RAM FLAT® Compactors allow their users to significantly reduce their costs to dispose of hazardous and radioactive waste. This is done by reducing the volume of the waste by compacting the material right into the drum.

Only interested in crushing empty drums? No problem. Some of the *RAM FLAT Compactor* models are designed specifically to crush empty drums into metal pancakes. But the real bonus is the ability to configure one *RAM FLAT Compactor* to both crush empties and to compact waste into drums.

RAM FLAT MEANS QUALITY

For over twenty-five years we have designed *RAM FLAT Compactors* around these quality parameters:

- Top Quality, USA made electrical, hydraulic & pneumatic componentry
- Easy to use controls: Down, Up & Emergency Stop. Bottom Stop optional
- Adjustable compaction Pressure
- · Completely enclosed crushing chamber
- Interlocked safety chamber door for operator safety
- Unitized, welded-body construction
- Liquid tight electrical conduit, all steel hydraulic tubing
- Oil-tight 115v push button controls
- Large oil reservoir for efficient cooling of the hydraulic circuit and seal protection

FLEXIBLE DESIGN

With field proven experience in compacting materials like paint filters, radioactive lab waste and even simple product destruction, the *RAM FLAT Compactor* has the ability to be customized to meet your application. Some of the customized options we have designed include:

- Multiple drum sizes with single machine
- Bolt on Crushing Plate for drum crushing
- Remote location machine controls
- Programmable machine controls
- Ergonomic sensitive drum handling system
- Drum piercing & drainage
- Provisions for outside installations
- · Air Filtration (particulate & vapor)
- Liquid removal from the compacted waste
- Waste spring back management
- Non-sparking surfaces
- · Stainless Steel construction

HAZARDOUS LOCATIONS

For explosion-proof locations, we offer two unique control designs which reduce the need for bulky and expensive electrical fittings and enclosures:

- Hydraulic Controls: electric controls and interlocks are replaced with non-sparking hydraulic control logic
- Pneumatic Controls: electric controls and interlocks are replaced with non-sparking pneumatic control logic

Standard explosion-proof designs feature a Class 1, Div. 1, Group D electrical motor.



S & G Enterprises, Inc.

N115 W19000 Edison Dr. Germantown, WI 53022

Tel: (262) 251-8300 (800) 233-3721

Fax: (262) 251-1616 www.ramflat.com

55A, 55AR & 85AR

Built for continuous duty & demanding applications

- 85,000 lbs. hydraulic force for inside drum compaction/drum crushing
- 55AR & 85AR have extra large drum clearance for material overfill
- 85AR = up to 85 gal. drums / 55A & 55AR = 55 gal. drums
- 6" cylinder with 5" chrome rod
- Lateral support rods minimizes piston rod stress
- .375 Steel Plate Crushing Chamber with 1.5" thick base plate
- 1" Steel Compaction Head with reinforcing gussets
- Positive Displacement Piston Pump for consistent cylinder travel speed



Model	55A		55AR		85AR	
Compaction Chamber Height	38.5"	97.8cm	50.5"	128.3cm	50.5"	128.3cm
Compaction Chamber Width	32.5"	82.6cm	32.5″	82.6cm	36"	91.4cm
Door Opening Width	27"	68.6cm	27"	68.6cm	29"	73.7cm
Full Cycle Time	65 sec.		81 sec		81 sec	
Machine Depth	39"	99.1cm	39″	99.1cm	43"	109.2cm
Machine Width	36"	91.4cm	36"	91.4cm	40"	101.6cm
Overall Machine Height	106.25"	270.0cm	130.25"	331.0cm	130.25"	331.0cm
Electric Motor	10 HP	7.5kW	10 HP	7.5kW	10 HP	7.5kW
Ship Weight Including Oil	3525 Lb.	1600 kg	3870 Lb.	1755 kg	4170 Lb.	1892 kg

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RAM FLAT MEANS QUALITY

For over twenty-five years we have designed *RAM FLAT Compactors* around these quality parameters:

- Top Quality, USA made electrical, hydraulic & pneumatic componentry
- Easy to use controls: Down, Up & Emergency Stop. Bottom Stop optional
- Adjustable compaction Pressure
- · Completely enclosed crushing chamber
- Interlocked safety chamber door for operator safety
- Unitized, welded-body construction
- Liquid tight electrical conduit, all steel hydraulic tubing
- Oil-tight 115v push button controls
- Large oil reservoir for efficient cooling of the hydraulic circuit and seal protection

FLEXIBLE DESIGN

With field proven experience in compacting materials like paint filters, radioactive lab waste and even simple product destruction, the *RAM FLAT Compactor* has the ability to be customized to meet your application. Some of the customized options we have designed include:

- Multiple drum sizes with single machine
- Bolt on Crushing Plate for drum crushing
- Remote location machine controls
- Programmable machine controls
- Ergonomic sensitive drum handling system
- Drum piercing & drainage
- Provisions for outside installations
- Air Filtration (particulate & vapor)
- Liquid removal from the compacted waste
- Waste spring back management
- Non-sparking surfaces
- · Stainless Steel construction

HAZARDOUS LOCATIONS

For explosion-proof locations, we offer two unique control designs which reduce the need for bulky and expensive electrical fittings and enclosures:

- <u>Hydraulic Controls:</u> electric controls and interlocks are replaced with non-sparking hydraulic control logic
- <u>Pneumatic Controls:</u> electric controls and interlocks are replaced with non-sparking pneumatic control logic

Standard explosion-proof designs feature a Class 1, Div. 1, Group D electrical motor.



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55E, 55ER

Built for medium to heavy duty applications & volume

- 60,000 lbs. hydraulic force for inside drum compaction/drum crushing
- 55ER has extra large drum clearance for material overfill
- 5" NFPA cylinder with 3.5" chrome rod
- .188 Steel Plate Crushing Chamber with 1" thick base plate
- 1" Steel Compaction Head with reinforcing gussets
- Positive Displacement Piston Pump for consistent cycle times



Model	55E		55ER	
Compaction Chamber Height	38.0"	96.5cm	50.0″	127.0cm
Compaction Chamber Width	32.5"	82.6cm	32.5"	82.6cm
Door Opening Width	27"	68.6cm	27"	68.6cm
Full Cycle Time	41 sec.	_	58 sec	_
Machine Depth	39″	99.1cm	39"	99.1cm
Machine Width	36″	91.4cm	36"	91.4cm
Overall Machine Height	103.0"	261.6cm	128.0"	325.1cm
Electric Motor	10 HP	7.5kW	10 HP	7.5kW
Ship Weight Including Oil	3140 Lb.	1424kg	3440 Lb.	1560kg

RAM FLAT Compactors allow their users to significantly reduce their costs to dispose of hazardous and radioactive waste. This is done by reducing the volume of the waste by compacting the material right into the drum.

Only interested in crushing empty drums? No problem. Some of the *RAM FLAT Compactor* models are designed specifically to crush empty drums into metal pancakes. But the real bonus is the ability to configure one *RAM FLAT Compactor* to both crush empties and to compact waste into drums.

RAM FLAT MEANS QUALITY

For over twenty-five years we have designed *RAM FLAT Compactors* around these quality parameters:

- Top Quality, USA made electrical, hydraulic & pneumatic componentry
- Easy to use controls: Down, Up & Emergency Stop. Bottom Stop optional
- Adjustable compaction Pressure
- Completely enclosed crushing chamber
- Interlocked safety chamber door for operator safety
- Unitized, welded-body construction
- Liquid tight electrical conduit, all steel hydraulic tubing
- Oil-tight 115v push button controls
- Large oil reservoir for efficient cooling of the hydraulic circuit and seal protection

FLEXIBLE DESIGN

With field proven experience in compacting materials like paint filters, radioactive lab waste and even simple product destruction, the *RAM FLAT Compactor* has the ability to be customized to meet your application. Some of the customized options we have designed include:

- · Multiple drum sizes with single machine
- · Bolt on Crushing Plate for drum crushing
- · Remote location machine controls
- Programmable machine controls
- Ergonomic sensitive drum handling system
- · Drum piercing & drainage
- · Provisions for outside installations
- · Air Filtration (particulate & vapor)
- Liquid removal from the compacted waste
- Waste spring back management
- Non-sparking surfaces
- Stainless Steel construction

HAZARDOUS LOCATIONS

For explosion-proof locations, we offer two unique control designs which reduce the need for bulky and expensive electrical fittings and enclosures:

- <u>Hydraulic Controls:</u> electric controls and interlocks are replaced with non-sparking hydraulic control logic
- <u>Pneumatic Controls:</u> electric controls and interlocks are replaced with non-sparking pneumatic control logic

Standard explosion-proof designs feature a Class 1, Div. 1, Group D electrical motor.



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55LR

Built for medium duty, lightweight wastestreams

- 20,000 lbs. hydraulic force for inside drum compaction
- Ideal for handling Low-level radioactive waste
- 55LR has large drum clearance for material overfill
- Exhaust Collar for chamber ventilation
- 3.25" NFPA cylinder with 2" chrome rod
- .179 Steel Plate Crushing Chamber with 1" thick base plate
- .5" Stainless Steel Compaction Head with tapered top cone
- Regenerative Hydraulic Circuit for fast cycle times



Model	55LR		
Compaction Chamber Height	48.0"	121.9cm	
Compaction Stroke Length	35.0"	88.9cm	
Compaction Chamber Width	32.5"	82.5cm	
Door Opening Width	27"	68.6cm	
Full Cycle Time	40 sec.		
Machine Depth	39″	99.1cm	
Machine Width	36"	91.4cm	
Overall Machine Height	99.75"	235.4cm	
Electric Motor	7.5 HP	5.6kW	
Ship Weight Including Oil	2160 Lb.	980kg	

· Optional drum roll out dolly shown in photo above.

RAM FLAT® Compactors allow their users to significantly reduce their costs to dispose of hazardous and radioactive waste. This is done by reducing the volume of the waste by compacting the material right into the drum.

Only interested in crushing empty drums? No problem. The Model 55SC RAM FLAT Compactor includes the ability to compact waste into a drum and crush drums. Nothing else to buy.

RAM FLAT MEANS QUALITY

For over twenty-five years we have designed RAM FLAT Compactors around these quality parameters:

- Top Quality, USA made electrical, hydraulic & pneumatic componentry
- Easy to use controls: down & up with a single control lever
- Inside-the-drum compaction head and drum crushing plate
- · Completely enclosed crushing chamber
- Interlocked safety chamber door for operator safety
- Liquid tight electrical conduit, all steel hydraulic tubing
- Large oil reservoir for efficient cooling of the hydraulic circuit and seal protection

FLEXIBLE DESIGN

With field proven experience in compacting materials like paint filters, radioactive lab waste and even simple product destruction, the *RAM FLAT Compactor* has the ability to be customized to meet your application. Some of the customized options we have designed include:

- Multiple drum sizes with single machine
- Ergonomic sensitive drum handling system
- Drum piercing & drainage
- Provisions for outside installations
- · Air Filtration (particulate & vapor)
- Liquid removal from the compacted waste
- · Waste spring back management
- Non-sparking surfaces
- Stainless Steel construction

HAZARDOUS LOCATIONS

For explosive-proof locations, we offer two designs:

- Model 55SC-EX; Motor starter housed in NEMA 7/9 explosion-proof enclosure; 3-HP motor rated for Class 1, Div. 1, Group D atmosphere
- Model 55SC-P; An air motor uses compressed air of 100-PSI at 130-SCFM to power the hydraulic pump. Eliminates the need for expensive electrical motor hook-up

E I I I C I

S & G Enterprises, Inc.

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Fax: (262) 251-1616 www.ramflat.com

55SC

Priced for the small volume generator

- 40,000 lbs. hydraulic force for inside drum compaction/drum crushing
- 55SC features clearance above drum for drum overfill
- Single Hydraulic Control Lever, semi automatic cycle
- 4" NFPA cylinder with 2.5" chrome rod
- Reinforced steel Crushing Chamber with 1" thick base plate
- 1" Steel Compaction Head with drum crushing plate included
- · Two stage gear pump



Model	55SC		
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Compaction Chamber Height	43.0"	109.0cm	
Compaction Chamber Width	27.0"	69.0cm	
Door Opening Width	26"	66.0cm	
Full Cycle Time	115 sec.	-	
Machine Depth	31.25"	79.0cm	
Machine Width	30.25"	77.0cm	
Overall Machine Height	107.0"	272.0cm	
Electric Motor	3 HP	2.2kW	
Ship Weight Including Oil	1800 Lb.	817 kg	

RAM FLAT® AIR FILTRATION SYSTEMS

For protection of the operator's environment, *RAM FLAT* offers several standard and customized Air Filtration Systems for research and industrial applications alike.

Individually designed to be used with any RAM FLAT Compactor model, the **CRN** and **HANC**Air Filter Systems will remove harmful particulate, dangerous vapors - or both.

COMPLETE DESIGN

- A <u>minimum</u> of 100 FPM (feet-per-minute) air velocity when the crushing chamber door is open, the same as a fume hood!
- Interlocked blower control with the RAM FLAT Compactor Controls
- A course pre-filter is included to extend the useful life of the HEPA filter or Charcoal Adsorber trays
- Choose where you want the Air Filter housing to be installed in relation to the RAM FLAT Compactor
- A large air inlet and plenum design assures an even dispersion of air against the filter element
- A vibration isolation connection is included to connect the RAM FLAT to the filter housing
- A manometer is included to constantly monitor the static pressure across the filters
- · Explosion-proof blower motors are available

SYSTEM CHOICES

CRN:

 Featuring a full 4 square feet of Industrial grade HEPA (High Efficiency Particulate Absolute) filter elements, the CRN removes airborne particulate down to 0.3μm (micron) in size at 99.97% efficiency.

CRN-C

 Engineered with eight removable trays of activated charcoal, the CRN-C effectively adsorbs odors and vapors.
Options include elements for the collection of mercury or radioactive isotopes.

CRN-HC:

 For applications calling for both particulate and vapor control, the CRN-HC situates the HEPA filter elements and eight trays of charcoal, in series for maximum protection.

HANC:

 Designed to adhere to the ANSI-N510 standards, this nuclear grade filter system will handle the most demanding applications. Features include Bag-in/ Bag-out, laminar flow, DOP testing ports and filter monitoring lights.



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Air Filtration Systems Comparison Chart

Model	CRN	CRN-C	CRN-HC	HANC
Application	Particulate	Vapor	Particulate & Vapor	Particulate & Vapor
Air Velocity	100 FPM (min.)	100 FPM (min.)	100 FPM (min.)	100 FPM (min.)
Air Flow	800 CFM (min)	800 CFM (min)	800 CFM (min)	1330 CFM (min)
90% Pre-Filter	2 x 24 x 24 inch	4 x 24 x 24 inch	2 x 24 x 24 inch	4 x 24 x 24 inch
99.97% HEPA Filter	11.5 x 24 x 24 inch	not applicable	11.5 x 24 x 24 inch	11.5 x 24 x 24 inch
Charcoal Filter	not applicable	8, 1 x 18 x 18 inch	8, 1 x 18 x 18 inch	6, 1 x 16 x 24 inch
Inlet Collar Size	9 inch diameter	9 inch diameter	9 inch diameter	9 inch diameter
Blower Outlet	6.5 x 10.75 in.	6.5 x 10.75 in.	6.5 x 10.75 in.	5 x 4 in.
Blower Motor	1 HP, TEFC	1 HP, TEFC	2 HP, TEFC	2 HP, TEFC
Dimensions	67 L x 28 w	61 L x 28 w	102 L x 28 w	153 L x 30 w
Shipping Weight	390 pounds	590 pounds	790 pounds	1300 pounds





The RAM FLAT® Compactor family has a little crusher that packs a punch just like it's big brothers... introducing the Model 5P, an all air-powered pail crusher that makes short work of a big problem.

PAIL & CAN CRUSHER

Model *5P RAM FLAT* Compactor can reduce the volume of most containers by up to 90%! At 120 psi, a 17 inch tall 5 gallon pail becomes a 2.5 inch pancake while a 12 inch 1 gallon can is reduced to only 1 inch.

AIR POWERED

The pneumatic Model **5P** *RAM FLAT* Compactor only needs clean, dry compressed air. And because there is no electrical power needed, the Model **5P** is already explosion proof.

SIMPLE OPERATION

The container is placed inside the chamber and the safety interlock door is closed. The Model **5P** operates only when the door is closed and the Palm Button is depressed. When the Palm Button is released, the crushing head automatically returns to its start position.

AVAILABLE ACCESSORIES

<u>Air Regulator:</u> with an air line Lubricator and Filter. Also includes OSHA standard Safety Valve with a lock out/tag out valve (LOTO) to relieve air from the lines and cylinder.

Floor Stand: Forty inch high structural steel floor stand permits the operator to work at bench height. The stand also permits a 55 Gallon drum to be placed under the Model **5P** for easy disposal of the pails.



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The small compactor that does A BIG JOB



	U.S Standard	Int'l Standard
Crushing Force:	120psi = 6,000 lbs. 100psi = 5,000 lbs. 90psi = 4,500 lbs.	$8.4 \text{kg/cm}^2 = 2,722 \text{ kg}$ $7.0 \text{kg/cm}^2 = 2,268 \text{ kg}$ $6.3 \text{kg/cm}^2 = 2,041 \text{ kg}$
Cycle Times:	15 sec. at 120 psi 39 sec. at 90 psi	15 sec. at 8.4 kg/cm ² 39 sec. at 6.3 kg/cm ²
Chamber Dim:	14" door width 17" height	356 mm door width 432 mm height
Outer Dim:	16.125" wide 17.187" deep 44.125" high	410 mm wide 437 mm deep 1,121mm high
Shipping Weight:	275 lbs.	125 kg