

Self-Propelled Sweepers and Scrubbers Tank and Hopper Capacity Rating

- 1. Scope**—This SAE Standard applies to self-propelled sweepers and scrubbers as defined in SAE J2130.
- 1.1 Purpose**—The purpose of the document is to provide uniform methods for determining the capacity of debris hoppers and fluid tanks used on self-propelled sweepers and scrubbers. The methods declared result in realistic useable volume measures.
- 1.2 Rationale**—This document has been reaffirmed to comply with the SAE 5-Year Review policy.
- 2. References**
- 2.1 Applicable Publications**—The following publication forms a part of the specification to the extent specified herein. Unless otherwise indicated, the latest revision of SAE publications shall apply.
- 2.1.1 SAE PUBLICATION—Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.
- SAE J2130—Self-Propelled Sweepers and Cleaning Equipment
- 3. Definitions**
- 3.1 Hopper**—The debris container of a self-propelled sweeper.
- 3.2 Struck Volume (SV)**—With the machine on level ground, the volume enclosed by the interior surfaces of the sweeper hopper with a struck plane running parallel to the ground and coincident with the lowest edge of the hopper material inlet (see Figure 1).
- 3.3 Heaped Volume for Pneumatic Sweepers (HV)**—The volume above the struck volume enclosed within the following planes:
- A plane developed 150 mm from and parallel to the air exhaust screen with the same plan view dimensions. Combined with; Planes emanating from the exhaust screen plane perimeter and meeting the intersections between the struck-plane and the hopper side panels (see Figure 1).

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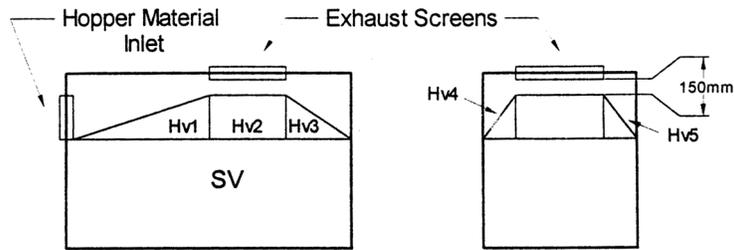
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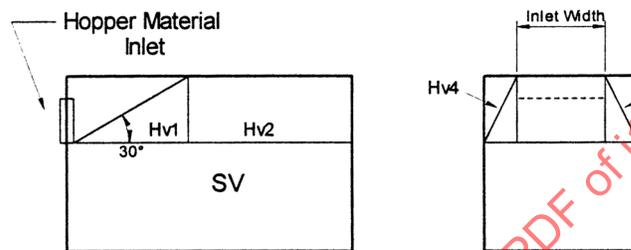
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SAE WEB ADDRESS:

Hopper for Pneumatic Machines



Hopper for Mechanical Machines



Struck Volume = SV

Heaped Volume (HV) = Hv1 + Hv2 + Hv3 + >>>>

Rated Capacity = SV + HV

FIGURE 1—METHOD OF CALCULATION

3.4 Heaped Volume for Mechanical Sweepers (HV)—The volume above the struck volume enclosed within the following planes:

A plane developed by the full width of the hopper inlet intersecting the lower edge of the inlet and sloping upwards at 30 degrees to intersect with the hopper roof. Combined with; a plane bounded by the hopper roof away from the hopper inlet and left and right side planes emanating from the sloping and roof plane perimeter meeting the intersections between the struck-plane and the hopper side panels (see Figure 1).

3.5 Rated Capacity—The sum of the struck volume (SV) and heaped volume (HV) (see Figure 1).

3.6 Dust Control Water Tank—The tank on a self-propelled sweeper that contains water used for dust control.

3.7 Solution Tank—The tank of a self-propelled scrubber that contains water or cleaning solution to be distributed to the surface being cleaned.

3.8 Dust Control Water or Solution Tank Capacity—The volume of water the tank will hold, without loss through splashing during normal operation of the machine, less the amount that cannot be drained because of stand pipes, etc. Normal operation includes starting, stopping, turning as well as climbing and descending rated grades.

3.9 Recovery Tank—The tank of a self-propelled scrubber that contains the water or cleaning solution recovered from the surface being cleaned.