

SUGGESTIONS FOR WRITING BID SPECIFICATIONS ON THE ADVANCE SC500™ 20D, X20D and X20R

GENERAL	<p>Machine shall be the type generally described as an automatic floor scrubber and named Advance <i>SC500 20D, X20D or X20R</i>. It shall wet, scrub and vacuum in one pass – leaving the floor clean, dry, and safe.</p> <p>The SC500 20D, X20D and X20R shall have a 21 inch (53 cm) rotary disc scrub deck. The X20D and X20R shall have an EcoFlex™ onboard detergent dispensing system standard.</p>
EcoFlex™ DETERGENT SYSTEM OPTIONAL	<p>EcoFlex™ models shall have EcoFlex™ onboard detergent dispensing system compatible with all manufacturers of automatic scrubber detergent. Dilution rate shall be variable and controlled with detergent flow adjustment push button on control panel and flow rate shall be displayed on multifunction display. Machine shall automatically maintain constant detergent ratio when there is a change in solution flow rate.</p>
BRUSH SYSTEM	<p>20D and X20D: Shall be equipped with one heavy-duty 24 Volt permanent magnet DC motor rated at 0.6 horsepower (450 Watt). Brush motor shall have automatic amp control to maintain 155 RPM for consistent cleaning results across different floor types.</p> <p>X20R: Shall be equipped with one heavy-duty 24 Volt permanent magnet DC motor rated at 0.9 horsepower (670 Watt) for 2,250 rpm micro orbital and 0-30 rpm macro orbital scrubbing.</p> <p>All models shall be equipped with automatic brush motor shutoff to protect floors when machine comes to rest.</p>
VACUUM SYSTEM	<p>Shall be equipped with one 24 Volt 0.37 horsepower (280 Watt) 2-stage DC motor with tangential discharge, quick change modular design and sound reduction system.</p> <p>20D and X20D: Shall be 63 dB A in full power and 60 dB A in silent mode at operator's position.</p> <p>X20R: Shall be 65 dB A in full power and 61 dB A in silent mode at operator's position.</p> <p>Vacuum system must be capable of 29.9 inches of waterlift (inch H₂O) at 38 cubic feet per minute (CFM).</p>
DRIVE SYSTEM	<p>Shall be a 0.27 horsepower (200 Watt) motor providing movement to front wheels for high traction. Shall operate up to 3.1 mph (5 kph) with five speed increments displayed on the multifunction display and two buttons (hare and tortoise) on the control panel to adjust the machine's speed.</p> <p>Machine shall have a fully-variable forward and reverse electronic control. Forward and reverse shall be operated by means of an ergonomic paddle allowing the operator to utilize multiple hand positions as well as serve as a safety device, preventing the operator from being pinned between the machine and an immovable object.</p>
CONSTRUCTION	<p>Shall be built with corrosion and impact-resistant polyethylene tanks and body, and a sturdy, powder coated and corrosion resistant steel frame.</p>

SOLUTION TANK	Shall have 12 gallon (45 L) capacity, constructed of linear high-density rotationally molded polyethylene. Shall have both a front and side-rear fill port and come standard with one remote hose filling kit capable of filling the machine from almost any faucet. Solution tank shall also have a sight gauge with graduations clearly marked. Sight tube shall also function as the solution drain hose.
SMARTFLOW	Machine shall come standard with SmartFlow, a solution flow system that consistently dispenses a constant flow of cleaning solution per square foot at any operator speed for consistent cleaning performance. Machine shall have five solution flow levels: Off, 1, 2, 3 and 4 to maximize productivity. Maximum shall be Level 4 with a 0.74 gal/minute (2.8 L/minute) flow rate for maximum solution dispensing. Solution levels 1 through 3 shall be adjusted for optimal cleaning performance at their facility. Machine shall have an automatic solution shut off in neutral to conserve cleaning solution.
RECOVERY TANK	Shall have 12 gallon (45 L) capacity constructed of linear high-density rotationally molded polyethylene. Recovery tank shall include removable cover and gasket, debris tray, float vacuum shut-off system to prevent tank overflow and a variable flow drain hose. Recovery tank must have a large opening to allow the operator to inspect and access all geometry inside the recovery tank for proper cleaning and maintenance. Recovery tank shall hinge open to allow full access of internal components such as batteries and EcoFlex™ cartridge, and provide easy service of deck and solution system.
BRUSH/PAD SYSTEM	20D and X20D: Shall include one 20 inch (50.8 cm) pad driver or prolene brush to cover a 20 inch (50.8 cm) scrubbing path. A pad holder as well as a variety of brushes shall be available for any cleaning application. Brush shall be put on or removable without tools or by using "Click-On/Click-Off" functionality. X20R: Shall include one 20 inch (50.8 cm) pad driver to cover a 20 inch (50.8 cm) scrubbing path. Scrub deck shall be raised and lowered by an electronic actuator.
BRUSH PRESSURE	20D and X20D: Shall have two brush pressure settings: 33 lb (15 kg) and 66 lb (30 kg). X20R: Shall have two brush pressure settings: 49 lb (22 kg) and 66 lb (30 kg). Brush pressure shall be changed with one touch button on control panel.
SQUEEGEE	Shall be a 28.4 inch (72 cm) wide curved (parabolic) style squeegee constructed of PA66 high impact plastic. Squeegee mounting bracket must have a break-away design to prevent damage from contact with immovable objects. Shall have four sided wiping blades and not require tools to remove, assemble, flip or replace squeegee blades. Squeegee shall be raised and lowered manually by a foot operated lever.
CASTERS	Shall have 3.1 inch (8 cm) rear caster for improved maneuverability.
DRIVE WHEELS	Drive wheels shall have a diameter of at least 7.9 inches (20 cm) and be made of a high traction non-marking compound.
HANDLE	Shall have an ergonomic, wrap around handle for operator comfort.

DIMENSIONS

Machine dimensions shall be no larger than the following dimensions (L x W x H):

20D and X20D:

With squeegee: 50.3 x 28.3 x 41.8 inches (127.7 x 72 x 106.3 cm)

Without squeegee: 50.3 x 21 x 41.8 inches (127.7 x 53.2 x 106.3 cm)

X20R:

With squeegee: 51.2 x 28.3 x 41.8 inches (130 x 72 x 106.3 cm)

Without squeegee: 51.2 x 21.2 x 41.8 inches (130 x 53.8 x 106.3 cm)

POWER SOURCE

20D – 24 Volt System: Shall have the option of two 12 Volt / 105 or 130 amp hour wet-acid batteries or two 12 Volt/140 amp hour maintenance-free AGM batteries.

X20D and X20R – 24 Volt System: Shall have the option of two 12 Volt / 130 amp hour wet-acid batteries or two 12 Volt/140 amp hour maintenance-free AGM batteries.

Machine shall be equipped with a low voltage cutout feature that can be set for the battery type (80% discharge for wet-acid; 70% discharge for maintenance-free AGM).

CHARGER

Shall have onboard charger as standard equipment: 24VDC, 13 Amps.

WEIGHT

Shall be no more than the following:

20D without batteries: Machine only: 183 lb (83 kg)

20D 105 Ah Wet batteries: 301 lb (136 kg)

20D 130 Ah Wet batteries: 311 lb (141 kg)

20D 140 Ah AGM batteries: 362 lb (164 kg)

X20D without batteries: Machine only: 187.4 lb (85 kg)

X20D 130 Ah Wet batteries: 315.4 lb (143.1 kg)

X20D 140 Ah AGM batteries: 366.4 lb (166.2 kg)

X20R without batteries: Machine only 194 lb (88 kg)

X20R 130 Ah Wet batteries: 322 lb (146.1 kg)

X20R 140 Ah AGM batteries: 373 lb (169.2 kg)

APPROVALS

Shall meet or exceed worldwide safety and electrical approvals (ETL, CSA, CE)

CERTIFICATION

Shall be CSA certified.

OPERATING SYSTEM

Machines shall have a multifunction LCD graphical display on the control panel and serve as the interface for displaying parameters and current configuration including: hours worked, battery type, battery charge level working and while charging, vacuum mode, brush work mode, detergent solution flow quality, detergent percentage quantity, percentages of detergent in the washing water, Burst of Power override timer, maximum machine speed setting, auto shut-off timer.

Machine shall have a burst of power switch that instantly increases cleaning performance and aids in controlling both the overall cost to clean as well as environmental sustainability. Engaging the burst of power shall increase brush pressure to the maximum level, increase the solution flow rate to the next available level, increase detergent strength to the strong setting and increase the vacuum power to maximum for 60 seconds, by default, or by a specified time determined by the user. When the 60 seconds expires, the machine shall revert back to the previous cost effective and environmentally sustainable mode of operation.

Control panel shall have a vacuum mode switch to control the sound level of the machine (standard sound, quiet and off mode) to reduce operator fatigue and allow for daytime cleaning of occupied facilities. Sound level shall be depicted on the multifunction display.

Control panel shall have a solution flow push-button to switch between: no solution, level 1, level 2, level 3 and level 4. Level 4 is disabled by default. The rate of solution flow at each level shall be adjustable.

Control panel shall have a detergent ratio push-button to switch between chemical-free cleaning, weak detergent strength mode (level 1) and strong detergent strength mode (level 2). Detergent ratio shall be depicted on the multifunction display.

Machine shall have One-Touch™ Scrub ON/OFF push-button to activate the scrub deck systems. Pressing the One-Touch™ Scrub button will lower the deck up/down indicated by a flashing green LED. A solid green LED shall indicate the system is active. Holding One-Touch™ Scrub button for one second shall apply maximum pressure indicated by a red LED for maximum cleaning performance and productive one pass cleaning in dirtier areas.

20D and X20D machine shall have a brush release push-button to automatically remove the brush providing hygienic handling of the pad driver or brush. A flashing LED shall indicate the system is activated.

Machine shall have two speed control buttons located on the user control panel depicted by a Hare to increase speed and a Tortoise to reduce speed and indicated on the multifunction display. Speed control buttons shall be within easy reach of the operator for greater safety and ergonomics. Maximum machine speed shall be controlled by the operator.

The machine shall have a start/stop safety switch that turns off the machine with a one push button.

The Machine Shall Be an Advance SC500™ 20D, X20D & X20R