

GEHL®



round balers

Jason Clark





Here is a new generation of TDC® — Total Density Control — balers from Gehl, with new convenience and benefit features and total baling versatility to make them the balers for use anywhere.

- New Super-Start lower bale forming rollers for quick, easy starts in just about any crop, whether it's grass or legume hay, slippery dry straw, tangled and shredded corn stalks, high moisture bales for balage, or any crop in between. The new ribbed steel lower rollers grab the crop and start the bales forming instantly, then continue to apply pressure to make sure the bales are evenly wrapped, perfectly formed, all the way through the baling cycle.

- Texturized upper belts with super flexibility, super strength, for greater belt and lacing life. The belts grab slippery crops for quick bale starts and help shape the bale evenly, uniformly, with gentler handling than chains or rollers.

- Simplified twine wrapping with the optional Auto-Electric Wrap system for automatic, consistent twine wrapping.

- TDC — Total Density Control for full baling control. This system is fully adjustable, allowing you to literally custom bale every bale if you want. And it's remarkably simple with fewer moving parts, greater control, and more versatility for making the kinds of bales you want in the crop conditions you have.

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TDC®

Total density control

Why TDC

Moisture levels in a crop can be a deciding factor in the quality of the finished bale. The ability to control the density of the bale itself can be the key to getting high quality hay. Lower density in the bales can be a must if moisture conditions are a little high. At the same time, when the crop is "just right," you'll want a tighter, more dense bale, with more crop in every bale.

TDC allows you to change the kind of bale you make as the conditions of your crop change. TDC, available only on Gehl round balers, is the simplest yet most totally versatile system available today for making quality bales every time in terms of density, appearance, and ability to weather.

How does it work?

There are really two control systems involved with TDC. One regulates the size of the bale core and the second controls the density of the outside wrap. This two-stage "air-draulics" system offers infinite options in the type of bales made.

The core

The operator can regulate the size of the bale core, anywhere from a few inches in diameter to over 3½ feet in diameter on the 1860. He'll want to regulate core size as moisture levels change...a small core for dry crops...a larger core as moisture levels rise, allowing the bale to cure properly.

The wrap

The density of the wrap, or the tightness, is adjustable independent of the core. By simply adjusting the hydraulic pressure on the "air-draulic" system, the operator can make very densely wrapped bales (if he's baling in low moisture conditions), or, he can reduce the density of the wrap for lighter, airier bales, if moisture levels are higher.

How much control is necessary?

That depends on the crop and the conditions. Moisture levels in your crop may change from day to day, from field to field. Even throughout the same day. These varied conditions can mean different core sizes, and different wrap densities may be required to get the high quality bale you want. **ONLY** TDC gives you the total flexibility to adjust the kind of bale you get for the conditions you're working under.

What about balage?

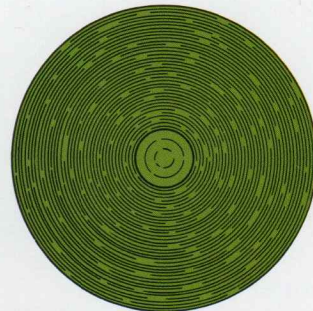
Research has shown the more dense your balage bale, the higher the quality of your end product. Only variable chamber balers can give you those densities. But if you start with a small, dense core, you could encounter difficulty spearing the bale for lifting and bagging.

Only Gehl TDC balers allow you to vary the core size so you can more easily penetrate the bale and still maintain a super dense wrap on the rest of the bale.

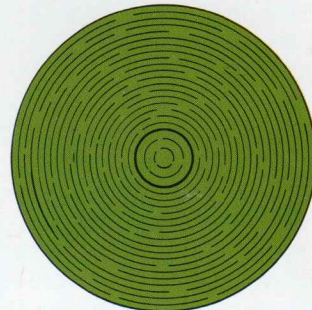
"Air-draulics"

Air pressure controls the formation of the bale core. The actual size of the bale core can be set by the adjustment of the hydraulic triggering mechanism.

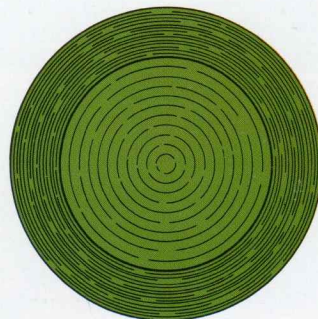
Once the hydraulics are activated, increased pressure takes over and controls the density of the outer wrap. This hydraulic pressure maintains belt tension on the bale. You can lower the pressure for less densely wrapped bales, or increase it to get more density with more crop in each bale. Either way you have total versatility and control in getting uniformly shaped bales that will stand up to weather, retain valuable nutrients, and hold their shape.



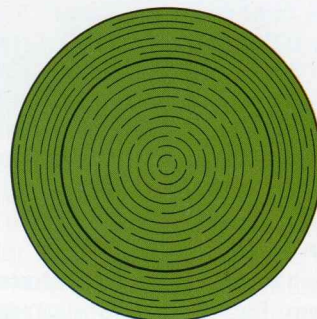
small core — high density wrap



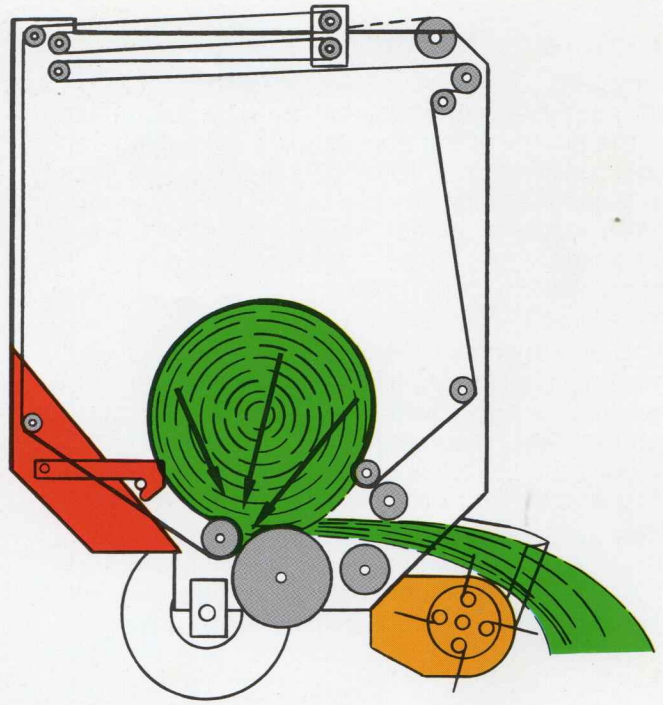
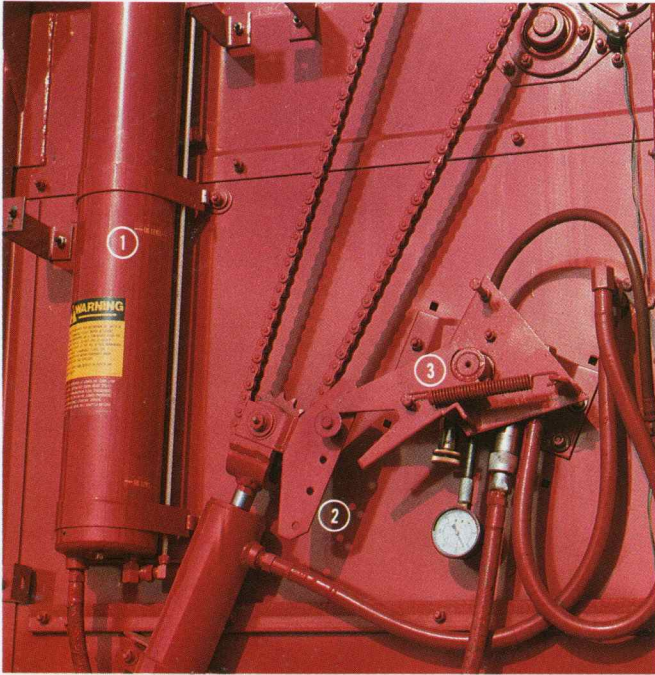
small core — low density wrap



large core — high density wrap



large core — low density wrap



“air-draulics”

The simple system

With TDC you take total control over the density, even the size of the round bales you make, all with one of the simplest systems available today.

Self-contained air and hydraulic — “air-draulic” — systems form the heart of Gehl TDC balers. There are no series of rollers and chains, just an air pressure tank and a self-contained hydraulic system.

The air pressure tank (1) controls the reduced belt tension during the critical bale starting period. As the core starts to roll, the additional belt required to wrap the growing core comes from the rearward movement of the shuttle. This moves the hydraulic triggering mechanism (2) upward.

The final size of the core will be determined by where you place the triggering mechanism. Moving it closer to the hydraulic valve will give a small bale core while positioning it further away, near the bottom of the plate, for example, will give a larger core. There are a number of settings to choose from.

When the core reaches the pre-set size you want, the triggering mechanism will trip the hydraulic valve (3). At this point hydraulic pressure takes command over the tension on the belts. The hydraulic pressure is adjustable for a wide number of pressure settings, thus a wide variety of densities in the final bale wrap. High moisture crops might be baled with a total hydraulic system pressure in the 350-400 psi range. Low moisture crops might be baled in the 600-650 psi range, giving you very tightly wrapped bales with high crop densities. The nice part about the entire system is that *you can change* the core size and the pressure on the wrap quickly and easily, according to the crop conditions you have.

(Note: Both the 1460 and the 1860 share the “air-draulics” system. Exact configuration may vary slightly between machines.)

Total crop compression

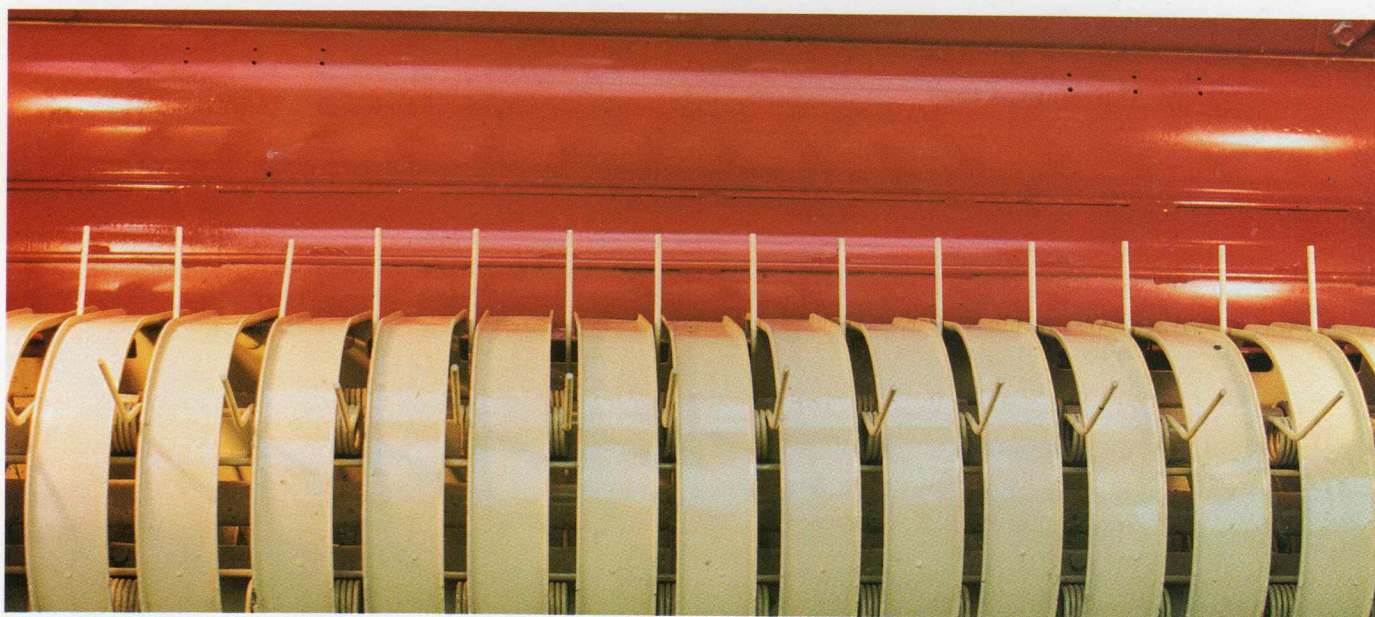
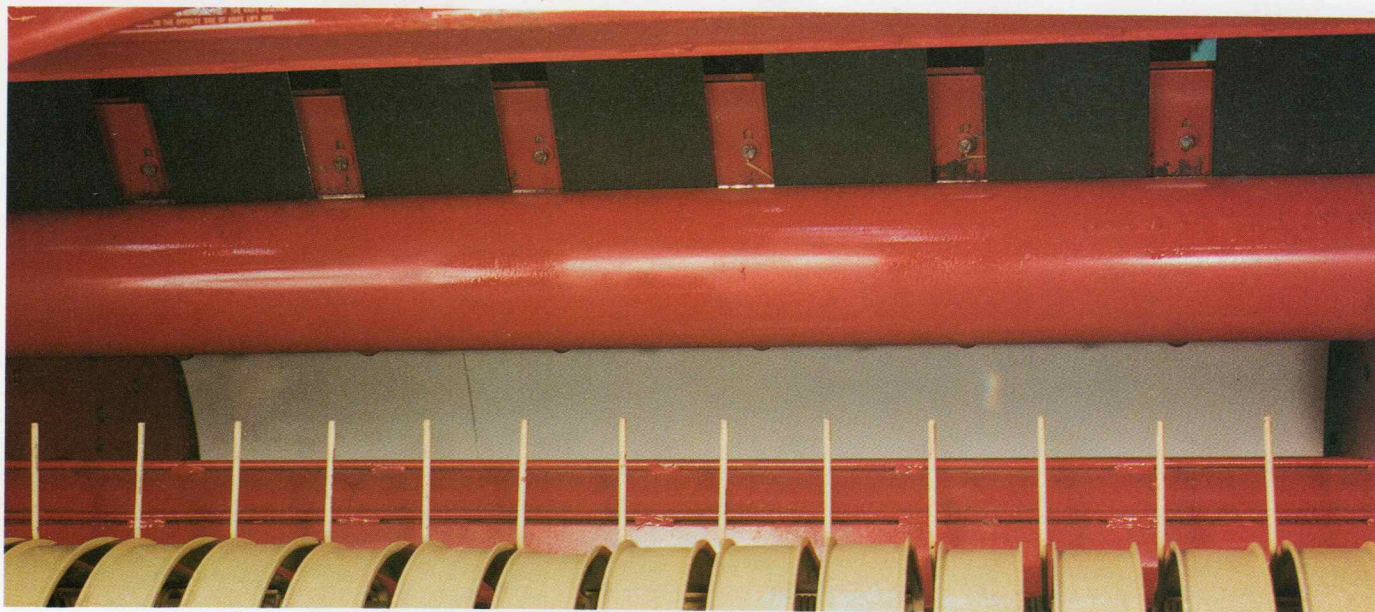
In addition to the uniform upper belt pressure provided by the “air-draulic” system, new Gehl “60-series” balers feature ribbed steel lower bale forming rollers and a 6” penetrating roll to assure quick starts and further increase density.

As material enters the baling chamber the front 8” bottom roller and rear 16” bottom roller feed the crop into the upper belts. As the bale grows in size, it is forced up onto the 6” penetrating roller. The weight of the bale itself compresses all incoming crop onto this roller. This concentration of pressure on the crop, plus the upper belt tension, generates the high bale density.



Crowder wheel option

Because of the bale forming rollers and the positive feed throat (see page 5) these balers will tackle the tallest and widest windrows. The crowder wheels are ground driven to pull in the edges of extra-wide windrows allowing you to get all the crop and still maintain high baling speeds.



NEW super start bale forming system

Two ribbed steel rollers form the heart of the bale formation chamber on the new 1460 and 1860 balers. The 8" front ribbed steel roller feeds crop from the pickup into the bale formation chamber. There, a 16" ribbed steel roller starts the crop rolling for fast, sure starts. Both rollers are mounted with heavy duty relube bearings and shafts.

Wide, positive feed throat design

The upper packing roller and the ribbed lower steel roller in the infeed area pull the crop from the pickup into the baling chamber. The wide opening (top photo shows compression roller fully lifted) allows you to maintain baling speeds even in heavy windrows and will allow the occasional "slug" of hay to enter without plugging the pickup area of the baler.



Adjustable bale ramps

These bale ramps are designed to give your big round bales a little extra boost as they are ejected from the baler. This allows the bales to clear the arc of the gate so you can go right back into your windrow again. No backing up required. It's all automatic.



Now you can wrap your bales automatically with increased twine wraps on the ends of the bales to hold your bales together for transport...all with the new, optional Auto-Electric Wrap system. This system includes an audible alarm that lets you know the bale has reached the size you wish and that the twine wrapping sequence has begun. After twine has begun feeding into the balers, push the "cycle" switch and the Auto-Electric Wrap system will handle the wrapping itself, wrapping the left side of the bale first, then move in pre-determined intervals along the bale, finish on the right side, then automatically cut the twine. The bale will be tightly wrapped and ready for ejection...time after time after time. Other wrap mechanisms include manually controlled electric or hydraulic. You select the one for you.

The Auto-Electric Wrap system can be over-riden for manual control and is programmed for 1860 or 1460 balers by a flip of a switch.

It also includes a bale counter and an illuminated "reminder" light to assure the rear gate is locked after the bale has been discharged.



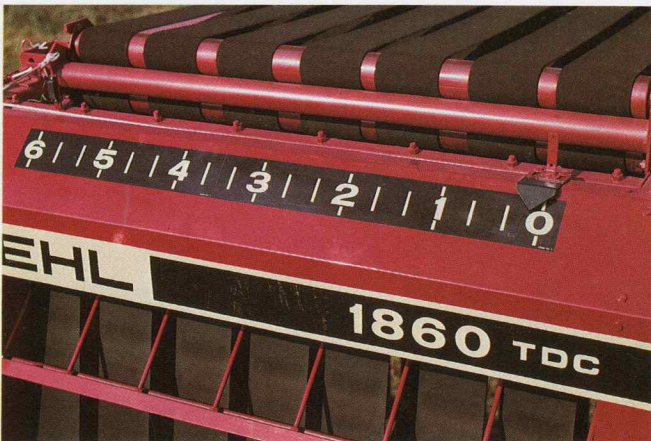
3-Ball twine box

This large, 3-ball twine box lets you bale and bale without worrying about running out of twine too soon after starting.



Round bale silage

The concept of baled silage, or balage, is rapidly growing as an alternative to regular baling. It's ideal when weather conditions are unfavorable for quality haymaking. Gehl balers, with their ability to make bales of various sizes in addition to nearly infinite densities, are the perfect balers for making balage.



Adjustable shuttle stops

Another versatility feature on these balers is the adjustable shuttle stops. They can be adjusted for reducing belt tension during the critical starting phase of making the bale, helping extremely difficult starting crops to begin rolling faster. The top-mounted bale size indicator allows you to consistently make bales the size you want, up to 72" on the 1860, 60" on the 1460.



Texturized belts

The belts on the 1460 and 1860 are slightly texturized and totally flexible. Because of their pliability, they wear longer than heavier, stiff belts offered on some other balers. The slight texturization assures better crop handling, particularly in slippery crops, and maintains better continual belt pressure on the bale for improved bale shape and more even rolling, reducing the chances of getting egg-shaped bales.



Specifications

(Specifications shown in inches (millimeters) unless specified otherwise)

1860

Power	60 hp minimum
	540 or 1000 rpm available
Height	109 (2769)
Length	174 (4420)
Width	96 (2438)
Pickup Width	72 (1829)
Weight (Approximate)	4450 lb (2021 kg)
Drawbar Tongue Weight	850 lb (386 kg)
Bale Diameter (Full Size)	72 (1829)
Bale Weight (Nominal)	2000 lb (908 kg)
Bale Width	61 (1549)
Tires	11L x 14, 6-ply

1460

Power	50 hp minimum
	540 or 1000 rpm available
Height	97 (2664)
Length	142 (3607)
Width	80 (2032)
Pickup Width	56 (1422)
Weight (Approximate)	3790 lb (1722 kg)
Drawbar Tongue Weight	800 lb (363 kg)
Bale Diameter (Full Size)	60 (1524)
Bale Weight (Nominal)	1000 lb (454 kg)
Bale Width	45 (1143)
Tires	9.5L x 14, 6-ply

Standard Features

(Common to both 1460 and 1860)

Four-bar closed reel pickup with crowder shields • Hydraulically operated rear gate • Adjustable drive line with shear bolt overload protection • Front PTO breakaway pedestal • Twine wrapping mechanisms less the actuating means • Bale size indicator • Self-contained hydraulic density control system • Adjustable bale discharge ramps • Upper belts textured both sides • Adjustable shuttle stops • Crop hold down for pickup • Fenders •

Optional Equipment

Auto-Electric Wrap system • Hydraulic cylinder and hose kit for hydraulic twine wrap system • Electric actuator, control box and wiring for electric twine wrap system • Dual hydraulic kit • Bale counter kit (included in Auto-Electric Wrap system) • 1000 rpm conversion kit • Crowder wheels • Flow control valve (for use with hydraulic twine wrapping system to extend cylinder fast and retract it slowly)

Note: The information contained herein is general in nature and is not intended for specific application purposes. Some equipment shown with optional equipment installed and specific shields may have been removed for illustration purposes only. Gehl reserves the right to make changes in specifications shown herein or add improvements at any time without notice or obligation.



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