



DRUM CRUSHER

Drum Crusher - ToronDC™

Drum crusher flattens steel and oil drums up to 200 litres into 100 mm plates, cutting the volume a spent drum occupies to roughly a quarter. Torontech supplies the ToronDC™ as a 20 ton unit with a 760 by 760 mm chamber and a 26 second cycle. The machine measures 1,000 by 1,050 mm on the floor, stands 2,800 mm tall, and weighs 1,000 kg. A 7.5 kW hydraulic package drives the press.

Spikes set into the press plate puncture the drum as compression begins. That step matters more than it sounds. A closed drum is a sealed cylinder, and compressing one without venting traps air that pressurizes and can throw the drum sideways instead of flattening it. Puncturing also lets residual liquid drain rather than being forced out under pressure.

An optional liquid receiver mounts beneath the chamber to collect whatever drains during crushing. Scrap yards, drum reconditioners, chemical plants, and lubricant distributors all use the machine. A spent drum becomes flat steel that stacks on a pallet and sells by weight. Handling, storage, and freight get simpler at the same time.

APPLICATIONS

Drum Crusher - ToronDC™ Applications

The ToronDC™ suits operations that accumulate empty steel drums faster than they can move them out whole.

- **Scrap Metal Yards:** flattens incoming drums into stackable plate that ships at useful density rather than as bulky empties
- **Drum Reconditioning Operations:** reduces drums judged beyond reconditioning, keeping the reject stream out of the yard
- **Lubricant and Oil Distribution:** handles the steady return flow of empty oil drums at depots and blending plants

- **Chemical Manufacturing and Blending:** compacts drums after they meet the empty-container criteria that apply locally
- **Paint and Coatings Production:** flattens spent resin, solvent, and pigment drums once residues are removed
- **Food and Beverage Processing:** handles drums from concentrate, oil, and ingredient deliveries
- **Waste Management and Transfer Stations:** reduces drum volume before onward transport to processors
- **Ports and Marine Terminals:** consolidates the drums accumulating from bunkering and ship supply operations
- **Mining and Remote Site Operations:** compacts fuel and lubricant drums where backhaul capacity is limited and costly



Standards

Torontech builds the ToronDC™ to the safety conventions expected in North American and European facilities. The design uses an anti-rebound gate structure aligned with European and U.S. practice, a start interlock that blocks the motor unless the door is closed, a ram stop on door opening, and an independent emergency stop. The supplier states the machine is for drums without explosive content. Operators remain responsible for confirming that drums meet the empty-container criteria applicable in their jurisdiction before crushing.

FEATURES

Drum Crusher - ToronDC™ Key Features

The ToronDC™ combines the force to fold a steel drum with the venting and interlocks that make the operation controlled.

- **Puncturing Spikes in the Press Plate:** open the drum as compression starts, releasing trapped air and letting residual liquid drain rather than spray
- **20 Ton Press Force:** enough to carry a 200 litre drum past initial buckling and flatten it to a uniform 100 mm plate
- **26 Second Cycle Time:** a full crush and unload sequence short enough to keep pace with a steady drum flow
- **Optional Bottom Liquid Receiver:** a tray beneath the chamber collects drainage for controlled disposal instead of letting it reach the floor
- **Door-Closed Start Interlock:** the motor will not run unless the door is closed, removing a common source of unintended operation
- **Door Open Ram Stop:** downward platen travel halts the moment the door opens, keeping hands clear of the compaction zone
- **Independent Emergency Stop:** a dedicated, prominently mounted circuit cuts hydraulic function apart from the main control system

- **Anti-Rebound Gate Structure:** built to European and U.S. safety practice, holding the compressed drum in place and blocking uncontrolled door movement
- **760 by 760 mm Chamber:** accommodates a full-diameter drum without the operator needing to position it precisely
- **NOK Hydraulic Seals:** Japanese-sourced sealing components extend service intervals and reduce seal replacement downtime
- **A.M.C. Oil Pipe Joints:** Japanese-made fittings hold hydraulic connections leak-free in an environment where drum residues reach the machine
- **Compact 1,000 by 1,050 mm Footprint:** fits in a yard corner or a drum staging area without dedicating a bay to it

THEORY & METHOD

Theory and Method

A steel drum resists crushing far less than its size suggests, because thin-walled cylinders fail by buckling rather than by yielding. The wall of a 200 litre drum is roughly a millimeter thick. Once axial load passes the point where that wall can no longer hold its curvature, it folds into concertina patterns at a stress far below what bulk deformation would need. The 20 ton rating gives margin beyond initial collapse, flattening the drum to a consistent 100 mm.

Trapped air is the real obstacle. Compressing a sealed cylinder raises internal pressure, and the drum will find the weakest path out, which may be a seam splitting sideways or the whole unit ejecting from under the platen. Spikes in the press plate open the drum before pressure can build, converting a sealed vessel into an open one. The same holes let residual liquid drain downward into the optional receiver instead of spraying from a rupture.

Residual contents determine whether crushing is safe at all. A drum that held flammable liquid retains vapor in the headspace long after it looks empty. Mechanical energy from puncturing and folding steel is more than sufficient as an ignition source. That is why the supplier limits the machine to drums without explosive content, and why the drum's history matters more than its appearance before it goes into the chamber.

TECHNICAL SPECIFICATIONS

Drum Crusher - ToronDC™ Technical Specifications

Parameter	Specification
Press Force	20 tons (approx. 196 kN)
Drum Capacity	Up to 200 litres, without explosive content
Crushing Chamber Size (L × W × H)	760 × 760 × 1,100 mm
Crushed Output Size (L × W × H)	760 × 760 × 100 mm
Unload Cycle Time	26 seconds
Motor Power	7.5 kW
Machine Weight	1,000 kg
Overall Dimensions (L × W × H)	1,000 × 1,050 × 2,800 mm
Liquid Receiver	Optional, bottom-mounted
Materials Handled	Steel drums, oil drums, paint drums



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