

## **HYDRA MAX**

### **Completely Hydraulic Snow Blower Featuring the Patented “Smart Valve”**

#### **Benefits & Features**

1. Machine is significantly shorter from front to back than other skidsteer snowblowers. Hooking closer to the skidsteer & with blower discharge chute on the right side, operator has excellent visibility down in front of machine. Right side discharge chute helps keep snow off the cab windows & also blows snow away from normal traffic flow. Allows operator to throw snow along side skidsteer and backwards. Center of gravity is closer to the skid wheels and with less weight, the operator has better stability and control and he can also enter the cab easier.
2. Driven by two hydraulic motors each with reverse feature, (one on right side of machine for blower fan & one on left side of machine for auger), machine has no chains, chain couplers, gearboxes, cross shafts, shear pins, or other similar moving parts. No bearings on machine except for one plastic grease packed bearing between auger flighting & blower fan. Reverse feature allows easy clean out.
3. Blower fan is the limiting factor in blowing snow with any snowblower because it takes more horsepower to run than the auger. This snowblower is equipped with the new patented “Smart Valve”. It contains a pressure sensing valve which automatically reduces oil flow to auger in order to keep constant oil flow to blower fan thereby maintaining maximum throwing distance & performance. (i.e. assume maximum skidsteer horsepower requires 3,000 p.s.i. oil pressure. When skidsteer is under heavy load and it reaches to within 100 psi of maximum pressure, the auger will slow down accordingly to keep the blower fan running at optimum power. Blower fan avoids slowing down, which is an especially important feature for heavy wet snow).
4. With other snowblowers, oil flows through a relief valve and back to the skidsteer when maximum system horsepower is reached. This builds up heat in the hydraulic system potentially shortening the systems life. With the “Smart Valve”, oil does not have to go over the skidsteer’s relief valve when maximum system pressures are reached thereby extending the system’s life.

5. The “Smart Valve” will detect by pressure, when a foreign object enters the auger and by automatically cutting off the oil flow, auger flighting will stop as fast as it needs to. It does not have to rely on shear pins to break, or hydraulic relief valves (which build up heat in the system). With the “Smart Valve”, when operator pushes button on the joystick to manually stop oil flow, the auger flighting will roll to a stop rather than make an abrupt stop. Avoiding abrupt stops increases hydraulic motor life and reduces stress on drive components.
6. The “Smart Valve” includes a third case drain line to the skidsteer. For maximum snowblower performance, skidsteers with case drain line hookups are recommended. Using skidsteers without case drain line has less power available to snowblower and it also puts more pressure on the hydraulic motor seals thereby weakening them and shortening hydraulic motor life. It is recommended to have dealer install case drain hookup on the skidsteer especially for hydraulic chute & deflector option. Skidsteers without case drain should use electric chute & deflector option.
7. Performance is enhanced with blower fan & discharge chute on the right side. Auger brings snow across the whole front of the machine and directly into the blower fan which is rotating in the same direction as auger and also at a much higher speed, thereby improving snowblower efficiency.
8. Discharge chute folds down for more compact storage & shipping. Chute starts right down on top of the blower fan. The snow no longer has to travel upwards through a lengthy throat which significantly reduces the area for snow to accumulate. Chute also has no inside ledges for snow to accumulate. These two factors combined nearly eliminate the possibility of snow plugging up in the chute. Discharge chute is set at a 45 degree angle which is the optimum angle to maximize snow throwing distance.
9. Powder coat painted-means less chipping, scratching, less chance for rust.
10. Replaceable cutting edge is standard equipment and mounts on bottom side of the front edge. Some competitor machines may not have replaceable cutting edge or it may be mounted on the top side of the front edge. Bottom mounted edge allows for aggressive chipping or digging of hard snow or ice. Allows for clean up near buildings & obstacles by allowing cutting edge to back drag snow. The cutting edge is also positioned farther forward than the leading edge of the auger flighting. This helps protect the flighting from damage if operator hits an obstacle.
11. Also equipped with replaceable & adjustable shoes.
12. Discharge chute (both rotation & deflector) is fully hydraulic and rotates 270 degrees. **At this time an electric chute rotation is not available.**

13. For newer skidsteers that have a 14 pin or 8 pin hookup, a wiring harness is used that allows operator to use joystick to activate the solenoid switch which engages the discharge chute (rotation & deflector) hydraulically. Skidsteers without 14 pin or 8 pin hookup must use the traditional wiring method whereby operator must push the control buttons from a separate control box that has been wired into the cab. For discharge chute that runs electrically, the 14 pin or 8 pin wiring harness can not be used because it requires too much current. Therefore traditional wiring method must be used.
14. Return oil rather than pressure oil (oil coming from the skidsteer) is used to activate the hydraulic chute rotation motor & deflector cylinder. The solenoid switch when activated, directs the return oil to the chute rotation & deflector before it goes back to the skidsteer. By using return oil there is no power loss to run the auger flighting and blower fan. Competitors that use pressure oil to run the chute reduce available power to the auger flighting & blower fan.
15. Panel on top of auger flighting is hinged and sits closer to auger. The lower panel height improves operator visibility--an ideal feature for blowing sidewalks. Hinged panel can be lifted when hitting deep snow.
16. Machine is equipped with 19.2 cubic inch hydraulic motor that powers the auger and 4.9 cubic inch standard flow hydraulic motor that powers blower fan. The 4.9 cubic inch motor works well on hi-flow skidsteers because operator can simply run his machine in lo-flow mode. Concentric design (auger flighting & impeller on same axis) combined with SMART VALVE allows standard-flow machine to perform as well as many competitive hi-flow machines. For this reason only the standard-flow 4.9 cubic inch hydraulic motor is offered at this time. **Testing is underway using a 6.1 cubic-inch motor for hi-flow skidsteers but is not available at this time.**
17. Hi-flow snowblower operates at 950-1,000 rpms on the blower fan and at 250 rpms on the auger flighting. Standard-flow snowblower operates at 800 rpms on blower fan and at 175 rpms on the auger.
18. A standard-flow skidsteer using a snowblower set up for hi-flow (6.1 cu in motor) will run at lower performance and making any manual adjustments on the “smart valve” will not help. A hi-flow skidsteer using a snowblower set up for standard-flow (4.9 cu in motor) will work because operator can simply leave machine in standard flow mode after startup rather than switching to hi-flow mode in the cab.
19. Cutting width is 74”. Total width is 78 ½”. Cutting depth is 27”. Total height with discharge chute folded down is 31”. Weight 650 lbs.

P/N 320-0-0620 Hydra Max Snowblower

P/N 320-1-0136 Optional Case drain kit for either hi-flow or low-flow skidsteer

P/N 320-2-1131 Optional 8 pin wiring harness  
P/N 320-2-1132 Optional 14 pin wiring harness

Machine comes equipped with 2 (5ft) hoses to skidsteer and flat faced couplers. Does not include case drain hose. Modifications on hoses & couplers to skidsteer are at dealers expense. Case drain not required but highly recommended for maximum performance. All machines are shipped set up with traditional electrical wiring kit & remote control box installed in cab including those machines ordered with optional 8 or 14 pin wiring harness at time of purchase. Dealer may then hookup the 8 or 14 pin harness at his own expense when he receives the unit at his dealership. Dealer can also still later choose to purchase a 14 or 8 pin and install it at his own expense.