



**1-800-548-6469**

**1-605-352-6469**

**780 West Park Avenue NW, Huron, SD 57350**

**www.overbuilt.com**



### Standard Features

- ⇒ No set-up time, just lower the lid and drive away.
- ⇒ Diesel engine. With safety shutdown gauges, electric idle up, cold weather package including a headbolt heater, heavy-duty air cleaner and heavy-duty radiator.
- ⇒ 400-Gallon fuel tank. With the optional 12V-fuel transfer pump you can also fuel your loader with ease.
- ⇒ Advanced oil recovery system with dual sludge traps, water separating valve and 400 gallon 'on board' waste oil storage tank.
- ⇒ After sandblasting we apply a 2-part urethane primer, then finish with a UV resistant 2-part urethane top coat. This automotive like finish will keep that machine looking like new for years to come.
- ⇒ Safety locks that can easily be placed to prevent the deck from falling.
- ⇒ Valves and engine controls are located in a lockable cabinet that also offers additional storage.
- ⇒ Marker lights on either side of the crushing chamber are spring mounted.

### Specifications

#### **Crusher Opening:**

Height (raised)	10'
Height (lowered)	24"
Width	7'6"
Length	20'3"
Travel	8'

#### **Cylinders:**

Bore	10"
Rod	4"
Travel	96"
Pressure	2500psi
Crushing Force	159 Tons

#### **Overall:**

Weight	60,000lbs
Length	43'
Travel Height	13'5"
Ground Clearance	16"

### Optional Oil Bypass System with 2-1/2" cylinder ports

Most manufacturers prefer to use lots of horsepower to make their crushers work fast. At OverBuilt, we prefer to use a little physics instead.

The high-speed option includes a 2-1/2" pilot operated valve and cylinders that have 2.5" oil ports. This bypass system allows oil to be transferred between the top and bottom cylinder ports, without having to go back through the main control valve.

When you raise the deck 27 gallons of hydraulic oil in the top of the cylinder transfer to the bottom. Add only 5 gallons of oil from the pump and in just 8 seconds you've put 32 gallons of oil in the bottom of the cylinder. Raising the deck in just 8 seconds is even more impressive when you consider we have 2 foot more stroke than most crushers. This puts your actual cylinder port oil flow at over 200 gallons per minute.

Going down, oil in the bottom of your cylinder is forced into the top. Since there is more oil in the bottom than the top, the excess oil is sent back to the tank. With the high-speed system we are able to move the deck up or down at about 1 foot per second, compared to just inches per second with a standard system.

A small metering valve allows you to adjust the distance the lid falls in the high-speed mode. The factory setting is 4 feet, after which the deck lowers the final 4 feet at the slower crushing speed.



# CYLINDER DESIGN

**FACT:** Cylinders are weakest when the load is being pushed and the rod is almost fully extended

- The design of our crusher allows us to maximize the cylinders strength by applying the crushing force in the retract (pull) stroke.
- Lowering our lid increases the distance between the top of the cylinder and the bottom of the piston. This means that the cylinders are getting stronger as the lid lowers.
- On push type crushers the opposite is happening.

## Cylinder strength lies in the use of wear guides

- Because of their hardness wear guides cannot be compressed.
- This allows them to act as **linear bearings** between the internal moving part of the cylinder.
- Wear guides allow the cylinder parts to maintain very close tolerances even after years of use.
- Seals and wipers are made of a soft material. When installed without adequate wear guides they can be compressed causing misalignment and metal to metal contact.

## An OverBuilt Piston has two 1" wear guides

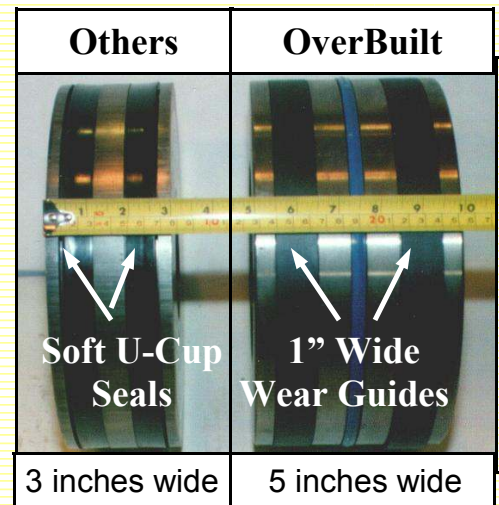
### The wider the bearing surface the stronger the cylinder

As you can see, with the OverBuilt piston design, we use two wear guides located on the outer edges of the piston.

This will significantly reduce any tendency for the piston to rock.

By keeping the piston properly aligned in the cylinder we can avoid damage to the honed tube and the piston itself.

Pistons without wear guides can rock in the cylinder, scarring the piston as well as the delicately honed inner surface.

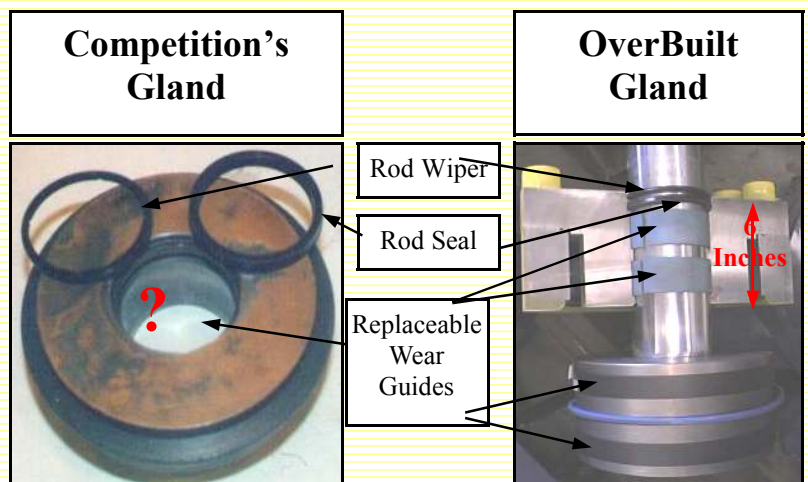


## An OverBuilt Gland has two 1-3/4" wear guides

The design of the gland is very Important. We use a 6" deep gland, this serves two purposes:

- ⇒ Increases the bearing length, allowing the use of two-1.75" wear guides.
- ⇒ Increases the minimum distance between the top of the gland and the bottom of the piston. This distance is very important, the greater the distance the stronger the cylinder.

Some glands we have seen don't even have replaceable wear guides.



# Remote Control

Lowest the operating cost by allowing the Loader operator to also operate the crusher

## Transmitter

- Two automatic crushing cycles, flat and rock.
- Individual up and down cylinder control buttons.
- Auto up cycle.
- Water-resistant transmitter & receiver enclosures.
- Emergency stop.
- Runs on 9V Battery.
- Engine Start/Stop switch. Stop or start the engine from the hand-held transmitter.

## Additional Features

- Automatic engine idle down.
- Automatic cycle can be operated from valve box.
- Emergency limit switch shutdown feature.
- Manual control levers on the valves.

## For Safety:

- Horn sounds during auto cycles.
- Emergency stop.
- Safety locks to keep the lid from falling.



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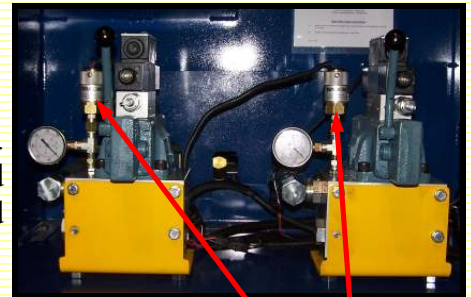
[www.overbuilt.com](http://www.overbuilt.com)

email: [sales@overbuilt.com](mailto:sales@overbuilt.com)



# Control Cabinet and Receiver

- Lets you run the flat and rock cycles without the transmitter.
- Double insulated from shock and vibration.
- Water tight connectors and switches.
- Connections are crimped and soldered.
- Cord ends are soldered and sealed with non-corrosive silicone.
- Modular design puts all the components in one 6"x 8"x 4" enclosure. If service is needed simply replace with a loaner from OverBuilt and send in the old one for repair. The Receiver can usually be swapped out in less than 10 minutes and involves just 4 bolts and 3 cords.



## Pressure Switches

Controls the lid on the down stroke.

These switches are set at 2400 psi which equates to 159,000 Pounds of force per side for a total crushing force of 159 Tons. When this pressure is achieved the pressure switch closes and tells the microprocessor to raise the lid.

- Easy to adjust with indicator lights that tell what pressure they are set at.
- Placed behind a snubber to reduce shock
- Rugged and Reliable



## Rocker Switches

Controls the lid on the up stroke.

Rocker Switches cost more to install when compared to using pressure switches, But the benefits are substantial.

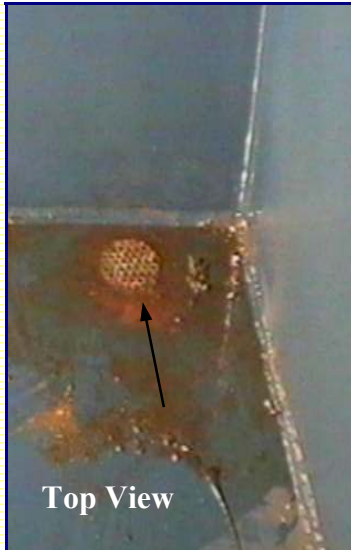
### Save Fuel, Wear and Tear

- The engine idles down as soon as the lid hits the switch.
- This keeps the engine and pump from having to build 1000-1500 psi in each cylinder, before idling down.
- Most importantly it keeps the cylinder from 'TOPPING OUT' this constant hammering of the piston to the bottom of the gland can cause the rod to eventually



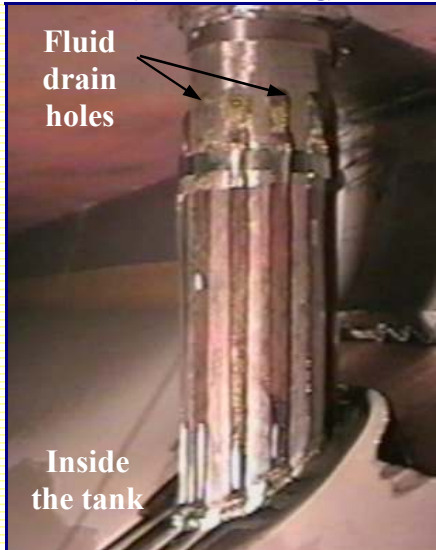
# Advanced Oil Recovery System

(Patent Pending)



Top View

Fluid and Debris fall into one of two sludge trap drain covers on either side of the crusher.



Inside the tank

The heavier particles fall to the bottom of the trap. The fluid fills the trap and then overflow into the 400-gallon storage tank.



Below the tank

You can open the ball valve to clean out the sludge trap or remove the access cover to clean out



**Water is heavier than oil.**

A ball valve at the bottom of the storage tank, allows you to remove the water, before pumping out the waste oil.

## Standard Features

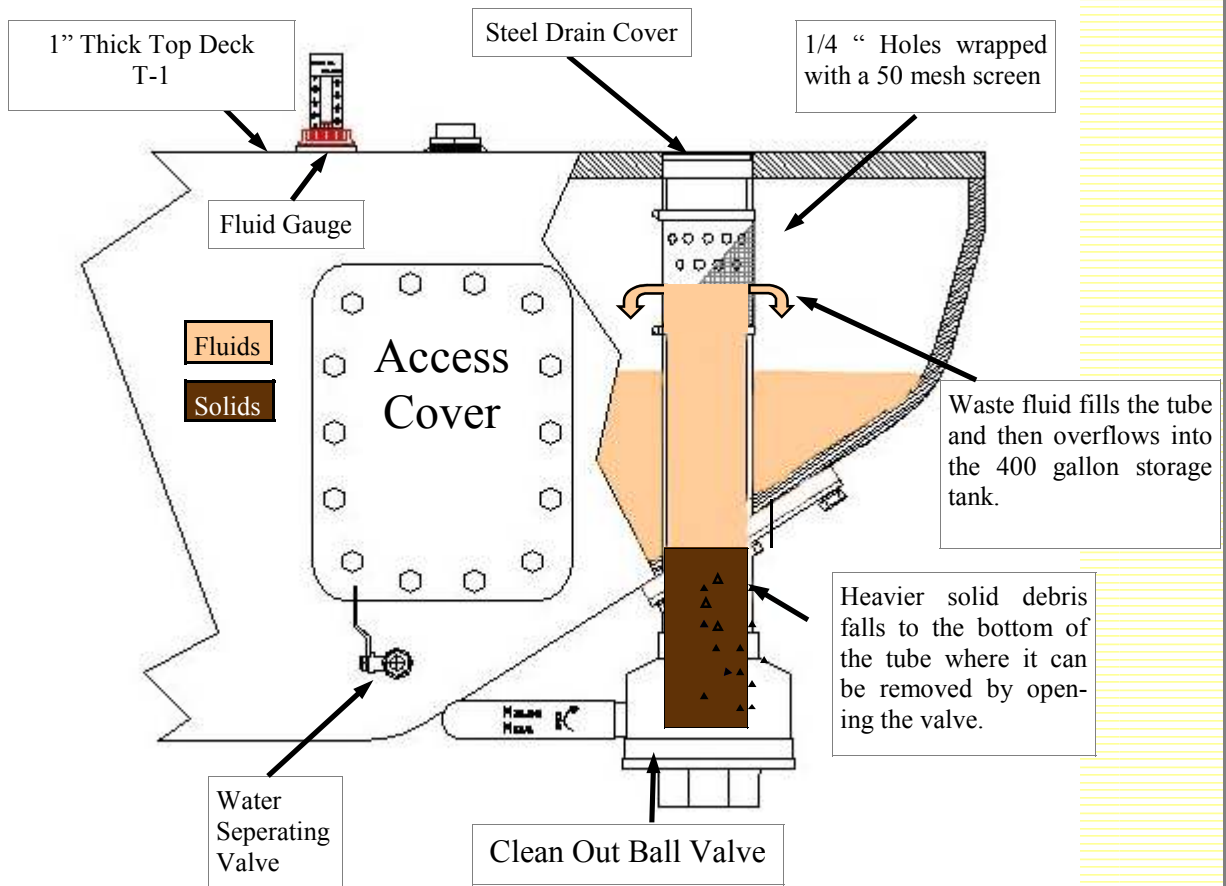
- Two sludge traps.
- Water separating valve.
- 400-Gallon on-board storage tank.
- 4 - access covers for easy maintenance.
- The fluid that overflows is filtered through a 50-mesh stainless steel screen.
- We provide extra screens and steel drain covers.
- Fittings allow you to use a standard barrel pump to remove the waste oil.



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Huron, SD

## Cut-away view of sludge trap



Another simple solution





# OverBuilt Options



## Hydraulic Landing Gear

Heavy duty landing gear with large pads (16" x 23")



## Air Compressor

120 gallon reservoir, filter, regulator, automatic oiler, and 100' of half-inch hose on a spring retractable reel



## Auxiliary Fuel Pump

Lockable cabinet with a 12 volt fuel pump and hose, lets you fuel your loader from the crusher's huge 400-gallon fuel tank.



## High Speed Oil Bypass System

High-Speed oil bypass system with 2.5" bypass valves and cylinder ports. The High Speed system speeds up the cycle time of the car crusher.

See the bottom of page 1 for more details.

**OverBuilt** INC