TURF AERATION

ADVANCED TINE SOLUTIONS FROM AERWAY
Aeration, while it is one of the most despised operations by golfers, is probably the single most beneficial cultivation practice that you can do on turf, especially high traffic, low mowed turf. The benefits include compaction relief and subsequently reduced stress to turf, improved drainage, added oxygen to the soil, deeper roots, incorporation of topdressing materials, break down of surface tension and relief from hydrophobic soil conditions and more effective and efficient nutrient uptake by the plant. The AerWay has proved to be both rugged and fast in doing our fairways and roughs.

Soil Basics
Three systems, physical, biological and chemical, work together to make soil productive. Soil scientists agree that the physical condition of soil is the key to efficient biological and chemical activity, which in turn determines how much plant life the soil can support.

Soil Tilth: Why Compaction is the Greens Keeper’s #1 Enemy
Soil tilth is a measurement of the balance between basic soil elements: air, mineral, water, and organic matter. The proper balance of these elements increase soil production by allowing efficient interaction of all the soil systems. Air and water balance in the soil is the key to good root growth.

Compaction stresses plants because air and water are “squeezed” from the soil. Biological and chemical activities which depend on air and water become severely restricted. Root growth is impaired, crop production suffers.

At Salford Group we are always working to improve our designs. Specifications are subject to change.
Air and Water Move Together
Correcting compaction makes a dramatic improvement in soil tilth. It is the most basic step you can take to promote healthy turf grass. That’s because air and water move together in the soil profile. With proper air/water balance in the soil, all the biological and chemical systems work at peak efficiency.

Compaction makes both wet and dry soil conditions more severe. It reduces the water holding capacity of soil which makes drought conditions worse, and inhibits drainage to make wet conditions more troublesome.

Mechanical Aeration with AerWay is the Answer
Aeration, by definition, is the movement of air into, and through the soil profile. Air, by itself, cannot accomplish this – it must be moved by an external force. The external medium is water. WATER, moving through the soil, displaces the carbon dioxide out of the pore spaces and pulls air into the vacuum created as it moves deeper into the soil profile. Therefore, aeration is accomplished by managing water.

Water management is generally measured by its infiltration and percolation rates. Infiltration is the rate at which water enters the soil, while percolation is the rate at which it passes through the soil. Deep aeration, typically 6” to 10”, once or twice a year, using the AerWay Shattertine, establishes percolation. Infiltration rates can be maintained by venting aeration with the AerWay Sportstine or Finetine. This is a fast, effective, low cost method to keep the soil surface open and minimize compaction without disrupting use of the turf area. As surface compaction is a continuous problem caused by both use (foot traffic) and maintenance (mowing), venting aeration should be scheduled every 2 to 3 weeks to be effective.

AerWay - effective aeration - where you need it - when you need it.
THE CAUSES AND RESULTS OF COMPACTION

Rainfall
Heavy rainfall disrupts the smallest particles on the surface and forces them into pore spaces near the surface creating layers of compaction.

Equipment and Foot Traffic
High traffic loads break down soil particles and forces them together. This reduces the pore space needed for air and water movement. The effect is worse in wet conditions when particles move more freely.

Compaction Relieved
- Increased pore space
- Reduced bulk density
- Increased gas exchange
- Efficient nutrient movement
- Optimum water contact
- Increased air content

Soil Conditions
- Increased water infiltration
- Improved drainage
- Reduced erosion
- Greater root mass
- Increased microbial activity
- Less nutrient leaching
- Reduced risk of injury

Plant Response
- Even turf growth
- Well developed plants
- Deeper, healthier roots
- Increased root mass
- Better drought tolerance
- Improved disease resistance
- Decreased weed pressure

The bottom line is that relieving soil compaction is the first step to increase soil productivity. Compaction relief is the single most cost-effective method for producing healthy turf grass.

Standing water is a visible sign of compaction.
SHATTERTINE® – For use on roughs, fairways, tees and sports fields. Patented AerWay® Shattertines® lift and fracture tough soil to increase air, water and nutrient movement. Moving over the surface of the ground, the unique angles and offsets of the Shattertines crack and shatter compacted soil 7 inches and deeper, resulting in increased water percolation, microbial activity and fertilizer utilization. Plants respond with stronger root systems and healthier top growth.

SPORTSTINE® – For use on sports fields, fairways, tees and approaches. The Sportstine® is a 6 inch long, heavy-duty venting aeration tine that can be fitted to any AerWay frame. Its usage is fast, effective and economical. It can even be used mid-season when the need is greatest and the “window of opportunity” exists. Sportstine lets you aerate and play right away.

FINETINE® – For use on greens, tees, approaches and fine turf. The AerWay® deep Finetine® relieves surface compaction and penetration up to 6 inches. It can be combined with the “Greens Express” smoothing roller on most AerWay frames for a fast venting aeration of greens and tees without disruption of play with no clean up. Eighteen greens can typically be aerated in about three hours.

CORING TINE – For use on fairways, and sports fields where a Coring Application is desired. The Coring Tine is ideal for dethatching and preparing the soil for topdressing and overseeding. The 3/4” diameter, 4” long tine can be used at high speeds. Tines are available on 4”, 5” and 6” centers and can be fitted into a variety of AerWay frames.

SUPER FINETINE® – For use on greens, tees, approaches and fine turf. The Super Finetine® is designed to be used as a thatch management tool. Its venting aeration through the thatch layer maintains infiltration rates between verticutting and coring treatments. Available on 3” x 3” centers and can be retrofitted on any AerWay Frame. It’s fast with no disruption in play when used with the smoothing roller.

Coring Tines & Super Finettes are not interchangeable with the other tines due to roller shaft differences.

You can outfit your AerWay with any of our five tine options for use on golf course fairways, greens, sports fields and large areas of maintained turf grass. Select the right tine or change out the complete roller system for the Aeration treatment you need.
COMPACTION RELIEF BOOSTS YOUR YIELD POTENTIAL.
AVAILABLE IN 5 FT. STRAIGHT FRAMES TO 30 FT. FOLDING FRAME MODELS

It’s easy. Simply choose your frame style, select the appropriate tine and add the options for your application.

**3-POINT HITCH**
Standard Category 1, or 2 three-point hitch (depending on size) for basic sports turf and fairway aeration.

- Bolt-on replaceable tines
- Built-in frame stands, ballast tank

** Options:**
- Shattertine®, Sportstine®, Finetine®, Coring Tine or Super Finetine®
- Greens Express Smoothing Roller kit
- 5” tine spacing (Sportstine® & Finetine® only)
- Single or two roller
- Super Finetine® 3”, 4”, 5”, 6” Tine spacing
- Coring Tine 4”, 5”, 6” Tine spacing

**3 - Point Hitch Specifications**
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<th>Model Number</th>
<th>Horsepower Required</th>
<th>Weight (approx)</th>
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<tr>
<td>45”</td>
<td>15-22 hp</td>
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<td>60”</td>
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<tr>
<td>90”</td>
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**HYDRAULIC TAG-ALONG**
Designed for use with tractors or utility vehicles. Pneumatic turf tires make transport convenient.

- Bolt-on replaceable tines
- Ballast tank
- Wheels/hydraulics
- Safety lock out

** Options:**
- Shattertine®, Sportstine®, Finetine®, Coring Tine or Super Finetine®
- Coring Tine 4”, 5”, 6” Tine spacing
- 5” tine spacing (Sportstine® & Finetine® only)
- Greens Express Smoothing Roller kit
- Single or two roller
- Super Finetine® 3”, 4”, 5”, 6” Tine spacing

**Hydraulic Tag-Along Specifications**
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<td>45”</td>
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<td>90”</td>
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Greens Express Smoothing Roller
The AerWay® Greens Express smoothing roller option allows the operator to lift the roller completely off the ground to leave the aeration holes open, or adjust tine penetration in less than one inch increments, or support the tined roller completely out of the ground for use exclusively as a smoothing roller.

Adjustable Roller Feature
On certain AerWay® models, the user has the ability to offset the rollers of the Shattertine® equipped units for renovation purposes. This can be accomplished by changing two bolts on the outboard end of each roller. The manual unit has three positions of offset, 0, 2 1/2 and 5 degrees.

Liquid Ballast Tank
The new liquid ballast tank, standard on all AerWay® units, provides an easy and effective way to ballast the AerWay for complete ground penetration. It comes complete with straps and an evacuation spout. The ballast tank should always be completely filled.

<table>
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**AERWAY**
- HAY AND PASTURE TILLAGE
- MANURE APPLICATION
- TILLAGE
- 9200 IN-LINE RIPPER MOLDBOARD PLOWS CULTIVATORS UNIVERSAL HARROWS

**BBI SPREADERS**
- PRODUCER SERIES MAGNASPREAD ENDURANCE LIBERTY GRASSHOPPER CRICKET TROOPER

**VALMAR APPLICATORS**
- 8600 PULL-TYPE
- 5500 PULL-TYPE
- 1255 PULL-TYPE
- 245 PULL-TYPE
- 55 SERIES MOUNTED APPLICATORS
- 455 FORAGE PRESERVATIVE APPLICATOR ST-6 & -8 ROW CROP

**SEEDING**
- 520 AIR DRILLS
- 525 AIR DRILLS
- AIR CARTS
- I-SERIES SEEDING
- PATHFINDER CART

**Contact Information**
- Canada - Salford, Ontario • Elie, Manitoba
- USA - Osceola, Iowa • Cornelia, Georgia

Phone: 519-485-1293
Toll Free: 1-866-442-1293
Email: sales@salfordgroup.com
www.salfordgroup.com