

FRANK J. ZAMBONI & CO., INC.

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October 2, 2017

Josh Landefeld
City of Ann Arbor
P.O. Box 8647
Ann Arbor, MI 48107
Ref: Burh Park

PROPOSAL

MODEL: Zamboni 546

QUANTITY: One (1)

CAPACITY: Full Size

- Snow Tank
100 cubic feet (actual volume)
120 cubic feet (compacted)
- Ice Making Water Tank
Constructed of High Density Polyethylene
200 U.S. gallons
Wash Water System (optional)
Constructed of High Density Polyethylene
82 U.S. gallons
Total Water Capacity
282 U.S. gallons

ENGINE: Kubota 1.6 Litre

- Four cylinder, 57 HP, 16 valve double overhead cam, 88 ft. lbs of torque, hydraulic valve lifters, liquid cooled
- Timing belt with automatic belt tensioners, 5 main bearings, full-flow oil filter system for long life and ease of maintenance
- Advanced electronic ignition system
- Meets or exceeds CARB/EPA 2012 standards
- Fuel choices LPG or Gasoline
- Load sensing electronic governor enables true "hands-free" engine operation by driver
- On-board engine diagnostic system with fault code readout via dash lamp or diagnostic computer

ZAMBONI®

TRANSMISSION: Sauer-Danfoss Hydrostatic Pump and Motor

- Continuously variable pump and motor and axial piston-type and offer volumetric efficiencies as high as 95%.
- Maximum drawbar pull even at low speeds and full hydrodynamic braking.
- Allows the use of a smaller and more efficient engine while still providing superior on-ice power.
- Hydrostat enables the conveyor augers to operate at full speed, regardless of vehicle speed, even when slowing for corners.

DRIVETRAIN: Dana/Spicer Axles

Model 44 Front-rated 4,300 lb.

Model 60 Rear-rated 6,400 lb.

- Rear axle is a rigid full-float design
- Because the 546 uses Spicer/Dana axles that are optimized for our chassis, we offer the industry's highest manufacturer approved axle capacities.
- Our chassis/axle combination is the key to the Zamboni 546 having a turning radius of 16 feet. This is a full 3 feet tighter than most other machines.

Hub City Transfer Case

- Rugged cast iron housing for rigid gear and bearing support. Heat-treated alloy steel gears are helical cut for greater strength and lower noise.
- Hydrostatic motor is wet-mounted to housing for long shaft life.

Chassis

- 2" X 5" structural steel tubing for high strength and long service.

HYDRAULICS: Sauer-Danfoss Turolla Pump and Permco Motors

- High efficiency gear type double pump has separate pump sections for vertical and horizontal augers for the best conveyor performance in the industry. Priority flow divider provides steering circuit.
- Pump is directly mounted to the engine for trouble free service. No belts or pulleys.
- Motors are high efficiency gear type with cast-iron bodies and case drain.

- HYDRAULICS:**
- Hydrostatic transmission features loop flushing which provides fresh fluid from tank to hydrostat for enhanced performance and cooler operating temperature.

Filtration and Tank

- Two hydraulic filters (1) 20 micron return line and (1) 10 micron hydrostatic charge loop, ensure a clean environment for all hydraulic components.
- Large 21-gallon tank enhances hydraulic fluid travel to rid the oil of entrapped air and increase heat dissipation.

**SNOW TANK
AND AUGERS**

- Large snow capacity and a tank design that provides all areas of the tank to be completely filled, even the top rear corners.
- The 546's snow tank incorporates a smooth bottom and sides, allowing for the snow to slide out with the least amount of residue and at a much lower height.
- Both 10-inch large diameter augers are double-flighted to ensure good performance even during heavy shaving and the augers are teflon coated for durability.

- CONDITIONER:**
- Zamboni Ice Resurfacers have a well-deserved reputation for producing the finest sheet of ice, even after many years of being in use.
 - A unique and patented design of spring and hydraulic down pressure is used for superior shaving results.
 - Performance will continue for the life of the machine by using replaceable bushings and springs.

**HUMAN
ENGINEERING:**

- The operation of the 546 is very simple. The operator sets the engine speed with the "hands-free" governor and drives the machine with a foot control. However, unlike an automotive transmission, the 546 will provide full power and speed to the augers at all times, even while slowing for corners. And the 546 will ensure the snow tank is compacted and completely filled.
- Speed is controlled by the single foot pedal equipped with a "dead-man" safety feature to dynamically brake the vehicle to a stop if the operator's foot leaves the pedal.
- Operator compartment ergonomically designed including steering wheel with a spinner knob.

HUMAN

- ENGINEERING:**
- Engine and hydraulic compartment is easily accessed through both side doors for daily maintenance checks, even with the snow tank down.
 - Wiring and looms are well routed and protected. Wires are individually labelled for easier service and trouble-shooting.

FACILITY

- ENGINEERING:**
- Zamboni Ice Resurfacers offer unparalleled shaving and snow conveyor performance. A quality sheet of ice is among an arena's primary selling features.
 - Zamboni has the tightest turning radius in the industry, enabling operators to resurface deeper into their corners.
 - The snow tank on the 546 is designed in an enlarged package with a flat bottom and sides. This gives the 546 a low front-dumping height. This is important for both dumping indoors as well as outdoors in adverse conditions.
 - Our unique engine and hydrostatic transmission enables the 546 to use a smaller, more efficient engine and can provide significant fuel savings.
 - Industry Reports have recommended that arena ventilation be determined by horsepower of the ice resurfer, which is over half of larger engines used in the competitor's machine. This can translate to considerable energy and facility savings.

MANUFACTURER'S STATEMENT:

The 546 is proudly designed and manufactured by Frank J. Zamboni & Co., Inc., in the United States of America.

WARRANTY:

Twenty four (24) months or 2,000 hours, parts replacement only.

SAFETY

STANDARDS:

The 546 is engineered to meet or exceed O.S.H.A. and A.N.S.I. safety labelling requirements.

**NJPA
CONTRACT
PRICING:**

Zamboni 546 Gas Carburetion \$ 84,955.00

- Board Brush \$ 5,625.00
- 3 Way Catalytic Converter \$ Standard
- Lambda Fuel Mgmt. System \$ Standard
- Aluminum Wheels \$ Standard
- Wash Water System w/ Poly Tank \$ 4,700.00
- Black Powder Coated Conditioner \$ Standard
- Conditioner Poly Side Plate \$ Standard
- Parking Brake \$ Standard
- Snow Tank Light \$ 400.00

SUB-TOTAL: \$ 95,680.00

Less NJPA Discount (\$2,870.40)

Transportation \$ 3,500.00

TOTAL: \$ 96,309.60

F.O.B.: Paramount, CA

TERMS: Net 30 days on approved credit.
Shipment 250 days or sooner from receipt of order.
Pricing firm for 30 days.
Pricing does not include any applicable sales tax.

THANK YOU:



Doug Peters
Regional Sales Manager

10/2/17
Date

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