as for other work requiring great drawing force and low speed of the rope moving. Version P2 can be used for putting out timber supports or transfer of loads in horizontal direction and in slant adits.

Technical Parameters:

	VPO 1	
	P1	P2
Version		
Max. weight of hung load (kg)	3200	3200
Max. drawing force (kN)	55	
For rope of diam. (mm)	16,2	20
Main outer dimensions (mm)	1415 x 830 x 930	
Weight (kg)	1130	1290

Hauling Winch VV 8, VVS 104

The winches are determined for transfer of loads and machinery equipment in underground mines in horizontal direction.

Technical Parameters:

	VV 8	VVS 104
Max. drawing force	11,34 kN	9,6 kN
Rope length for diam. 10 mm	170 m	
Rope length for diam. 8 mm		65 m