

A. DESCRIPTION AND TYPE OF PRODUCT TO BE TRANSPORTATION

“High Dump Forage Wagon” equipment (also called “sugar cane transport equipment”, “high lift dump box”, “high lift dump cart”, “side cane carting bins” or “sugar cane high lift side tipper body”) can be preferred for transporting various products. For example; sugarcane, raw cotton, peat moss, any silage harvesting group products, any type bulk cargo and waste products.

The truck (other prime mover, semi-trailer or trailer) can be equipped with two or any unit “High Dump Forage Wagons”. It is generally preferred in agricultural lands and non-traffic uses. For this reason, the dimensions of standard equipment are determined not according to the traffic regulation, but according to planting area planning or the specific weight of product to be transported.

High Dump Forage Wagon	Equipment / Body (For Standard Product)	Optionals (If compatible with combination)
Usable Volume of Each 1 Basket	24,63 m ³ (22,88 + 1,75 m ³)	* Depends on design and combination
Max. Capacity of Each 1 Basket *	6 tons	6 - 8 - 10 tons options
Number of Hydraulic Cylinders	2	2 or 4 cylinder option
Unloading Angle	(90 + 29)°	* Depends on design and combination
To be installed	On any chassis	-
Material	High-strength low-alloy steel	Aluminium
Length of Each 1 Basket	3530	Any size
Total Length of 2 Basket Set	7278	* Depends on design and combination
Total Width	3400	Any size
Total Height (Right Side)	3319 (from chassis)	Any size
Total Height (Left Side)	2680 (from chassis)	Any size
Unloading Height	3230 (from chassis)	* Depends on design and combination
Total Height at Unloading	7357 (from chassis)	* Depends on design and combination

Table 1: “High Dump Forage Wagon” Technical Specifications

* Equipment capacity depends on design and manufacturing variables. Equipment design and manufacturing is revised taking into account the requested internal volume and the density of the load to be transported. In high tonnage requirements, mechanical reinforcements are made or different design methods are applied

** All dimensions are given in mm

Density table of some materials that can be transported (kg/m³):

Sugar-cane	lb/ft ³	kg/m ³
Whole stick cane, tangled and tamped down as in a cane transport vehicle	12.5	200.2
Whole stick cane, neatly bundled	25	400.5
Billeted cane	22	352.4
Whole stick tangled cane but loosely tipped into cane carrier	10	160.2
Knifed cane	18	288.3
Shredded cane	20	320.4

Other Products	lb/ft ³	kg/m ³
Peat moss (bulk cargo) - in the range: 450-500 kg/m ³	31.2	500
Raw cotton (bulk cargo) - in the range: 220-360 kg/m ³	22,47	360
Wheat (bulk cargo) - in the range: 800-960 kg/m ³	59,9	960
Barley (bulk cargo) - in the range: 600-700 kg/m ³	43,6	700
Maize (bulk cargo) - in the range: 800-900 kg/m ³	56,1	900
Beet (bulk cargo) - in the range: 350-450 kg/m ³	28,1	450
Sunflower (bulk cargo) - in the range: 350-450 kg/m ³	28,1	450
Sawdust and wood waste - in the range: 220-240 kg/m ³	15	240
Tin cans waste - in the range: 80-88.1 kg/m ³	5,5	88.1
Nonferrous metals waste - in the range: 145-160 kg/m ³	10	160
Ferrous metals waste - in the range: 290-320 kg/m ³	20	320

B. THE BASKETS:

A set of two baskets to be mounted on the chassis of the truck (also applicable on tracked vehicle chassis, semi-trailer, trailer or any other structure).

* Unless otherwise specified in the contract, equipment installation on prime mover will be done by the buyer. Installation instruction will be provided by seller.

* In case the prime mover is diverted to the production area, the seller can complete equipment installation on prime mover with an additional fee.

Capacity Of The Baskets:

- Each 1 basket usable volume is 24,63 m³ (22,88 + 1,75 m³), 2 basket set volume is 49,26 m³

- Each 1 basket load capacity is 6 tons, 2 basket set load capacity is 12 tons

* Optional volume and load capacity options with optional design

B1. DIMENSIONS EACH ONE BASKET:

- ❖ **Length:** 3530 mm ± %3
- ❖ **Width:** 3400 mm ± %3
- ❖ **Height:**
 - Right side 3119 mm ± %3
 - Left side 2680 mm ± %3

B2. TIPPING EQUIPMENT:

Equipment is tipping by two hydraulic cylinders for each basket (Optional 2-stage tipping mechanism with 4 hydraulic cylinders). Side tipping can be directed by hydraulic arm (hydraulic directional control valve) that connected to cylinders in each basket and it can also be controlled from the cabin. Hydraulic system drive is provided by PTO (power take-off) compatible hydraulic pump control.

According to the intended use, the equipment can also be mounted on any trailer, semi-trailer or other vehicles. These vehicles may be tracked vehicles or equipment that can be pulled by a tractor. In this case, the main drive unit can also be an external hydraulic drive unit instead of the PTO.

B3. HIGH SIDE TIPPING / HIGH DUMP:

Until a sufficient discharge angle is obtained at right or left side, high lifting of the basket by means of two hydraulic cylinders that hydraulic actuated.

The system will be controlled as circular up and down movement by hydraulic arm (refer to C.2. item of this document) that connected to the PTO (power take-off) hydraulic pressure line.

The system will be blocked both mechanically and with oil drain line hydraulically at the upper lifting point.

B4. BASKET STRUCTURE:

Baskets are made of high-strength, 1,5-5 mm thickness "ST37 or equivalent" sheet metals and profiles.

* Sheet metal and profiles thicknesses may vary according to the load capacity of the basket.

The tipping side of the baskets are made of high-strength sheet metal plate. The other (left and right side) and the opposite side of tipping are of strengthened structure too.

B5. THE SIDE OUTER / MAIN FRAME:

SIDE OUTER FRAME SUPPORT: These two vertical supports which support the basket to tip over the any unloading place or chop cane on the planter also made of good strength metal.

C. HYDRAULIC SYSTEM:

- ❖ Pump: “Piston type” or “gear type” hydraulic pump that compatible with hydraulic drive unit
 - ❖ Discharge: 80 - 110 liter/min (\pm % 10)
 - ❖ Pressure: 150 - 200 bars (\pm % 10)
 - ❖ Driven: By prime mover (truck/tractor) PTO (power take-off) compatible hydraulic pump
 - ❖ Installation: On truck chassis or specified vehicles that mentioned in item B.2. in this document
- * Unless otherwise specified in the contract, PTO and hydraulic pump are provided by the buyer

C1. HYDRAULIC OIL TANK:

Capacity: 120 - 200 Liters mount on truck chassis for 2 baskets set. (Tolerance \pm % 10)

* It is recommended to keep the tank volume high to keep the oil temperature low in hot areas and for tolerance in the hydraulic oil line.

* The oil tank will be provided and mounted by the party that complete equipment installation on prime mover's chassis according to contract. May already exist on some prime mover or tractor.

C2. VALVES:

Any type compatible valves to operate the basket to be determined by the manufacturer.

- ❖ 1 piece 22-cc hydraulic flow divider per basket (for tipping mechanism with 2 cylinders)
- ❖ Single arm, hydraulic directional control valve (mono block hydraulic control lever)
- ❖ Hydraulic fitting, hydraulic hoses and connecting attachments

C3. HYDRAULIC CYLINDERS:

Each basket equipped with two hydraulic cylinders for tipping the baskets (one at left and the other at right side).

* Optional 4 hydraulic cylinder mechanism (refer to C.2. item of this document)

C4. LUBRICATION:

All scudding and moving parts should be easy to lubricate. The lubrication chart that the user must follow carefully will be provided by the manufacturer.

D. WARRANTY:

Warranty to cover is 12 months (1 year) against manufacturing defects.

E. DOCUMENTATION:

- ❖ Operation instruction / guide for use
- ❖ Maintenance instruction / guide (regular maintenance, lubrication, general inspection etc...)
- ❖ Installation instruction (if only upper body is provided and if required)
- ❖ Fast (under 2 years) / slow (under 5 years) moving spare parts list

F. OTHER REQUIREMENTS:

Details mentioned below can be provided with only extra payment:

- ❖ Standard tool kits in locking type tool boxes
- ❖ Engineer-supported maintenance / repair / usage overseas and home training for users
- ❖ After sales, technical support
- ❖ Equipment installation on prime mover / chassis
- ❖ Supply and mounting of hydraulic pump and PTO (or any external hydraulic drive unit)
- ❖ Prime mover - equipment hydraulic pipe line, hydraulic oil tank and other hardware



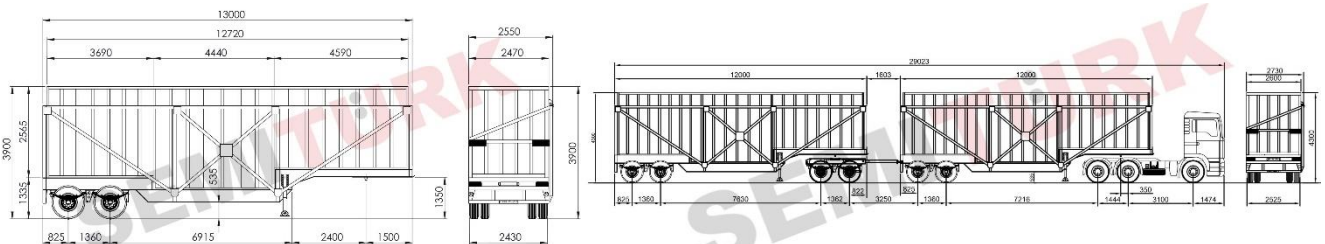
Application on tracked vehicle chassis - "High Lift Side Dump Box for Silage Harvesting"



Application on truck chassis - "High Dump Forage Wagons | Sugar-cane Transport Equipment"



Application on trailer chassis - "Sugarcane Self Tipper / Tipping Trailer"



Semi-trailer application - "Sugar Cane Transporter Semi-Trailer (Inter-link / Train Connection)"

* Semi-trailers do not have a hydraulic system and the baskets are tipped with external hangers