SALFORD

Independent Series

History of the Patented Salford INDEPENDENT Series

Since 1978 Salford has been designing and building quality conventional tillage equipment. In 2001 Salford recognized that conservation tillage and no-till practices were on the rise in North America. Understanding that residue management was a critical challenge for these producers Salford began work on a tool that would help improve their soil productivity. 2003 saw the release of the Residue Tillage Specialist or RTS, and the advent of a whole new type of tillage machine. Being one the first companies to develop a residue management machine Salford took an innovative approach and developed the Coil-Tech Coulter. Blades are independently mounted on the spring loaded Coil-Tech.

In the years following the release of the RTS owners began to describe a series of unexpected benefits from residue management and seedbed preparation with the RTS.

Producers began pushing the machine into wetter field conditions where other tillage machines wouldn't dare go. The independently mounted blades would not plug. It became apparent that the Coil-Tech has effects on the soil that go much deeper than the working depth of the machine. When the spring loaded coulters cross the ground at 8 mph or more the vibration of the Coil-Tech drives cracks into the hard pan. These cracks allow surface moisture to infiltrate deeper into the ground, and other field operation can begin sooner. Farmers began to notice that their primary tillage tools require less horse power after a pass with the RTS, proving that along with the cracks overall soil density is being reduced by the Coil-Tech action. These effects would collectively come to be know as the "Jackhammer" effect. Many producers agree that the combination of re-sized, evenly distributed residue, warmer seedbeds, improved moisture storage and soil density reduction improve germination over conventional seedbed preparation tools.

In 2006 producers and Salford engineers began to use the durable high clearance RTS frame as a canvas for further innovations. The frame has been equipped with larger, more aggressive mounts and blades, and multiple attachments for seed and fertilizer application. These patented tools that combine independently mounted blades and multiple attachments have come to be known as Salford's Independent series.

At Salford we are always working to improve your experience. Specifications may change without notice.

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Blade mount	1 1/4" Coil-Tech
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Blade Spacing	7"
Hub	4 bolt

I-2100 Specs pg20	
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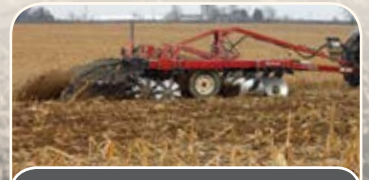
Blade mount	1 5/8" Coil-Tech II
Blade Type	22" x 5mm Coulter
Blade Spacing	7.5"
Hub	5 bolt

I-3100 Specs pg24	
Depth range	0" - 5"
Blade mount	Rubber Suspension
Blade Type	22" x 5mm Coulter
Blade Spacing	7.5"
Hub	5 bolt



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Depth range	0" - 5"
Blade mount	Rubber Suspension
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Blade Spacing	5"
Hub	5 bolt

Least ← Soil Disturbance (Residue Buried, Tillage Depth, Rut Leveling) → Most

The Value of Residue

Residue Management

Crop residue can present serious challenges. Residue complicates our ability to influence yield limiting factors such as heat, light and moisture. Residue can also interfere with efforts to manage pests such as weeds, insects and disease. However with the right tools the benefits of residue far outweigh the cost of residue management.

The Nutrient Value of Residue

As the cost of fertilizer continues to rise it is important to consider the nutrient value of crop residue and the cost required to replace those nutrients if residue is removed from the soil. Though actual amounts vary greatly, one acre of corn residue from a 155 bushel crop can contain as much as 48 lbs of nitrogen (N)*, 16 lbs of phosphorous (P_2O_5), 98 lbs of potassium (K_2O), and 6 lbs of sulphur (S). *N found in crop residue can take a significant amount of time to become available to new plants.

Building and Maintaining Healthy Soil

Left on the surface crop residue can significantly reduce wind and water erosion. Surface residue also helps retain soil moisture by reducing rain water run off and evaporation. As residue breaks down it adds to the soil's organic matter, which also increases soil's capacity to store moisture. The decomposed residue also adds organic carbon, critical for maintaining the appropriate carbon to nitrogen ratio for healthy plant development.

Respecting the Role of Soil Organisms

A complex eco system exists within soil. Macro organisms, such as worms and beetles, start the decomposition of crop residue by resizing residue and breaking open stover to introduce micro organisms. In turn select micro organisms, bacteria and fungi, start the process of mineralizing the nutrients found in residue. The mineralized nutrients are then available for plants to absorb.

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Improving Soil Productivity: Residue Management & Soil Density

Tillage, Residue and Soil Structure

Tillage can be critical to reduce compaction and eliminating horizontal layers in the soil that can prevent root systems and water from penetrating into the sub soil. However, if care is not taken, tillage machines can cause more problems than a troublesome mat of residue.

- Tillage can be responsible for creating density layers in the soil.
- Aggressive tillage can destroy the habitat for macro and micro soil organisms causing further delays in the decomposition of residue.
- Too much residue buried in the seedbed can interfere with germination
- Residue buried by tillage can take longer to decompose without the help of macro organisms, making nutrients unavailable for use by future crops.
- Clearing too much residue from the soil surface can increase soil erosion and cause soil to moisture to evaporate too quickly.

Working with Residue

Most of Salford's Independent series use independently mounted blades that enter straight into the ground, on 7.5" spacing. The blades slice through soil and residue as opposed to dragging and turning over the top layer of soil. After a single pass with most Independent series machines some roots that have passed between the 7.5" spacing and remain loosely anchored in the soil to prevent erosion. One pass with I-1100 leaves 50% or more of the soil's surface covered in residue preventing water erosion from rain and moisture loss from evaporation. The re-sized residue has been cut and crimped by the coulters, and mixed with some soil as the fluted blades loosen the surface. The conditioned residue begins to rapidly decompose, allowing micro-organisms to start mineralizing nutrients faster.

In spring seed bed preparation the vertically mounted blades and surface tillage action resist mixing residue into the seedbed, leaving a clean environment for germination. The loosened topsoil, warmed by the slightly darker surface allows plants to germinate faster and emerge uniformly.

Pictured above: Roots take from a Salford research plot administered and maintained by a 3rd party agronomist. On the right a root system growing into ground fall tilled with a Salford 9700 CTS and spring seedbed preparation with an I-1200. On the left a root system fall tilled by a chisel plow and spring seedbed preparation with a disc harrow. Avoiding vertical density layers, caused by not shattering between primary tillage shanks, or horizontal density layers created by discing or cultivating in wet or damp soil, is critical to root development and the overall yield potential of the plant.

The Jackhammer Effect: Fracturing the Soil

The Independent Series blade mounting systems drive cracks into the ground and loosen the surrounding soil without having to overturn and disturb the soil structure. The cracks allow air and moisture to infiltrate the soil. The additional oxygen gives new energy to aerobic micro-organisms, which in turn break down residue and build organic matter. Moisture is stored deeper in the soil and can be held by the additional organic matter. The cracks caused by the Jackhammer effect also allow crop root systems to penetrate deeper into the soil, providing a healthy foundation for the plant, and allowing it to reach down to additional moisture and nutrients.

Independent Series Range of Uses

The general purpose of the Independent series is the reduction of operating costs compared to conventional tillage systems, while at the same time improving the productivity of your soils through better management of yield limiting factors. The Salford Independent series is used for various fall and spring applications.

Designed for multiple purposes which include, but are not limited to, stalk chopping, cover crop management, crust breaking, mixing of herbicides, fertilizers and manure, and preparing a seedbed in conventional, conservation and no-till farming systems. When properly adjusted there is almost no limit for the use of the Independent series in any soil or residue conditions.

Spring Applications:

- Uniformly distribute and size residues to improve seeding equipment performance
- Loosen seedbed to improve seed to soil contact and improve germination and promote rapid early plant growth
- Shatter crust formed after planting and improve seedbed after planting
- Improve weed control through rapid uniform germination of weed seeds

Fall Applications:

- Residue management prior to primary tillage
- Cut and condition residue to assist with insect and disease habitat destruction
- Leveling & distribution of crop residue
- Speed up the decay of crop residue by promoting increased microbial activity
- Help balance the Nitrogen/carbon levels in soil
- Help germinate weeds and volunteer crops to maximize winter kill and improve the effect of herbicides

Late Fall Residue Management

Virtually No Residue Limitations

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Moisture Management & Seeding & Fertilizer Attachments

Moisture Management

- Evaporate excess surface moisture and increase the rate of soil warming to allow for earlier planting
- Break up any soil crusting to release excess soil moisture without disturbing the wet soil below
- Maintain residue coverage to prevent moisture evaporation, slow run off and prevent erosion
- Manage and increase soil organic mater content to capture and store more moisture
- Increase water infiltration by loosening soil bulk density
- Increase water infiltration by maintaining sub-soil habitat for macro soil organisms (Macro soil organisms loosen soil density and create paths for water and nutrients to travel through)
- Maintain residue coverage to reduce moisture evaporation

Seeding and Fertilizer Attachments

- Assist with incorporating fertilizer, manure and seed
- Application and incorporation of liquid and dry fertilizers, including NH3
- Broadcast and seeding of cereals, canola, hay and pasture crops
- Assist in the management of cover crops
- Seeding cover crops and winter cereals
- Mixing of manure and fertilizers

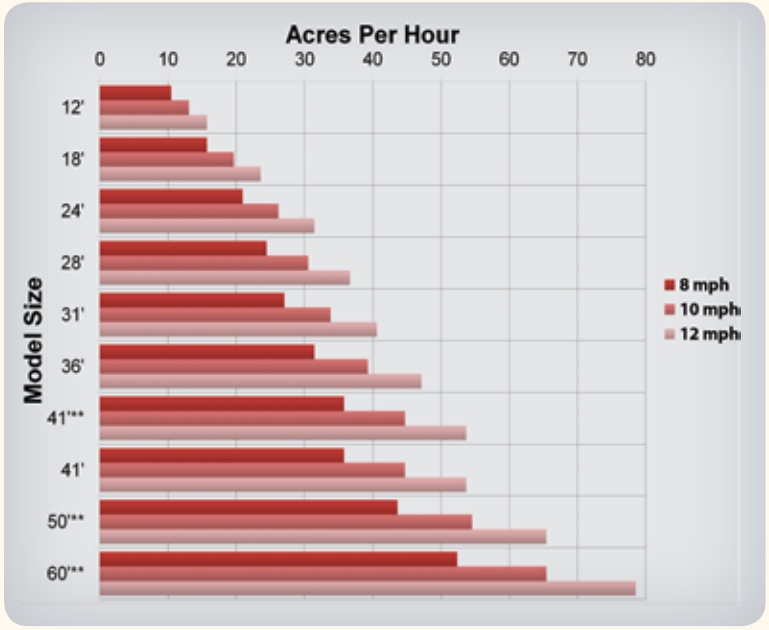
Improve Drainage

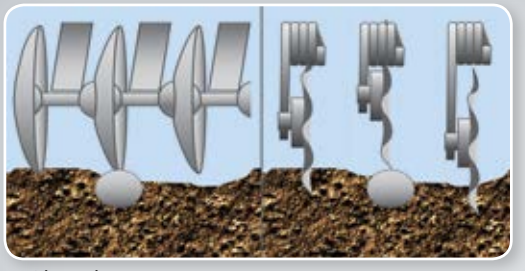
Independent Series Seed and Fertilizer Application

Independent Advantages

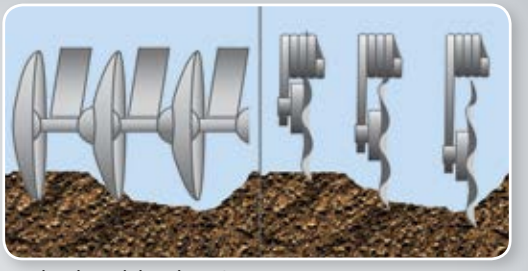
Independently Mounted Blades

Salford Independent series tools stand alone in their class with patented independent blade mounts. The independent blade mounts allow up to 7" vertical travel and are able to move around obstacles allowing high speed operation without damaging equipment. Unlike disc gangs that have difficulty following ground contours or are forced to leave the ground when one blade contacts an obstacle, the individually mounted blades follow changes in terrain and each blade faces obstructions individually. The deep 5 bar frame combined with offset blade spacing allows for exceptional residue flow and is almost impossible to plug. The blade mounting systems thrive on speed. Vibration in the mount, created by the speed, works the ground like a jack hammer fracturing the soil around and below the normal operating depth of the blades helping to improve soils moisture and air storage capacity.

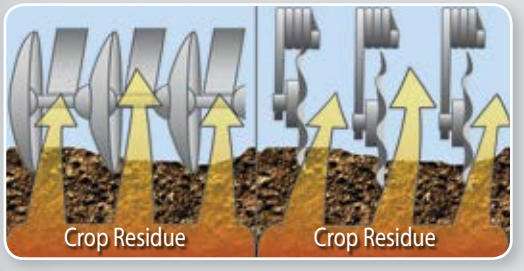




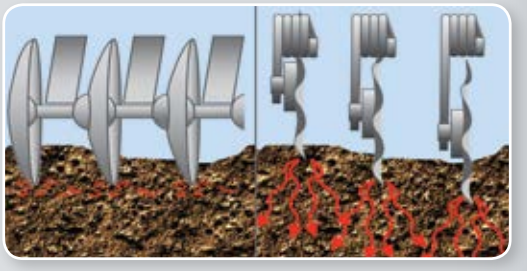
Obstacle Protection



Wheel track leveling / contouring



Residue Flow



Positive Coulter Vibration

	Independently Mounted Blades	Disc Gangs
Residue Flow	• Vertical coulters are self cleaning - no scrapers • Staggered mounting on hi-clearance 5 bar frame provides trouble free residue flow • I-1100 averages 285lbs per individually mounted coulter keeps all blades engaged in soil	• Spools and scrapers wear • Residue is likely to plug in spools and scrapers • Lower weight per blade and gang dependent system can cause machine to ride up on top of tough crop residue and loose soil engagement
Obstacle Protection	• One coulter makes contact with obstacle and all other coulters remain engaged • Individual mounts deflect from to 5"-7"	• One gang blade makes contact and the entire gang is forced to follow • C-hangers provide roughly 1" vertical travel
Maintenance	• Simple replacement of blades and bearings • Little down time, possible in field fix • Fewer wear parts	• Replacement of blades or bearings requires work on entire gang • Long process, shop repair

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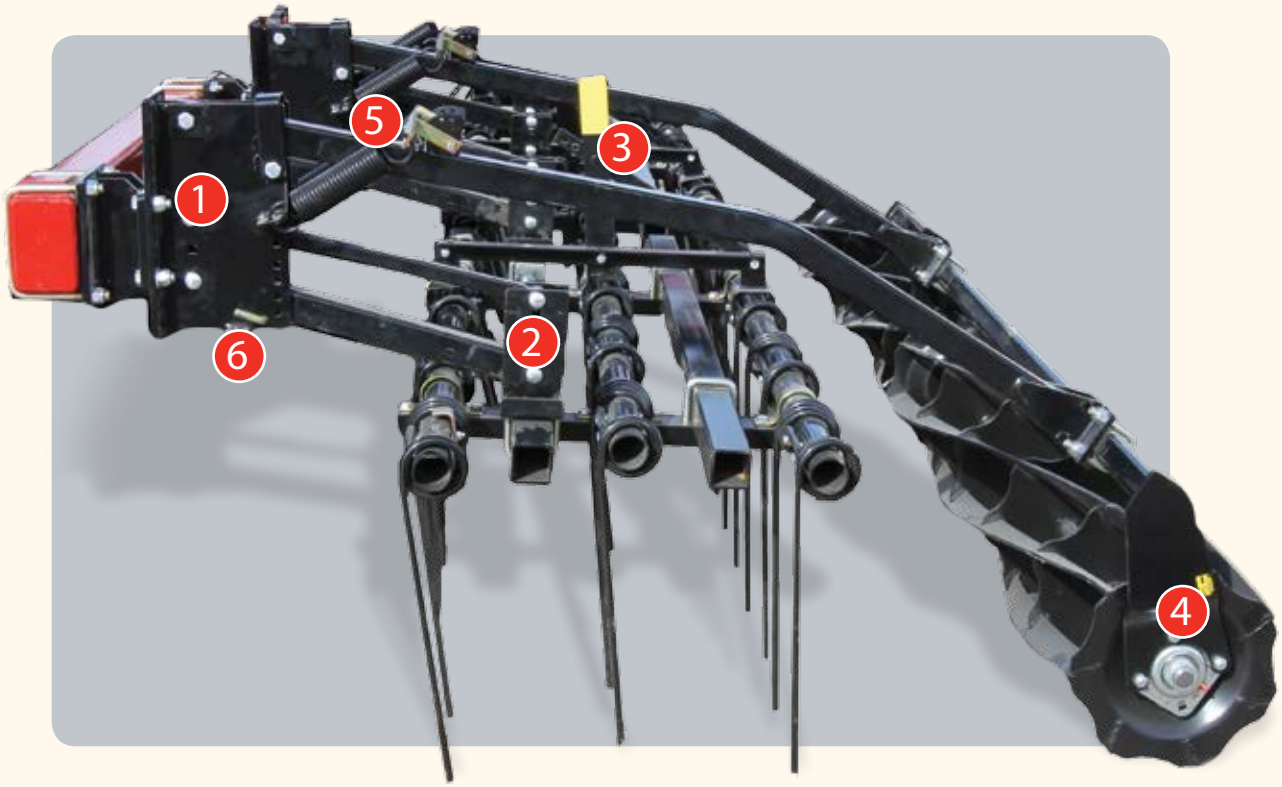
HD Harrow Package

Salford's Heavy Duty Harrow System is an essential part of the Independent series residue management and superior finish. 3 rows of HD 1/2" tine bars provide surface leveling and evenly distribute residue. The 14" HD rolling harrow conditions residue and anchors it in the soil to help prevent erosion and accelerate decomposition. In the spring the harrow package evenly distributes residue and crushes clods to improve planter performance and seed to soil contact. The harrow system is key to eliminating nutrient losses during incorporation of volatile fertilizers and also helps to cover incorporated seed and firm the seedbed.



1. The harrow head is the base for this versatile package. There are five depth settings for the tine harrows and a transport lock for the rolling baskets.
2. Three rows of durable 1/2" dia. x 20" tines level and distribute residue behind the Independent series. The tine harrows are mounted on a parallel linkage for maximum down pressure as well as flotation. Multiple pitch settings allow for maximum leveling performance and residue flow.
3. Salford tine harrows feature five pitch settings for increased leveling performance, or more shallow angles for less aggressive operation and increased residue flow. Tine sections adjust in seconds with no tools required.
4. Independent series rolling harrows are 14" in diameter to provide optimal operation at high speeds. The 14" rolling harrows provide improved re-sizing of soil clods and help to condition and anchor residue to the surface, to reduce erosion. The reinforced steel construction and 1.5" triple seal bearing resist rock damage, even at high speeds.
5. Salford rolling harrows have 5 individual down pressure settings and adjust quickly and easily with a quick adjustment tool provided with your harrow kit.
6. A plated pin is put in place for additional clearance during road transport. Removing this pin during field operation allows for more aggressive operation and improved incorporation of seed and fertilizer.

Independent Series Standard Features

High Quality Boron Steel Blades

Salford machines use only high quality boron steel blades for durability and longevity.

Single Point Depth Control

Managing operating depth for varying field conditions, or changing from spring to fall tillage is simple with the fine adjust single point depth control.

Hydraulic Self-Leveling Frame

Independent series tools feature a hydraulic self leveling frame. This feature keeps the frame level from front to back when changing depth, or raising and lowering the machine.

All Tubular Frame, Welded End Caps

Never worry about frame repairs with the 4"x6" tubular steel frames. Beam ends are welded shut to increase durability and protect your investment.

Operator Convenience Center

Simple features like the Operator Convenience center, including hydraulic hose storage, color coded hydraulic grips, and operators manual storage keep key components organized and at your finger tips.

Heat Treated Cast Clevis Hitch

Whether you're pulling 18' or 60' machines, 10-12 mph in the field can stress your machinery. Durable, heat treated cast clevis' are the first step in making sure your implement is up for the job.

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Optional Equipment

500 lb Spring Trip Shanks

Add shanks to the Independent series tools to do even more work in one pass. Shanks can be fitted with knives for anhydrous application, or an OEM adapter can convert the shank for chisel ripping.

1300 lb Hydraulic Trip Shanks

These shanks can be engaged and disengaged right from the tractor seat for maximum operating flexibility. The auto-reset shanks are protected by a relief valve and can be set from 300lb - 1,300lb using active down pressure.

Tow Hitches

Independent series tools are available with standard or reinforced tow hitches and optional hydraulic lines. Implement light wiring is standard. The unique one person hitch allows you to get connected with ease.

Banding and Broadcast Application

Apply and incorporate small seed and/or dry fertilizer in one pass. While the coulters loosen the soil to incorporate product, the rolling harrow gently firms the soil to ensure placement.

Tire Upgrades

Between tough residue and the long distances between some fields sometimes standard implement tires just aren't enough. Main frame tire upgrades are available for most of sizes of Independent series tools.

Weight Kits

If you struggle with ground penetration in hard soil types, or soils with low organic matter, the Independent series tools can be equipped with weight kits to help you reach the depth you're after.

Independent Series Attachments: Shank Kits

Versatility

Salford Independent Series tools can be fitted with shank kits for applying fertilizer or chisel ripping. Choose between 500lb spring trip shanks, or hydraulic shanks with adjustable trip pressure up to 1,300lbs. The shanks dig in up to 8" and readily accept common fertilizer application knives to put down liquid, dry and/or NH_3 fertilizer. An optional heavy chisel shank allows you to convert the Independent series Fertilizer Applicator into the Independent series Coulter Chisel. Fertilizer Application and Tillage shanks quickly lock out of operating position to convert this machine to a surface tillage tool. Locking up shanks can also adjust shank spacing to match your application/tillage needs. The 500lb spring trip shanks use a single bolt lock up, hydraulic trip shanks can be raised and lowered from the tractor seat.

Equip the I-1100 and I-2100 with shanks on 15" spacing for chisel operation then lift every second shank for 30" fertilizer application.

Hydraulic and Spring Shanks with Lock-Up

The auto-reset shanks dig in between 4" and 8" and are adjusted through the machines operating depth, and/or by using multiple mounting positions. Hydraulic shanks are protected by a hydraulic by-pass. Each shank style also is protected with a shear bolt.

Fertilizer Application Hardware

Equip the shanks with a variety of knives for anhydrous, liquid and dry fertilizer application, or combination knives to apply two products at once. The shanks allow for application between 4"-8". The coulters and heavy duty harrows quickly seal the trenches left by the shanks to prevent gas loss.

Chisel Shank Kit

A 1/4" wide by 2 1/4" deep tillage shank is available for adding chisel hardware to the Independent Series. Best suited for the 1,300lb hydraulic mount the chisel shank has 50 degree mounting for various chisel attachments and quickly converts back to a surface tillage machine with the hydraulic shank control.

Chisel Hardware

Equipped with chisel hardware Independent series tools are capable of more aggressive soil density reduction and field leveling. The shank can work between 4" - 8" using three hardware depth settings and the single point depth control.

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Independent Series Attachments: Fertilizer and Seed Delivery

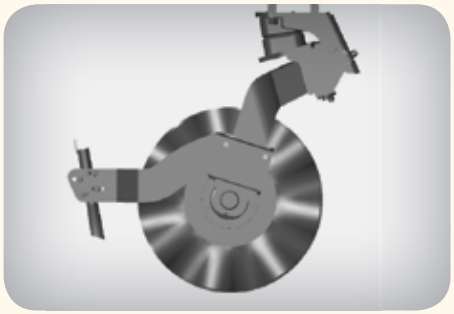
Right Time, Right Place, Right Rate, you choose the Right source

Equipped with air distribution kits Independent series tools are exceptional at incorporating product via coulter mounted banding tubes, broadcast diffusers, or both methods at the same time. Independent series tools work fast and open the window to a wider range of operating conditions, allowing you to apply fertilizer at the right time. Independent series tools incorporate at a uniform depth and gently firm the soil to ensure product is at the right place. Salford metering systems are very accurate and designed to handle a wide range of product with out changing meters, to deliver the product you choose at the right rate. Seeding with Independent series tools germinates best in damp conditions, where these tools excel. Seed is uniformly incorporated and gently packed into firm soil by the rolling harrow package. Earlier starts, longer growing seasons, high yields.

- I-1100
- 41 ft.
- 9 mph

40
acres per hour

- Residue Management or Chisel Plow
- Seedbed preparation
- Fertilizer application and seeding



Coulter Mounted Banding

Mounted to the coulter, these commodity delivery tubes place product into the trench opened by the coulter. The banding tubes can be configured to deliver product on multiple row spacings.

Broadcast Diffuser

The broad cast system allows for accurate incorporation and complete field coverage with seed or fertilizers. Applying seed, such as cover crops, through the broadcast system allows for complete seed bed utilization and rapid canopy development.

Combine Operations

Combining attachments allows for various custom product applications. Deliver multiple commodities simultaneously while achieving the correct placement.

Seeding

Take advantage of the Independent series' exceptional seed bed preparation and the ability to run in damp conditions to apply seed sooner than other machines can get into the field. Incorporated seed germinates best in these damp conditions and plants are able to take full advantage of the extra degree days.

I-1100 RTS

I-1100 Specs

Operating depth range	0" - 4"
Blade mount	1 1/4" Coil-Tech Coulter
Blade Type	20" x 4.5mm • 8 wave (2" deep wave) • 13 wave (1 1/4" deep wave) *optional 17" blade
Blade Spacing	7"
Vertical Travel	6"
Swivel	Yes*
Hub	4 bolt

*Not all coulter mounts are designed to pivot.

Integrated Seed & Fertilizer Attachment Options / Combinations

- 500 lb Spring Shank (Chisel or NH3)

- Coulter Mounted Banding Tube

- 1300 lb Hydraulic Shank (Chisel or NH3)

- Broadcast Diffuser

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Built for Soil Productivity

Your Time is Valuable

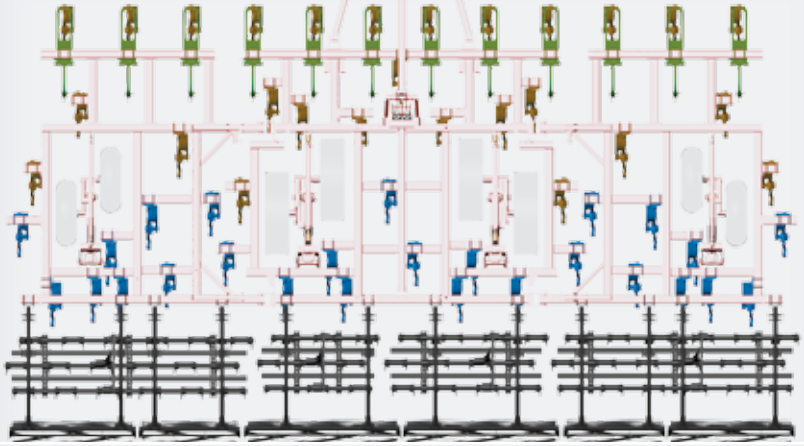
The Independent Series is the platform for the most flexible and innovative line of residue management tools available. Operating between 8 and 12mph the I-1100 starts by saving you time. With the multitude of spring, fall and special applications the I-1100 performs in one pass, the I-1100 saves you money. And with the durability of Salford's solid frames, the HD harrow system and the coulter hub design, the I-1100 virtually eliminates downtime. Go where other equipment wouldn't dare tread

The Independent series does not just outperform in wet conditions compared to gang style machines, the I-1100 will run when other tillage tools are parked. This affords operators more up time, and will help evaporate surface moisture as well as combat standing water problems created by compacted soil.

Coil-Tech Coulter: 1 1/4 dia. coil

■ The patented Coil-Tech Coulter uses a coil spring to hold the hub and blade. The coil is able to travel 6" and generates the compaction shattering "jackhammer" vibration.

Blade Configuration and Optional Shank Attachment Layout



■ 8 or 13 Wave Blades ■ 8 or 13 Wave Blades ■ Optional Shank Kit

I-1100 Performance and Operating Guide

I-1100 – 20" dia. coulter on 7" spacing, 1 1/4" Coil-Tech Coulter

- Zero till and conservation till operations with light to medium soils and medium to high residue.
- Warmer climates with medium to high rainfall. Performs very well in wet soil with no risk of plugging
- Well controlled insect and disease pressure. Maximum residue coverage desired for protection against wind, rain and sun.
- 220 – 235 lb per coulter approximately (est. does not include optional weights)
- Quickly convert to fertilizer application or coulter chisel with attachments

Operating Guide

Operation	Crop Type	Depth
Seed bed preparation	Corn, Cereal Grains, Hay & Pasture	1.5" - 2" (less than or equal to planting depth)
Seed bed preparation	Soybean, Edible beans, Canola, Pulse Crops	2" - 3" (equal to or slightly more than planting depth)
Fall residue management	All crops	2.5" or deeper (coulter hubs must stay clear of field surface)
Seeding	Cereals, canola, cover crops, hay/pasture blend	2" or less
Fertilizer Application	All types	2" or more

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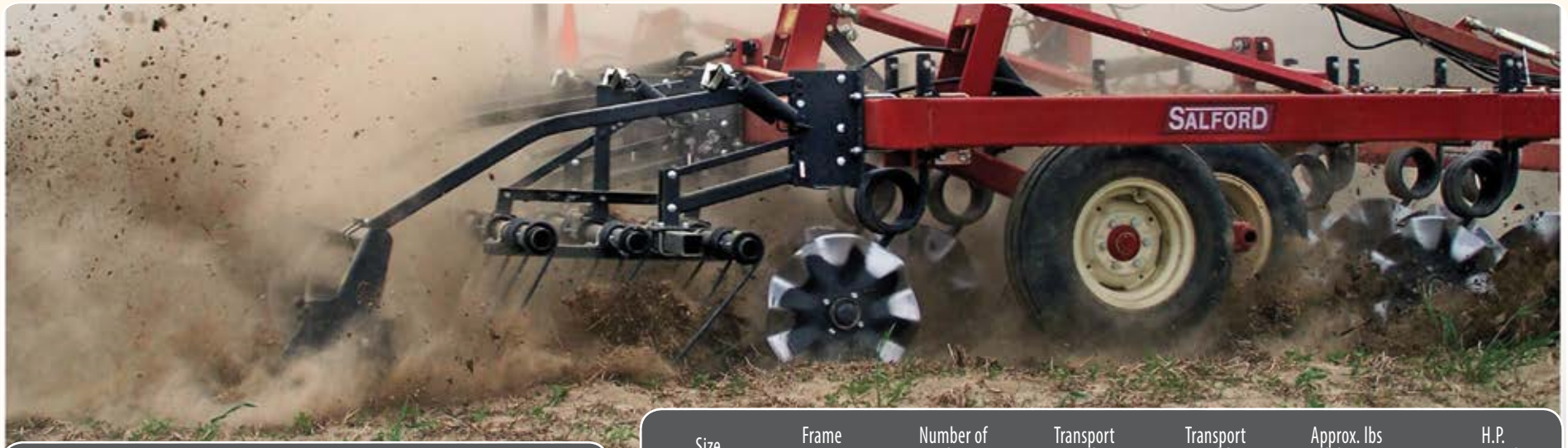
I-1100 Specifications



Shank kits: Spring or Hydraulic trip

Machine Size	Narrow Spacing (Approx. 14") # of Shanks	Narrow Spacing (Approx. 14") Anhydrous Coverage	Wide Spacing (Approx. 28") # of Shanks	Wide Spacing (Approx. 28") Anhydrous Coverage
18′	N/A	N/A	8	18'6"
24′	N/A	N/A	10	23'5"
27′	22	27'	12	28'
30′	24	29'8"	12	29'1"
36′	28	33'	14	33'4"
41′	32	40'4"	16	37'10"
41′ (5 sect)	31	38'8"	16	37'5"
50′ (5 sect)	39	48'10"	20	49'
60' (5 sect)	N/A	N/A	24	57'6"

Size	Frame Sections	Number of Coulters*	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required*
12′	1	21	No wings	13′3″	6,300	90-150
16′	3 - Flat fold	27	9′	10′	8,200	120-200
18′	3	31	10′1″	13′	9,500	130-220
22′	3	37	11'8"	13′	11,000	160-270
24′	3	41	12'8"	13′	11,600	170-290
27′	3	47	13′	15′8″	13,500	190-330
30′	3	53	14′6″	15′8″	14,700	210-360
36′	3	62	14′2″	21′	16,950	260-440
41′	3	71	16′6″	21′	18,500	290-500
41′	5 Bi-fold	70	13′6″	18′9″	19,700	290-500
50′	5 Bi-fold	85	14′3″	19′	26,600	350-600
60'	5 Bi-fold	103	15'8"	21'10"	32,000	500+

*Horsepower requirements vary by speed and operating depth.

I-1200, 5" Blade Spacing

Superior Seedbed Preparation

Designed for the finest surface tillage available the I-1200 uses the Coil-Tech Coulter I, 1 1/4" independent blade mounting system, to carry blades on 5" spacing. The I-1200 models average 40% more blades and 39% more weight per machine than the standard I-1100 that uses 7" blade spacing and a lighter frame.

The I-1200 creates the finest seedbeds and does a superior job of sizing and incorporating residue. The tighter blade spacing also makes the I-1200 capable of more mechanical weed control than most Independent Series tools.

Using the Coil-Tech I blade mount, the I-1200 still features "jackhammer" vibration that reduces soil density below the working depth to improve air and moisture storage capacity in the soil. Salford's patented independent blade mounting systems also feature industry leading residue flow and obstacle protection to stand up to high speed operation. The 3 bar 1/2" tine harrows and 14" rolling basket provide exceptional leveling performance.

Model Size	Frame Sections	Number of Coulters	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required*
18′	3	45	10′1″	13′3"	12,700	220 - 250
24′	3	57	12'8"	13′3"	15,300	290 - 340
28′	3	69	13′	15′8″	19,300	340 - 390
31'	3	73	14′6″	15′8″	19,800	370 - 430
36′	3	85	14′2″	21′	23,800	430 - 500
41′	3	97	16′6″	21′	25,800	490 - 570
41′	5 Bi-fold	97	13′6″	18′9″	30,300	490 - 570
50′	5 Bi-fold	119	14′3″	19′	36,500	600+
60'	5 Bi-fold	144	15'8"	21'10"	42,000	600+

*Horsepower requirements vary by speed and operating depth.

At Salford we are always working to improve your experience. Specifications may change without notice.

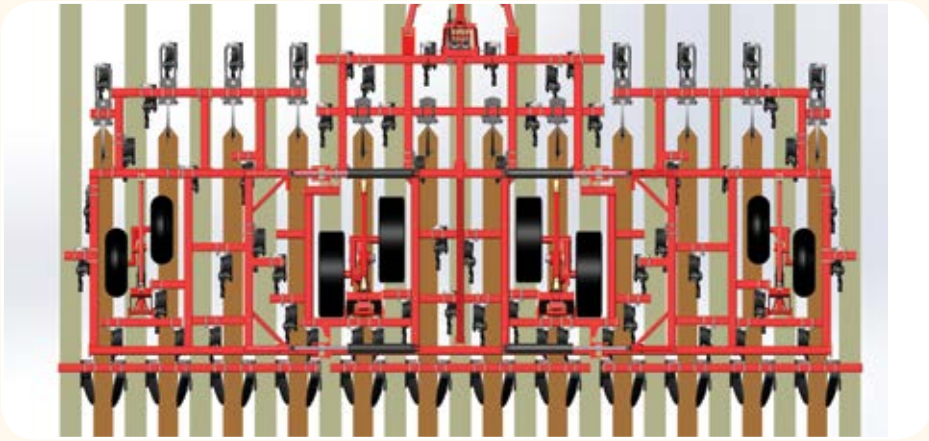
I-1500 Strip Till Applicator

The I-1500 Strip Till Applicator takes the best of strip till technology and spreads it out over a much deeper frame than conventional strip-till machines in order to prevent the tool from plugging with high volume residue.

Combined with Salford Commodity Carts the I-1500 is an ideal tool for responsible nutrient management. The carts flexible metering system and multiple compartments allow you to apply the right products at the right rate. The I-1500's high clearance design allows you to get into the field in almost any conditions, allowing you to apply pre-planting fertilizers at the right time; And the multiple attachments for broadcast incorporation, banding behind coulters and deep placement with the shank kit allow you to put your pre-planting fertilizer in the right place.

Salford's I-Series tools can be equipped with 500lb spring trip shanks, or 1,300lb hydraulically protected shanks that can till and apply fertilizer up to 8" deep. The I-1500 can be equipped with berming and/or rolling baskets to create the desired finish.

The I-1500 strips are on 30" centers and the standard layout tills a 20" row with 5 coulters per row and a 10" undisturbed strip between the rows. The Coil-Tech Coulter I blade mounts carry a 20" wavy coulter and features industry leading clearance and durability.



Previous Row Shank Path / Berm

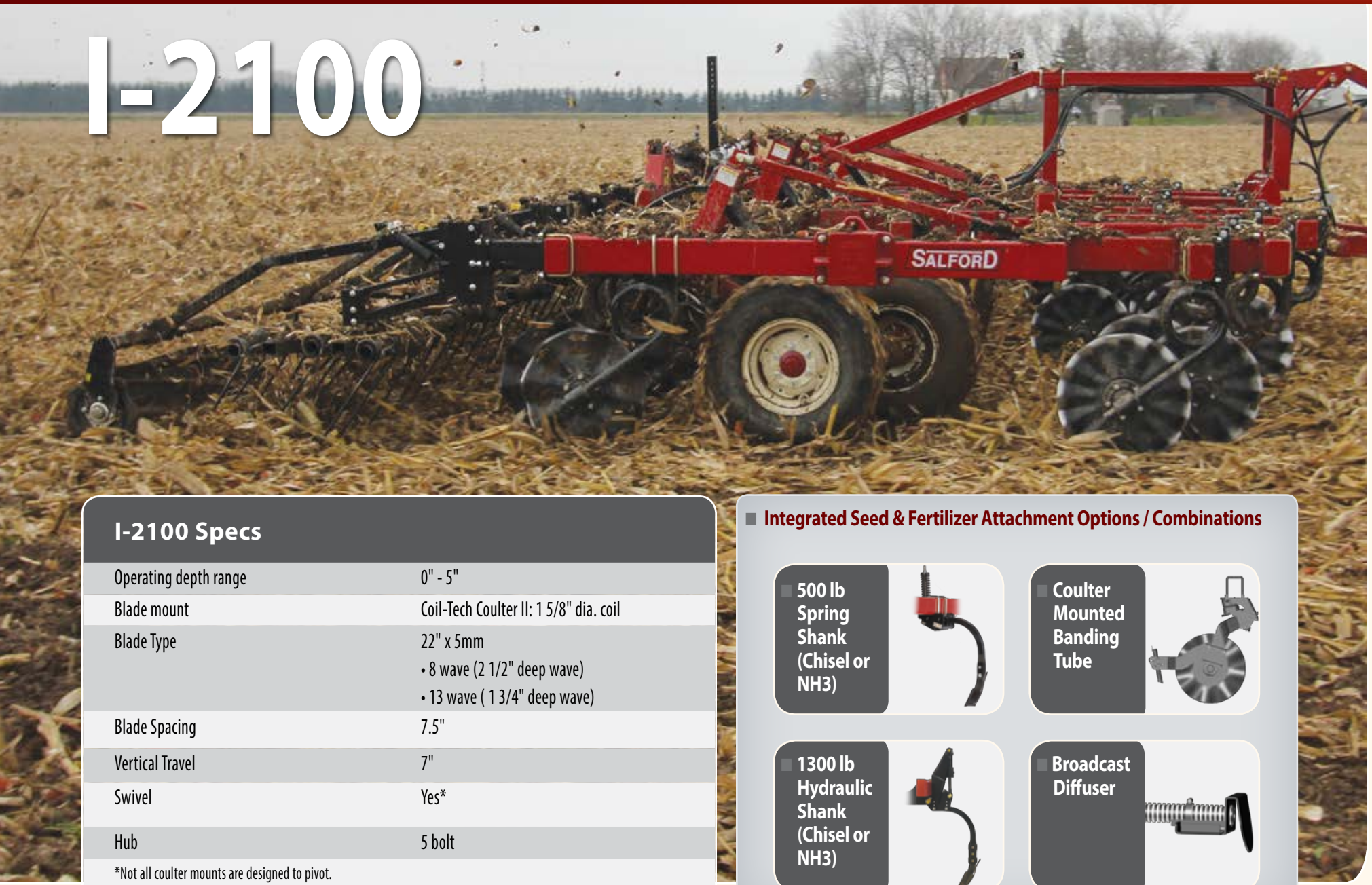
Berms created by the I-1500

Rear view of the I-1500 rows

Model Size	Rows	Number of Coulters*	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required*
20'	8	38	10'1"	13'3"	13,100	90-150
31'	12	62	14'6"	15'8"	20,500	120-200
41'**	16	82	13'6"	18'9"	31,400	130-220

** 5 section frame *Horsepower requirements vary by speed and operating depth.

I-2100



I-2100 Specs

Operating depth range	0" - 5"
Blade mount	Coil-Tech Coulter II: 1 5/8" dia. coil
Blade Type	22" x 5mm • 8 wave (2 1/2" deep wave) • 13 wave (1 3/4" deep wave)
Blade Spacing	7.5"
Vertical Travel	7"
Swivel	Yes*
Hub	5 bolt

*Not all coulter mounts are designed to pivot.

Integrated Seed & Fertilizer Attachment Options / Combinations

- 500 lb Spring Shank (Chisel or NH3)

- Coulter Mounted Banding Tube

- 1300 lb Hydraulic Shank (Chisel or NH3)

- Broadcast Diffuser

At Salford we are always working to improve your experience. Specifications may change without notice.

Next Generation Residue management

Shatter Compaction

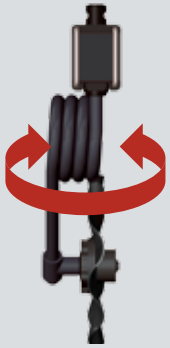
The I-2100 uses the Coil-Tech Coulter II, a heavier coil spring, with *60% more down pressure in the first 2" of travel than the original Coil-Tech. The Coil-Tech II carries larger 5-bolt hubs and 22" blades, increasing the Coil-Tech's jackhammer effect, allowing the blades to penetrate deeper into tougher ground conditions. The I-2100 is built on a HD frame to increase weight per blade and to manage the additional vibration created by the Coil-Tech II.
True to the Independent series engineering this machine is able to cover an acre per hour per foot - a 41' machine will cover 41 acres per hour. The I-2100 has been engineered for compatibility with I-series seeding and fertilizer attachments to allow producers to combine field operations saving fuel and man hours by completing more operations with each pass.

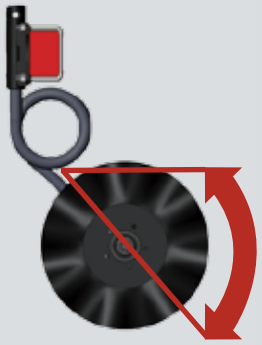
60% More Power*

I-1100
Coil-tech Coulter I (1 1/4" spring)
4 bolt hub, 20" blades

I-2100
Coil-tech Coulter II, (1 5/8" spring)
5 bolt hub, 22" blades

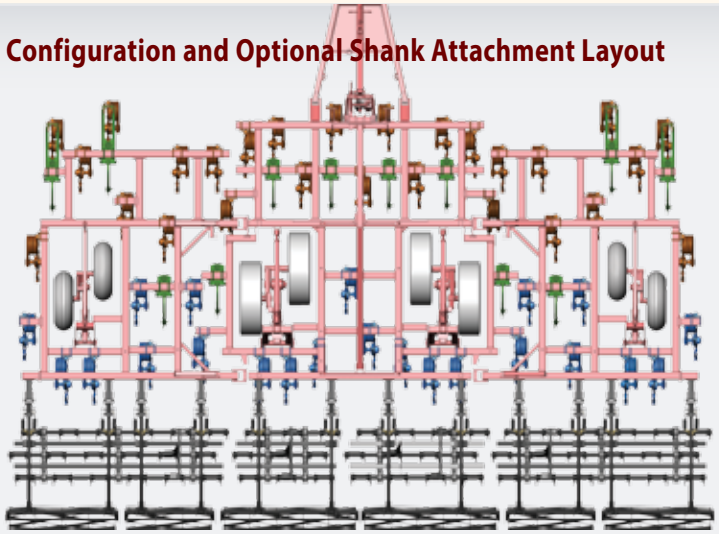
Coil-Tech Coulter II: 1 5/8" dia. coil





The patented Coil-Tech Coulter II uses a heavy coil spring to hold the hub and blade. This coil is able to deflect 7" and generates the compaction shattering "jackhammer" vibration.

Blade Configuration and Optional Shank Attachment Layout

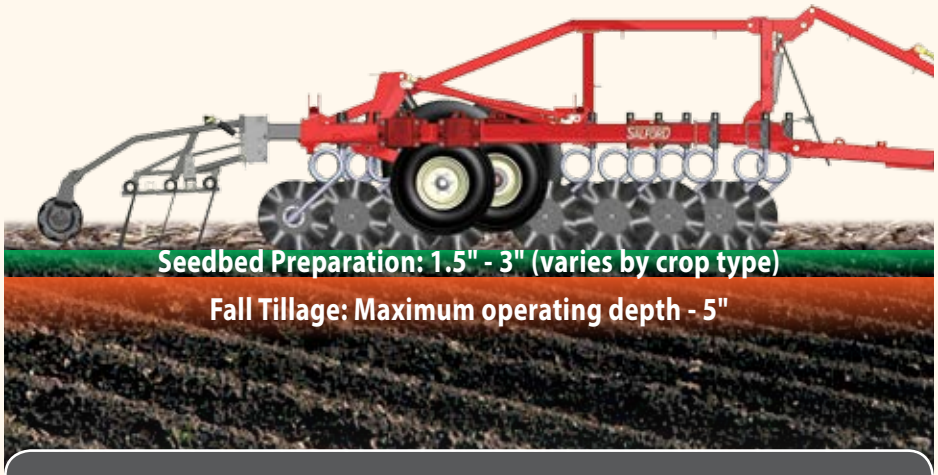


8 or 13 Wave Blades 8 or 13 Wave Blades Optional Shank Kit

I-2100 Performance and Operating Guide

I-2100 – 22" dia. coulter on 7.5" spacing, 1 5/8" Coil-Tech Coulter II

- Conservation and conventional till operations with medium to heavy soils, high to heavy residue with a need for additional insect and disease control.
- Performs well in warm or cool climates and wet or dry soils with no risk of plugging.
- Extra down force for hard dry soils and improved leveling.
- 7" deflection for rock protection for very stony soils.
- 310 lb per coulter approx (est. does not include optional weights)
- Quickly convert to fertilizer application or coulter chisel with attachments



Operating Guide

Operation	Crop Type	Depth
Seed bed preparation	Corn, Cereal Grains, Hay & Pasture	1.5" - 2" (less than or equal to planting depth)
Seed bed preparation	Soybean, Edible beans, Canola, Pulse Crops	2" - 3" (equal to or slightly more than planting depth)
Fall residue management	All crops	2.5" or deeper (coulter hubs must stay clear of field surface)
Seeding	Cereals, canola, cover crops, hay/pasture blend	2" or less
Fertilizer Application	All types	2" or more

At Salford we are always working to improve your experience. Specifications may change without notice.

I-2100 Specifications

Shank kits: Spring or Hydraulic trip

Machine Size	Narrow Spacing (Approx. 15") # of Shanks	Narrow Spacing (Approx. 15") Anhydrous Coverage	Wide Spacing (Approx. 30") # of Shanks	Wide Spacing (Approx. 30") Anhydrous Coverage
12'	9	12'	5	12'
18′	13	17'6"	7	17'6"
24′	17	22'10"	9	22'10"
28′	21	27'4"	11	27'4"
31′	23	29'10"	12	29'10"
36′	27	35'5"	14	35'5"
41′	31	40'2"	16	40'2"
41′ (5 sect)	33	40'2"	15	37'6"
50′ (5 sect)	39	47'6"	19	47'6"
60′ (5 sect)	NA	NA	23	57'6"

Shank kits require an additional average of 5 horsepower per shank

Size	Frame Sections	HEAVY DUTY # of Coulters	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required
12'	1	19	No wings	13'3"	8,000	100-160
18′	3	29	10′1″	13′3″	12,800	150-240
24′	3	37	12′8″	13'3"	16,700	200-320
28′	3	45	13′	15′8″	19,300	230-370
31′	3	49	14′6″	15′8″	20,100	250-410
36′	3	57	14′2″	21′	23,900	290-470
41′	3	65	16′6″	21′	25,900	330-540
41′	5 Bi-fold	65	13′6″	18′9″	30,800	330-540
50′	5 Bi-fold	79	14′3″	19′	36,300	400-650
60'	5 Bi-fold	95	15'8"	21'10"	41,800	500+

*Horsepower requirements vary by speed and operating depth.

I-3100

I-3100 Specs

Operating depth range	0" - 5"
Blade mount	Leaf spring & rubber suspension
Blade Type	22" x 5mm • 8 wave (2 1/2" deep wave) • 13 wave (1 3/4" deep wave)
Blade Spacing	7.5"
Vertical Travel	5"
Swivel	Yes*
Hub	5 bolt

*Not all coulter mounts are designed to pivot.

Integrated Seed & Fertilizer Attachment Options / Combinations

- 500 lb Spring Shank (Chisel or NH3)

- Coulter Mounted Banding Tube

- 1300 lb Hydraulic Shank (Chisel or NH3)

- Broadcast Diffuser

At Salford we are always working to improve your experience. Specifications may change without notice.

Bigger Blades, More Black Soil

Heavy Residue management

With a durable rubber suspension blade mounting system the I-3100 features Salford's renowned independent blade mounting design for unparalleled residue flow, obstacle protection, and ground contact. The heavier blade mounting system allows the I-3100 models to match the increased ground penetration, residue resizing and soil disturbance of the I-2100. Like the I-2100 the I-3100 uses the same oversized, 5 bolt hubs with tapered roller bearings to carry larger 22" coulters.

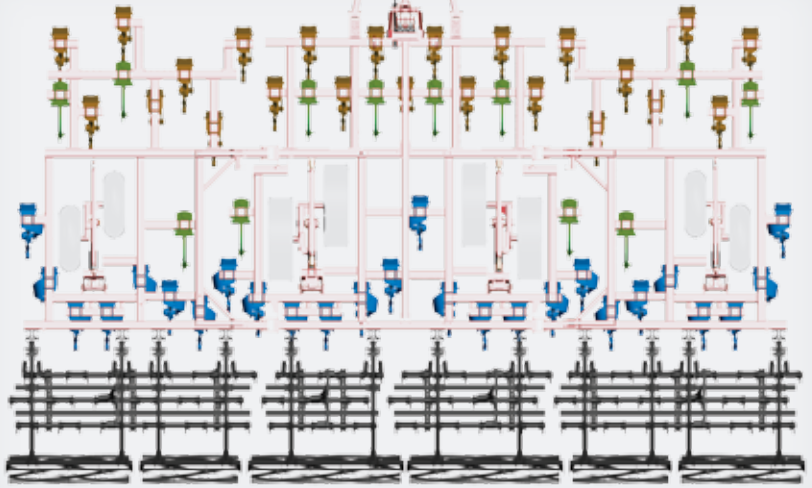
Common to the Independent series of tools the I-3100 can be fitted with multiple seed and fertilizer attachments. Pictured on the right is the I-3100 with chisel hardware adapters on the 500lb spring shanks.

Optional upgrade kits allow the I-3100 convert to a I-4100 and back adding to the versatility of the rubber suspensions machines.

Rubber Suspension Blade Mount

A molded rubber cushion inside the mount allows coulter arm and blade to travel up to 5" and return to it's original position. The front two rows can swivel.

Blade Configuration and Optional Shank Attachment Layout



Pivot Coulters Fixed Coulters Optional Shank Kit

I-3100 Performance and Operating Guide

I-3100 – 22" dia. coulter on 7.5" spacing, Rubber Suspension

- Conservation and conventional till operations with medium to heavy soils
- High to heavy residue with a need for additional insect and disease control.
- Performs well in warm or cool climates as well as wet or dry soils.
- Additional down force for hard dry soils.
- Less jackhammer effect than the I-1100 or I-2100
- 290 lb per coulter approx. (does not include optional weights)

Operating Guide

Operation	Crop Type	Depth
Seed bed preparation	Corn, Cereal Grains, Hay & Pasture	1.5" - 2" (less than or equal to planting depth)
Seed bed preparation	Soybean, Edible beans, Canola, Pulse Crops	2" - 3" (equal to or slightly more than planting depth)
Fall residue management	All crops	2.5" or deeper (coulter hubs must stay clear of field surface)
Seeding	Cereals, canola, cover crops, hay/pasture blend	2" or less
Fertilizer Application	All types	2" or more

At Salford we are always working to improve your experience. Specifications may change without notice.

I-3100 Specifications

Shank kits: Spring or Hydraulic trip

	Wide Spacing (Approx. 30")	
Machine Size	# of Shanks	Anhydrous Coverage
18′	7	17'6"
24′	9	22'10"
28′	11	27'4"
31′	12	29'10"
36′	14	35'5"
41′	16	40'2"
41′ (5 sect)	15	37'6"
50′ (5 sect)	19	47'6"

Shank kits require an additional average of 5 horsepower per shank

Size	Frame Sections	HEAVY DUTY # of Coulters	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required
12'	1	19	No wings	13'3"	7,800	100-160
18′	3	29	10′1″	13′10″	13,200	150-240
24′	3	37	12′8″	13'10"	15,100	200-320
28′	3	45	13′	15′8″	18,200	230-370
31′	3	49	14′6″	15′8″	19,500	250-410
36′	3	57	14′2″	21′	22,400	290-470
41′	3	65	16′6″	21′	24,600	330-540
41′	5 Bi-fold	65	13′6″	18′9″	29,400	330-540
50′	5 Bi-fold	79	14′3″	19′	35,000	400-650
60'	5 Bi-fold	95	15'8"	21'10"	40,500	500+

*Horsepower requirements vary by speed and operating depth.

I-4100

I-4100 Specs

Operating depth range	0" - 5"
Blade mount	Leaf spring & rubber suspension
Blade Type	22" x 5mm First two rows: Shallow Concave Last two rows: Coulter • 8 wave (2 1/2" deep wave) or • 13 wave (1 3/4" deep wave)
Blade Spacing	7.5"
Vertical Travel	5"
Swivel	No
Hub	5 bolt

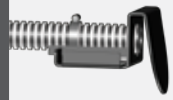
Integrated Seed & Fertilizer Attachment Options / Combinations

- 500 lb Spring Shank (Chisel or NH3)

- Coulter Mounted Banding Tube

- 1300 lb Hydraulic Shank (Chisel or NH3)

- Broadcast Diffuser



At Salford we are always working to improve your experience. Specifications may change without notice.

Fiercely Independent

Hybrid Vertical Tillage

The I-4100 combines two rows of shallow concave disc blades followed by two rows of coulters. The front two rows of concave blades are spaced 15" apart and the rear two rows of coulters split that spacing to reduce density between the disc blades. The combination of spacings on four rows gives the machine a net 7.5" spacing overall. The I-4100 performs best as a fall residue management machine, incorporating residue, nutrients and leveling. The additional tillage action of the disc blades mixes more soil with residue to further accelerate decomposition. For seedbed preparation the I-4100 does it's best work with two passes at slightly opposite angles to ensure the surface is fully prepared. The Independent series tools comfortably apply NH_3 at 8 - 10mph, often with the anhydrous meter being the limiting factor for speed.

Rubber Suspension Blade Mount

■ A molded rubber cushion inside the mount allows coulter arm and blade to travel up to 5" and return to it's original position.

Blade Configuration and Optional Shank Attachment Layout

■ Concave Blades ■ Fixed Coulters ■ Optional Shank Kit

I-4100 Performance and Operating Guide

I-4100 – 22" dia. compound disc shallow concave on 15" spacing split by 22" dia. coulters on 15" spacing - Rubber Suspension

- Conservation and conventional till operations with medium to heavy soils.
- High to heavy residue requiring maximum insect and disease control.
- Performs well in warm or cool climates with extra down force for hard dry soils.
- Exceptional leveling performance
- 7 – 10 mph operating speed. Performs best as a high speed primary fall tillage tool.
- 290 lb per coulter approx (est. does not include optional weights)

Operating Guide

Operation	Crop Type	Depth
Seedbed preparation*	All Crops	2" - 3"
* For seedbed preparation with the I-4100 run two passes at slightly opposite angles. The machine should be tipped 1" to 1.5" to the rear so that the coulters penetrate deeper than the concave blades. Not recommended for seedbed preparation in heavy clay soils.		
Fall residue management	All crops	3 or deeper (coulter hubs must stay clear of field surface)

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I-4100 Specifications

Shank kits: Spring or Hydraulic trip

	Wide Spacing (Approx. 30")	
Machine Size	# of Shanks	Anhydrous Coverage
18′	7	17'6"
24′	9	22'10"
28′	11	27'4"
31′	12	29'10"
36′	14	35'5"
41′	16	40'2"
41′ (5 sect)	15	37'6"
50′ (5 sect)	19	47'6"

Shank kits require an additional average of 5 horsepower per shank

Size	Frame Sections	# of Concave/ Coulter	Transport Height	Transport Width	Approx. lbs with harrows	H.P. Required
12'	1	9/10	No wings	13'3"	7,800	100-160
18′	3	13/16	10′1″	13′10″	13,200	150-240
24′	3	17/20	12′8″	13'10"	15,100	200-320
28′	3	21/24	13′	15′8″	18,200	230-370
31′	3	23/26	14′6″	15′8″	19,500	250-410
36′	3	27/30	14′2″	21′	22,400	290-470
41′	3	31/34	16′6″	21′	24,600	330-540
41′	5 Bi-fold	31/34	13′6″	18′9″	29,400	330-540
50′	5 Bi-fold	39/40	14′3″	19′	35,000	400-650
60'	5 Bi-fold	47/48	15'8"	21'10"	40,500	500+

*Horsepower requirements vary by speed and operating depth.

I-5100

I-5100 Specs

Operating depth range	3" - 5" (6" with optional 24" blades)
Operating Speed	6 - 12 mph
Blade mount	Leaf spring & rubber suspension
Blade Type	Shallow Concave Standard: 22" x 5mm Optional: 24" x 6.5mm
Blade Spacing	5"
Vertical Travel	5"
Swivel	No
Hub	5 bolt

Rubber Suspension Blade Mount

■ A molded rubber cushion inside the mount allows coulter arm and blade to travel up to 5" and return to it's original position.

■ The first three rows of blades are mounted on a compound angle improving ground penetration and maximizing soil and residue flow

At Salford we are always working to improve your experience. Specifications may change without notice.

Faster than a speeding disc, as powerful as a moldboard plow,...

... able to penetrate in dry conditions and won't plug in wet soil.

The patented I-5100 is built on the deepest Independent Series frame and carries four rows of 22" or 24" blades spaced 5" apart throughout the machine. The four rows of blades alternate cutting direction to mix soil and residue twice as much as a disc. The result is a superior blend of soil and residue that creates exceptional seedbeds and accelerates residue decomposition. This unique blade mount allows the I-5100 to run in tougher conditions, at higher speeds, and leave a more level surface.

Patented Independent mounts also give unmatched obstacle protection with 5 inches of travel on each blade, allowing the other blades to remain engaged in the soil when one blade contacts an obstacle. (see diagram page 3)

The compound blade angle is also key to the performance of the I-5100. The face of the blade is twisted forward and tilted under, which draws the I-5100 into the ground, much like a mold board plow. This blade mount enhances ground penetration in any soil condition.

Range of Uses

The I-5100 was engineered for complete soil density reduction between 2.5" and 6" working depth, and blending residue evenly through the worked soil while meeting Salford's extreme standards for leveling performance. Uses for the I-5100 include:

- Fall primary tillage
- Incorporation of fertilizer, manure, green manure, up to 6"
- Seedbed preparation (2.5" to 3.5")
  Depth of seedbed preparation varies based on residue coverage. If no fall tillage was applied 3"-3.5" operation is required to properly incorporate thick residue.
- Breaking pasture or reclaiming marginal ground
- Penetrating hard ground
- Drying excess surface moisture

I-5100 Performance and Operating Guide

I-5100 – 22" or 24" dia. coulter on 5" spacing, leaf spring & rubber suspension

- Fall primary tillage in any soil type and medium to high residue.
- Spring seedbed preparation
- Ideal for crop rotations where maximum residue incorporation is desired.
- Four rows of concave blades create a superior soil residue mixture
- Works well in warm or cool climates.
- Performs very well in wet or dry soil with little to no risk of risk of plugging
- Well controlled insect and disease pressure.
- Average 355 lb per blade (does not include optional weights)
- Exceptional for nutrient and/or fertilizer incorporation
- Potentially replaces - chisel plow, HD disc harrow, shallow moldboard plowing

Operating Guide

Operation	Crop Type	Depth*
Fall residue management	All crops	3" - 6" (disc hubs must stay clear of field surface)
Seedbed preparation	All crops	2.5"-3.5" Depth varies by amount of residue cover
Nutrient Incorporation	All types	3" - 6"

* Optional 24" blades are required for operating 6" deep

At Salford we are always working to improve your experience. Specifications may change without notice.

I-5100 Specifications

STANDARD:

• Blades:
- 22″ x 5mm -shallow concave discs
-2 Guide Coulter 25″ x 1/4" (6.5mm) Flat Smooth Blade
-1 Center Coulter with 22″ x 8 Wave Blade
• Cat. 3 or 4 hitch (please specify)
• Hydraulic self-leveling frame (4″ x 6″)
• Hydraulic single point depth control
• Tires
- 12' & 16' - Dual wheels
- 19' & 22' - Dual wheels on main, single wheels wings
- 29' & 36' - Dual wheels on main frame and wings
- Fixed Gauge Wheels on Models 29' & 36'

OPTIONS:

• Upgrade to 24" x 6.5mm shallow concave blades
• Adjustable tow hitch (One man hook-up)
•Add Tow Hitch Top Brace (increase towing capacity)
• Hydraulic lines and quick coupler to tow hitch
• Weight kit, 100 lb*
  * 19', 3 weight recommended on each outside wing
• Fixed gauge wheels for 19' wings
• Harrow Dirt Shield
• Cat. 5 Hitch upgrade

Model Size	Working Width	# of Concave Blades	Transport Height	Transport Width	Approx. weight with Harrows (lbs)	H.P. Required* (15-20 per ft)
12′	12′1″	28	no wings	13′10″	11,100	180 - 240
16′	15′5″	36	9′	12′6″	15,100	240 - 320
19′	18′9″	44	10′3″	15′2″	19,100	280 - 380
22′	22′1″	56	12′4″	15′2″	21,200	330 - 440
29′	28′9″	68	14′7″	15′2″	24,500	430 - 580
36′	35′5″	84	14′2″	20′6″	35,700	540+

*Horsepower requirements vary by speed and operating depth.

SEEDING & FERTILIZING


520 AIR DRILLS


525 AIR DRILLS


AIR CARTS

INDEPENDENT SERIES


I-1100


I-1200


I-2100


I-3100


I-4100


I-5100


I-Series Fertilizing


I-Series Seeding

TILLAGE


9700 CTS


9800 DRH


9200 In-line Ripper


Disc Cultivator


Moldboard Plows


Disc Harrows


Cultivators


Universal Harrows

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