SPECIFICATIONS
AIR-FLO®
STAINLESS STEEL SIDE-TIP BODY

Model	Length	Inside Width	Outside Width	Side Height	Tailgate Height	Struck Capacity
STB-10-SS	10’	87”	102”	34”	44”	7.6 YD
STB-14-SS	14’	87”	102”	46”	54”	14 YD

INTENT:

It is the intent of these specifications to describe a heavy duty multi-purpose dump body. The dump body shall have a front telescopic hoist for dumping material to the rear. For structural support and rigidity, the body shall have an inner right side wall and outer right side wall. The floor and inner right side wall shall lift and move material to the conveyor on the left side of the body.

BODY:

The overall length of the dump body shall be ____ft. It shall have a struck capacity of ____cubic yards without sideboards.

The **straight vertical SIDES** of the body shall be made of 10 Ga. 304 stainless steel. The top of the sides shall be boxed with a "C" section closure and full welded. The boxed top rail shall be dirt shedding with a 45 degree slope at the top and shall be 5” deep and 6” high. The corner post shall be made from 10 Ga. 304 stainless steel and be 5 1/2" deep and 16" wide. It will run full depth from the top of the gate to the bottom of the longitudinal and be full welded. The sides are supported by vertical gussets that are 4-1/2" deep, 7 1/4" wide and full welded. The bottom of the sides will have a 45 degree sloped rub rail that is 5" wide.

The **TAILGATE** shall be constructed of 10 Ga. 304 stainless steel. There shall be two vertical interior gussets 5 1/2" wide, 3 1/2" deep and full welded and two vertical outside gussets 5 3/4” wide, 3 1/2” deep and full welded. There will be a dirt shedding boxed horizontal top rail running full width that is 6 1/2" x 4" and full welded. The upper tailgate hinge bracket shall be incorporated into the rear corner post to give the appearance of the tailgate and hinge assembly being the same height as the rear corner post. The bottom horizontal rail shall be full width and sloped 45 degrees. The tailgate hinge pins and latch pins shall be 1 ¼” in diameter. Tailgate latch pins shall be recessed into the vertical brace of the tailgate and welded 360 degrees.

The **FLOOR** shall be made from 1/4" AR-400, shock and abrasion resistant (185,000 PSI) steel with 3” I beam and C channel crossmembers. The left side of the floor shall have a bar flight chain conveyor running the entire length of body. The floor and the right side of the body moves as a single unit and tips to the left to charge the conveyor.

For additional strength and durability, the **BODY** shall have a complete inner and outer right side wall. The 3/16” AR-400, shock and abrasion resistant (185,000 PSI) inner right side wall shall be integrally attached to the floor. This inner right side wall and floor shall raise, allowing material to move to the conveyor located on the left side of the body. The right outer side wall shall be attached to the frame of the body and remain stationary during side lifting operations to provide support to the unit.

The hinge pins of the lifting floor shall be 1¼” stainless steel with all bushings equipped with grease fittings. In order to reduce stress, the hinge is designed to prevent any accumulation of material. To provide protection to the conveyor during conventional hauling operations, a hinged conveyor cover made of ¼” AR-400 shall be provided. The floor and the sides shall be joined by a ¼” AR-400 plate. The right side is integrally mounted with the lifting floor and a solid curbside outer wall is built for added strength.

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The **FLOOR** of body shall be supported with 3" I beam and C channel crossmembers. Linked to the crossmembers shall be two longitudinals made of 10" structural: channel for the 10' units and I beam for the 13' and 14' units. To provide additional strength, the longitudinals are attached in the rear by a 13" apron. At the front of the body shall be a 3/8" plate that joins the longitudinals and acts as the attachment for the cylinder base. In between the longitudinals are two 4" x 4" reinforcement tubes. These tubes are placed at the fixing point of the two tilt cylinders.

CONVEYOR:

When the conveyor chain is moving material toward the front of the body, the material shall be fed through an adjustable discharge gate installed at the left front side of the body. This gate controls the discharge of material to the spinner.

The conveyor chain shall be self cleaning 88-K chain with an average strength of 24,000 lbs. The bar flight shall be 3/8" x 1 ¼", centered on 5 ½" and welded to the top and bottom of the chain links. The chain shall be 18 ¾" wide will move through a recessed trough. The bedplate of the conveyor shall be 3/16" AR-400.

The conveyor shall be powered by a 25:1 ratio worm gearbox mounted to the side of the 1½" drive shaft with two 8 tooth sprockets and a flange bearing. The gearbox shall be powered by a hydraulic motor. Attached to the 1½" idler shaft are two round wheels with bearings mounted on a sliding system. Sprockets on a sliding system will be unacceptable.

Chain tension shall be adjusted by the use of two grease cylinders mounted on the sliding system. Screw type adjusters are unacceptable.

DRIVE ASSEMBLY COVER:

Shall be bolted in position easily detached to allow for ease of maintenance of rear drive assembly.

SPINNER:

The poly spinner disc shall be 18" in diameter and shall have 5 formed vanes. The spinner disc shall be adjustable in position to facilitate the control of spread patterns and concentrations. The spinner disc is mounted to a drive shaft with top mounted motor, and supplied with quick disconnect hydraulic couplings. A truck frame mounting bracket shall be installed at the left front side of the body and shall include a discharge chute.

1/2 CAB SHIELD:

There shall be a 1/2 cab shield supplied made of 10 Ga. 304 stainless steel. The 1/2 cab shield shall extend 22-1/2" from the front of the body.

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HYDRAULIC FLOOR LIFT CYLINDERS:

The lifting floor is raised by two 4" x 21" double acting cylinders. In the full lift position the floor shall be in excess of 38 degrees to its horizontal position. For added safety, a body prop will be installed on the underside of the lifting floor. To insure uniform lifting of the dual cylinders under the floor, a gear driven oil flow divider shall be installed.

HYDRAULIC CONTROL:

To operate the unit as a spreader, there shall be two variable speed hydraulic cab controls mounted in the cab. One control knob will govern the conveyor speed and the other will govern the spinner or shoulder conveyor speed.

TELESCOPIC HOIST:

The hoist shall be of telescopic design, single acting and have a trunion mounting. The trunion mount shall have a 1-7/8" pin. Capacity shall be____tons.

It shall be designed to operate up to 2500 PSI and shall be self-bleeding. It shall have 1/4" wall construction with bronze glands and pistons to assure a smooth and durable bearing surface. Each cylinder shall be internally sealed. The inside seals shall have a U-cup design made of nitral packing.

The piston rod shall be machined from ASI 4140 and nitrated using the QPQ method to establish the following mechanical properties:

Surface Hardness: Rockwell C60-C65
Surface Finish: RMS 20
(using ASTM B117 salt spray)
Approximately 7% surface area
corrosion in 88 hours (or 10 times
better than hard chrome plating)
Fatigue Strength: Approximately 80% to 100% increase
using QPQ as compared untreated
sample.

AIRGATE:

There shall be an air latch tailgate in place of a manual latch, the handle operating the front pivot shaft will be replaced by an air brake chamber operated front pivot shaft. The air brake chamber shall be a type 30 with a 2 ½" stroke.

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OPTIONS:

1) **SCREENS:**

Top screens will be provided that are one piece, removable as one section and made of 3/8" wire mesh with 2 1/2" openings. Screens shall be designed to hinge at the center to accommodate the side-tip function of the body. A hatch is located at the front left of the screen assembly to allow access to the conveyor system without the removal of the entire screen. Screens are supported longitudinally by 4 sections of 3/16" 2 x 3 tubing and laterally by 3" channel.

3) **CENTRAL GREASE SYSTEM:**

There shall be a central grease system installed with grease lines of SAE 100R3 hose, OD .56 in. ID .25 in. with a synthetic rubber inner tube and two textile fiber braid reinforced oil, weather and abrasion resistant outer cover to each grease zerk on the body, except chain tension cylinders.