

Groundsman Product Catalogue



Exceptional build quality, machines you can rely on & great aftersales care...



To see our full range visit our website or give us a call, there are no pushy salesmen, just good honest help & advice...



Leading by design

email : info@groundsmanindustries.com www.groundsmanindustries.com

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This catalogue is a summary of the Groundsman Product Range. Further information and technical specifications are available on request. See front and back covers for contact details. Please visit our website www.groundsmanindustries.com where you will find lots of information, downloadable PDF brochures and short video clips of the machines working.

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TURF AERATORS

Models 345MD / 345HD

GROUNDSMAN 345 Models are sealed bearing crank driven plunge action machines available in HD (heavy duty) and MD (medium duty). They are front wheel drive and have 3 tining arms and an operating width of 45cm(18 inches). They are fitted with a 6.5hp petrol engine and 500x4 pneumatic tyres.

Model 460HD

The GROUNDSMAN 460HD is a wider version of the 345 range. It has 4 tining arms and an operating width of 60 cm (24 inches). They are fitted with a 8hp petrol engine and 650x6 pneumatic tyres. It is only available as a heavy duty version.

Model 460SDR

The GROUNDSMAN 460 SDR is the top of the range pedestrian aerator. It has the same 4 arm heavy duty aeration mechanism as the 460HD but with two aeration speeds, rapid transport and power steering. Engine and tyres are the same size as the 460HD.

Model 8120CTM

The GROUNDSMAN model 8120CTM is an 8 arm 120cm (48") swath compact tractor mounting machine. Minimum tractor requirement of 18 to 20 HP. Its modular design uses two 4 arm heavy duty aeration units. This machine has been designed to accept the unique GROUNDSMAN Flexblade Core Collector attachment which enables you to Core and Collect in one pass.

Model 12180TM

The GROUNDSMAN model 12180TM is a 12 arm 180cm (60") tractor mounting machine. Minimum tractor requirement is 28 to 30 HP. As with the 8120, it is modular using four 3 arm heavy duty tining units. This machine can also be used to core and collect in one pass with the Flexblade Core Collector attachment.



AERATOR ATTACHMENTS

Windrow Attachment

Model No: WA3 & WA4

A windrow attachment is available for all Groundsman Pedestrian operated Turf Aerators. This attachment gathers the soil cores into a centre row for easier collection. It is attached to a slotted bracket to each side of the rear flap and secured by two spring pins. An adjustable lift chain pulls the attachment clear of the ground when the machine is raised.



Core Collection Models: FCC8 & FCC12

This patented attachment is available for the Groundsman Tractor Mounting Turf Aerator models 8120CTM and 12180TM. Cores are dumped automatically when the machine is raised. A series of soil or core piles will be left on the edge of the green or aerated area. The Collector has the capacity to collect these piles into one collective pile, eg, to a selected spot away from play. This attachment can save many hours of manual work or a follow-up operation with heavy cumbersome equipment. It is clean and efficient with over 60% of the cores entering the Collector without touching the ground. The remainder are scooped cleanly from the surface by a series of platelets which follow the contours acting like shovels.



More Core Collection models on Page 15

Surface Roller Attachment

Model No: SR3 & SR4

The surface roller attachment is available for all the Groundsman Pedestrian Turf Aerators. It is used to smooth out the surface of fine turf when needle tining or spiking is performed. This implement can help prevent scalping around the hole parameter on the follow up cutting especially if the mower is set very low. It attaches the same way as the Windrow.



Surface Iron

Model No: RTK8120 & RTK12180

The surface Iron effectively performs the same task as the Surface Roller Attachment on the Pedestrian Turf Aerators. This system works in the same principal as the Flexblade Core Collector except the leading edge is turned upward like a ski which follow the surface contours. This system is flexible on the surface of rolling terrain making it more effective than a roller on the wider Tractor Mounting machines. It is used, as with the roller, to smooth out the surface when needle tining or spiking.



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AERATOR ATTACHMENTS

Seeder & Drag Brush Attachment Model No: DS3, DB3

The Groundsman Seeder & Drag Brush attaches to the Groundsman 345HD/MD allowing for a one pass operation, consisting of a front hopper distributing the seeds evenly ahead of the tining unit, followed up by a brush which efficiently spreads surface seeds down into the seed beds.

- Even Distribution of Seeds on any sports turf surface
- Flawless and easy seeding of your green in One Pass
- Consistent depth of seed bed for better Germination
- Attach and remove for use, when and where you need it
- Compact and easy to attach straight onto your Groundsman 345HD/MD

A drag brush and roller combination attachment is also available on request.



Caster Wheel Attachment Model No: CWA3, CWA4

The Groundsman caster wheel attachment allows for tight turning of the 345HD/MD and 460HD pedestrian aerators.

The Caster Wheel raises when the machine is dropped into work position and lifts the front wheels when the machine is raised out of work position to allow tight turning of the machine at the end of an aerated strip. Ideal for turning in confined areas such as bowling greens and small gardens.

The caster wheel attachment is easily attached and removed. Slide the caster wheel supporting bar into attachment bracket and simply tighten clamp bolts. To remove the caster wheel attachment simply slacken clamp bolts and slide caster off leaving the crossbar mounted.









AERATOR TURF RETAINERS

Tie Down Bracket Part No: GI269

A tie down bracket is available to give convenient and secure tie down locations between the front and rear axles on the pedestrian operated Turf Aerators. The brackets come complete with mounting bolts and bolt holes are provided on the chassis sides. These brackets will prove invaluable when transporting the machines between sites.

Turf Retainers

Turf Retainer Pedestrian Mount Model No: TRR3,TRR4 & TRR4S

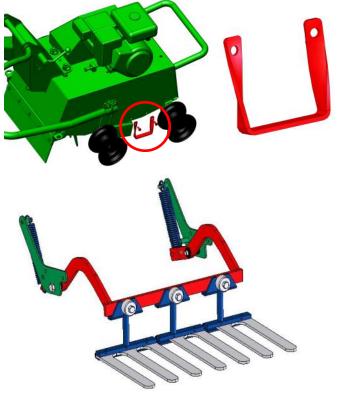
The Elliptical Plunge Action tining mechanism on the Groundsman range of surface aerators causes very little surface lifting. However, in circumstances where the roots are particularly shallow, turf retainers are available for all pedestrian and tractor mounting Aerators. Holes are provided in the chassis sides to bolt the mounting bracket to finger holders and a spring loaded mounting bar provides a quick attachment for the finger-bar holders.

Turf Retainer Rack Tractor Mount Part No: TRR8 & TRR12

The Rack is required if Turf Retainers are to be used. It consists of a box section member which attaches to the roller leg bracket on the 8120 and 12180 Tractor Mounting Turf Aerators. This rack spans the width of the machine just in front of the roller. Spring loaded brackets extend over the roller rearwards onto which the Turf Retainer Holders are bolted in pairs. This system allows the retainers to follow the contours of the surface while maintaining a constant pressure on the turf to prevent lifting. The rack is supplied with Blank Retainer Holder Flanges to keep the clamp bolts secure when retainers are not being used.

Turf Retainer Holders Part No: TRH & TRHW

Turf Retainer Holders are required to hold the plastic retainer sections. One wide holder is required in each set. The model 8120 machine requires 8 retainers i.e, 7 standard and 1 wide. The model 12180 machine requires 12 retainers i.e, 11 standard and 1 wide. The Holders have a bolted bottom plate which clamps the plastic retainers to the holder body. The Holders are universal accepting Twin, Triple, Quad and Quint Retainers. As with the Tine Holders, it is a good idea to have set of Holders for each set of Retainers for convenience.







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AERATOR TURF RETAINERS

TWIN TR2 & TR2W

Twin Turf Retainers can be used with all Twin Holders no matter which Tine is being used. One wide Retainer TR2W is required with each set, it is always fitted to extreme left of the machine as viewed from the rear. There are seven standard and one wide retainer in the model 8120 and eleven standard and one wide Retainer in the model 12180 Turf Aerator machine.



TRIPLE TR3 & TR3W

Triple Turf Retainers can be used with all Triple Holders no matter which Tine is being used. One wide Retainer TR3W is required with each set, it is always fitted to extreme left of the machine as viewed from the rear. There are seven standard and one wide Retainer in the model 8120 and eleven standard and one wide retainer in the model 12180 Turf Aerator machine.

QUAD TR4 & TR4W

Quad Turf Retainers can be used with all Quad Holders no matter which Tine is being used. One wide retainer TR4W is required with each set, it is always fitted to extreme left of the machine as viewed from the rear. There are seven standard and one wide Retainer in the model 8120 and eleven standard and one wide Retainer in the model 12180 Turf Aerator machine.

QUINT TR5 & TR5W

Quint Turf Retainers can be used with all Quint Holders no matter which Tine is being used. One wide Retainer TR5W is required with each set, it is always fitted to extreme left of the machine as viewed from the rear. There are seven standard and one wide Retainer in the model 8120 and eleven standard and one wide Retainer in the model 12180 Turf Aerator machine.





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TINES & HOLDERS PRE-VIEW

SC (spigot clamp) Tine Holders

Groundsman developed the Spigot Clamp type of mounting for a quick and secure attachment of Tine Holders to the HD (heavy duty) range of Turf Aerator machines including Tractor Mounting. This type of Tine Holder is available for mounting the following number of Tines in each Holder; two (Twin Holder) three (Triple Holder) four (Quad Holder) five (Quint Holder). A range of sockets is available depending on the holder. A socket is the hole into which the Tine is clamped, the size of socket required is given with each tine specification in the catalogue.

Full Listing is on Page 9

DB (draw bolt) Tine Holders

The Draw Bolt is the type of mounting required to attach the Tine Holders in the Medium Duty Turf Aerator model 345 MD. These are available in Twin and Triple Holders only. A range of socket sizes is available. Refer to the Tine Holder catalogue where the required socket size is given with the Tine specification.

Full Listing is on Page 9





Tubular Hollow Tines

Tubular Hollow Tines consist of taper-bore case hardened tubular steel. The core is ejected out the top of this tine. Groundsman supply these tines for 13mm ($\frac{1}{2}$ ") 16mm (5/8") and 19mm (3/4" jumbo) coring. They are available in standard and long length.

Full Listing is on Page 10

Side Discharge Hollow Tines

Side Discharge Hollow Tines are manufactured from high tensile hardened and tempered steel. The core with this type of tine is ejected out a slot in the side of the tine and this manufacturing process makes this tine more expensive. The advantages are its thicker wall gives it better wear resistance and it is less prone to clogging especially in the smaller core sizes. Groundsman supply these tines for 8mm (5/16") 10mm (3/8") 13mm ($\frac{1}{2}$ ") 16mm (5/8") and 19mm (3/4"jumbo). One standard length is available.

Full Listing is on Page 11





CUSTOM TINES CAN BE MADE TO ORDER

TINES & HOLDERS PRE-VIEW

Solid and Needle Tines

Solid and Needle Tines are manufactured from high tensile steel which is hardened then tempered just enough to relieve any brittleness to achieve the maximum wear qualities. The taper on the working diameter is designed to minimise exit suction and thereby surface lifting.

Full Listing is on Page 12

Chisel & Star Tines

Groundsman Chisel Tines are a drop forging of high tensile steel which give them unbeatable strength and wear resistance. These are available in widths of 25mm (1") and 30mm (1 $\frac{1}{4}$ "). Both can be supplied in standard or long length. Star Tines were developed as a form of spiking but with less soil displacement. In theory, the wall of the hole is subjected to less pressure and compaction with more surface area to absorb the nutrients.

Full Listing is on Page 13

Cluster Tine Heads

Cluster Tines are available in eight or ten groupings of Needle or Micro Hollow Tines. The hollow is excellent for thatch removal over-seed preparation to about 20mm $\frac{3}{4}$ " maximum depth. The needle will prick the surface to about 40mm (1 1/2") depending on density like a vertical action sorrel roller. These disposable heads are available for attachment to the machine using a Cluster Mounting Flange available for Spigot Clamp (SC) or Draw Bolt (DB) mount.

Full Listing is on Page 14

Note:

Most Tines are available in standard and long length. The Tractor Mounting machines can accept all lengths while the pedestrian are limited because of ground clearance to a maximum of 140mm (5 1/2") overall length of tine.

Cluster Mounting Flanges

Used to attach all types of Cluster Heads to Spigot Clamp (SC) or Draw Bolt (DB) mountings.

Full Listing is on Page 15

Turf Retainers

Turf Retainers are available for the Groundsman Turf Aerator range. A rack spans the width of the machine attached at either end to the roller leg. The retainers consist of impact resistant plastic rails which clamp the turf surface holding it in place during aeration i.e, spiking or hollow coring. These plastic sections are clamped into a holder and are available for Twin, Triple and Quadra Tine Holders.

Full Listing is on Page 6

CUSTOM TINES CAN BE MADE TO ORDER



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TINE HOLDERS

DESCRIPTION :	Twin Tine Holder
SPIGOT CLAMP no. DRAW BOLT no.	SC212, SC258, SC234, SC278 DB212, DB258, DB234, DB278
SOCKET SIZE :	¹ /2" 5/8 " ³ /4" 7/8 "
AERATION PATTERN :	3" x 3"(Minimum Uniform)



RECOMMENDED USE :

Generally used with the larger tines i.e. $\frac{3}{4}$ " 5/8" or $\frac{1}{2}$ " where the wider hole spacing is desirable. Twin Holders are also useful to achieve maximum depth where conditions are very hard and compacted. The choice of tine would depend on the severity of the compaction, i.e, the finer the tine the easier it would be to achieve full penetration. Twin Holders are available in all four-socket sizes including the recently introduced 7/8" sck. for Jumbo Hollow Tines.

DESCRIPTION :	Triple Tine Holder
SPIGOT CLAMP no. DRAW BOLT no.	SC312, SC358, SC334 DB312, DB358, DB334
SOCKET SIZE :	1⁄2" 5/8 " ³ ⁄4"
AERATION PATTERN :	2" X 2" (Minimum Uniform)

RECOMMENDED USE :

Normally used with the medium sized tines i.e, $\frac{1}{2}$ " or 7/16" although the smaller micro tines can be used where conditions are compacted or the pattern produced is desirable. The $\frac{1}{2}$ " slit or $\frac{5}{8}$ " hollow and solid tines are generally not recommended for use in triples and certainly used only if conditions are soft and an exceptionally large amount of soil is to be removed or disturbed. This holder is available in three socket sizes therefore all tines except $\frac{7}{8}$ " socket jumbos will fit.

DESCRIPTION :	Quadra & Quint Tine Holder
SPIGOT CLAMP no.	SC412, SC512
SOCKET SIZE :	½" & ½"
AERATION PATTERN :	1 ½" 1 ¼"
RECOMMENDED USE :	

Normally used only with the smaller tines, i.e. $3/8^{\circ}$ and $5/16^{\circ}$ for micro hollow and solid tining including needles all of which fit the $\frac{1}{2}^{\circ}$ socket. The Quint Holder can also be used for over-seeding preparation or thatch removal.



TUBULAR HOLLOW TINES

DESCRIPTION :	5/8" & ¾"	Hollow Tine
PART NO :	GTH58	GTH34
SOCKET SIZE :	3/4"	7/8"
OVERALL LENGTH :	4 1⁄2"	4 3⁄4"

RECOMMENDED USE :

Normally used in Twin Holders with the pedestrian range of machines. Spring and Autumn general purpose aeration of compacted areas to maximum depth. Large core size at 3" x 3" hole pattern. Moderate to severe soil removal. GTH34 Jumbo Tine is normally used on fairways or where a large amount of soil exchange is desired

DESCRIPTION :	5/8"Long & ¾"Long Hollow Tine	
PART NO :	GTH58L	GTH34L
SOCKET SIZE :	3/4"	7/8"
OVERALL LENGTH :	5 1/2"	5 ¾"

RECOMMENDED USE :

Normally used in Twin Tine Holders with the Groundsman model 8120 Tractor Mounted machine, however they can be used on the pedestrian range where conditions permit. Spring and Autumn general purpose aeration of compacted areas to maximum depth. Large core size at medium hole pattern (3" x 3"). Moderate to severe soil removal. GTH34L Jumbo Hollow Tine is normally used on fairways or for excessive soil exchange.

DESCRIPTION :	1/2" Hollow Tines
PART NO :	GTH12
SOCKET SIZE :	5/8"
OVERALL LENGTH :	4 3/8"

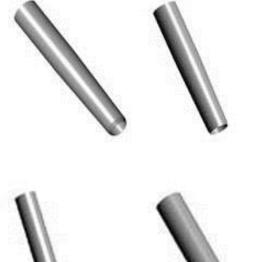
RECOMMENDED USE :

Normally used in Triple Holders with the pedestrian range of machines however, they can be used in twins for compacted conditions or on harder surfaces such as Cricket tables or Tee boxes and approaches. Spring and Autumn aeration producing a medium sizes core to maximum depth, moderate soil removal.

DESCRIPTION :	1/2" Hollow Tine (Long)
PART NO :	GTH12L
SOCKET SIZE :	3/4"
OVERALL LENGTH :	5 1/2"
RECOMMENDED USE :	

Normally used with Groundsman model 8120 Tractor Mounted machine fitted to Triple Holders for close pattern hollow coring of Greens etc. Use on Twin Holders for harder more compacted surfaces or if the wider hole pattern is more desirable. These tines can be fitted to the pedestrian machines but preferable on a Twin Holder. Medium core size to maximum depth with moderate soil removal.

CUSTOM TINES CAN BE MADE TO ORDER









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SIDE DISCHARGE HOLLOW TINES

DESCRIPTION :	5/16" SD Hollow Tine
PART NO :	GTSD516
SOCKET SIZE :	1/2"
OVERALL LENGTH :	4"
RECOMMENDED USE :	

Normally used in Quint or Quadra Tine Holders producing a 1 $3/8" \times 1 3/8"$ or 1 $\frac{1}{2}" \times 1 \frac{1}{2}"$ hole pattern respectively and up to 2 $\frac{1}{2}"$ deep. Year round aeration with thatch removal or preparation for over seeding. Dispersible miniature cores.

DESCRIPTION :	3/8" SD Hollow Tine
PART NO :	GTSD38
SOCKET SIZE :	1/2"
OVERALL LENGTH :	4 3⁄4"

RECOMMENDED USE :

Normally used in Quadra or Quint Tine Holders but can also be used on Triples for harder more compacted surfaces or if the wider hole pattern is desirable. Produces a small core to a maximum depth of about 3". Minimal disruption coring for surface compaction relief or thatch removal. Also effective for over-seeding.

DESCRIPTION :	1/2" SD Hollow Tine
PART NO :	GTSD12
SOCKET SIZE :	5/8"
OVERALL LENGTH :	5 1⁄2"

RECOMMENDED USE :

Normally used in Triple holders for Greens if conditions are not too compacted. Use Twin Holders for Tee boxes and approaches etc. or Cricket tables where conditions are harder and maximum depth is desirable. Medium soil removal to depths of 3 $\frac{1}{2}$ " to 4" maximum.

DESCRIPTION :	5/8" ³ /4" SD Hollow Tine			
PART NO :	GTSD58	GTSD34	GTSD3434S	
SOCKET SIZE :	3/4"	7/8"	3/4"	
OVERALL LENGTH :	5 3/4"	6 3/8"	6 3/8"	
RECOMMENDED USE :				

Normally used in Twin Holders producing a 3" x 3" hole pattern at depths of 4" to 4 ½" maximum. Spring and Autumn general purpose aeration of compacted areas. Large core size with moderate to severe soil removal. GTSD34 Jumbo Tine is normally used on fairways or on areas where extreme soil exchange is desired. GTS3434S.

CUSTOM TINES CAN BE MADE TO ORDER

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SOLID & NEEDLE TINES

DESCRIPTION :	5/8" Solid	Tines
PART NO :	GTS58	GTS58L
SOCKET SIZE :	5/8"	5/8"
OVERALL LENGTH :	5 1/2"	6 1⁄2"

RECOMMENDED USE :

Normally used in Twin Tine Holders. Soft to medium areas in need of drainage. Maximum depth spiking producing quite a large hole at 3" centres. Please note: Not recommended for compacted surfaces.

1/2" Solid Tine	
GTS12	GTS12L
5/8"	5/8"
5 1⁄2"	6 1⁄2"
	GTS12 5/8"

RECOMMENDED USE :

Normally used in Twin Holders for maximum penetration in compacted surfaces. General purpose spiking for areas in need of aeration and drainage.

DESCRIPTION :	7/16" Solid Tine	
PART NO :	GTS716	GTS716L
SOCKET SIZE :	1⁄2"	1⁄2''
OVERALL LENGTH :	5"	6"

RECOMMENDED USE :

Normally used in Triple Holders ($\frac{1}{2}$ " sck.) for year round spiking and surface drainage with minimal surface disruption. This tine can also be effective in Twin Holders for heavily compacted areas.

DESCRIPTION :	3/8" Solid	Tine
PART NO :	GTS38	GTS38L
SOCKET SIZE :	1/2"	1/2"
OVERALL LENGTH :	4 3⁄4"	5 ¾"

RECOMMENDED USE :

Normally used in Quadra Holders. The 3/8" solid tine is the thickest in the micro-tine category. Durable yet fine enough to perform year round aeration and improve drainage without disturbing play.

5/16" Nee	dle Tine
GTS516	GTS516L
1/2"	1/2"
4 1⁄2"	5 1⁄2"
	GTS516 1⁄2"

RECOMMENDED USE :

Normally used in Quint Tine Holders for close pattern spiking through out the summer. Regular use is recommended, especially effective immediately before treatments such as fertilisation.

1/4" Needle	Tine
GTS14	GTS14L
1/2"	1/2"
4 ½"	5 1⁄2"
	GTS14 1⁄2"

RECOMMENDED USE :

Normally used in Quint Tine Holders for summer aeration on fine turf with little trace on the surface. Use often for maximum effect especially throughout the growing season. Also available in clusters.

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CHISEL & STAR TINES

1" Chisel Tine	
GTSL1	GTSL1L
1⁄2"	1⁄2"
5 1/8"	6 1/8"
	GTSL1 ½"

RECOMMENDED USE :

Normally used in Twin for aeration and root pruning on fine turf to 4 $\frac{1}{2}$ " & 5 $\frac{1}{2}$ " depth. This form of slitting leaves no surface gash and is not prone to opening during dry spells. A popular choice for Winter or year round aeration with little or no surface disturbance.

DESCRIPTION :	1 ¹ / ₂ " Chisel Tine
PART NO :	GTSL112
SOCKET SIZE :	5/8"
OVERALL LENGTH :	5 5/8"

RECOMMENDED USE :

Only use in Twin Holders for 3" x 3" pattern. Soft to medium areas for up to 5" deep slit pattern and root pruning. Groundsman chisel tines leave a close pattern stitched effect which is not prone to opening during dry spells. Polish on approach before going on fine turf.

DESCRIPTION :	Star Tines	
PART NO :	GTST12	GTST12L
SOCKET SIZE :	1/2"	1⁄2"
OVERALL LENGTH :	5 1/2"	6 ¹ /2"

RECOMMENDED USE :

Normally used in Triple Holders. Has the hole surface area of much larger tines with little trace on the playing surface. Ideal playing season aeration to maintain oxygen, water and chemical movement. Enhances root density. Recommended by many agronomists.

DESCRIPTION :	Star Tines	
PART NO :	GTST58	GTST58L
SOCKET SIZE :	5/8 "	5/8 "
OVERALL LENGTH :	5 ½"	6½"

RECOMMENDED USE :

Normally used in Twin Holders. Has the hole surface area of much larger tines with little trace on the playing surface. Ideal playing season aeration to maintain oxygen, water and chemical movement. Enhances root density. Recommended by many agronomists.

Please Note

The Tines and fittings in this catalogue have been selected because they have proven to be the most popular and effective. However, Groundsman Industries will manufacture special tines and fittings to suit your requirements. To discuss this please contact Billy Warke on (Tel) 028 276 67049 (Fax) 028 276 66855 or by (Email) bwarke@groundsmanindustries.co.uk Visit our website : www.groundsmanindustries.com for more information

CUSTOM TINES CAN BE MADE TO ORDER





CLUSTER TINE HEADS

DESCRIPTION:

PART NO :

 Cluster of 5/16" or 3/8" Hollow Tines

 8SD516
 8SD38

AERATION PATTERN :

 DEPTH RANGE :
 ½" - 2 ½"

RECOMMENDED USE :

Use for very close pattern Micro Hollow Tining at medium to shallow depth to enhance surface drainage while relieving surface compaction. Very effective at shallow depth for thatch removal and in preparation for overseeding.

1 ½" x 1 ½" (64 - sq./ft)

DESCRIPTION :	Cluster of Eight Solid Tines	
PART NO :	8S14	8S516
SPIKE DIAMETER :	5/16" & ¼" (needles)	
AERATION PATTERN :	1 ½" X 1 ½" (64 - sq./ft.) (38mm X 38mm)	
MAX DEPTH :	3"	

RECOMMENDED USE :

Fast ground coverage for close pattern spiking throughout the Summer and just before treatments such as fertilisation to encourage deeper rooting. No surface disruption.

DESCRIPTION :	Cluster of Ten Solid & Hollow Tines	
PART NO :	105516	10SD516
SPIKE DIAMETER :	5/16"	
AERATION PATTERN :	1 ¼" X 1 ¼" (30mm X 30mm)	(100 - sq./ft.)
DEPTH RANGE :	1/4" - 1"	

RECOMMENDED USE :

Use for very close pattern Micro Hollow Tining at shallow depth for thatch removal and in preparation for over-seeding.

DESCRIPTION :	Cluster of Ten Solid	Needle Tines
PART NO :	10S14	
SPIKE DIAMETER :	1/4 "	
AERATION PATTERN :	1 ¼" X 1 ¼" (30mm X 30mm)	(100 - sq./ft.)
DEPTH RANGE :	1" - 2"	

RECOMMENDED USE :

Produces precision depth Needle Tining at a very close pattern for a Sorrel Roller effect for surface drainage or over-seeding.

DESCRIPTION :	Cluster Head Mounting Flange	
MOUNT TYPE :	Spigot-clamp The HD Range	Draw-bolt The MD Range
PART NO :	GSCMF	GDBMF

RECOMMENDED USE :

Used for mounting Cluster Heads to machines accepting the spigot-clamp & Draw-Bolt type fitting.

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SOIL / CORE COLLECTION

CORE AND COLLECT IN ONE PASS

Flexblade Core Collectors to fit PTO and Pedestrian Aerator

This patented attachment is available for Groundsman Tractor Mounted PTO Aerator models 8120CTM and 12180TM aswell as the John Deere 1500 PTO Aerator, Wiedenmann Terra Spike SL6 PTO Aerator and the Toro Procore 648 Pedestrian Aerator. Cores are dumped automatically when the machine is raised. A series of soil or core piles will be left at the edge of the green. The Collector has the capacity to collect these piles into one collective pile, eg to a selected spot away from play. This attachment can save many hours of manual work or a follow up operation with heavy cumbersome equipment. It is clean and efficient with over 60% of the cores entering the collector without touching the ground. The remainder are scooped cleanly from the surface by a series of platelets which follow the contours acting like shovels.

STAND ALONE COLLECTOR

Flexblade Core Collectors to fit Utility Vehicles and Tractors

The Flexblade Soil / Core Collector is also available as a stand alone implement on a **three point linkage frame** or for mounting on **Turf Vehicles** such as a **Toro Workman**. Suitable for follow up core collection or linear aeration soil. The implement can be driven rapidly over the surface without effecting collection making it extremely efficient. The cores or soil are scooped cleanly from the surface by a series of platelets which follow the contours acting like shovels This operation will not be hindered by the cores or soil getting wet or driven over, the flexblade will scoop them cleanly from the surface without break-up keeping the aeration holes open. These piles can then be collected into one pile away from play. Can be used on fairways and football pitches as well as fine turf.

AVAILABLE MODELS :	1.2m	1.5m	1.8m
	7 Blade	7 Blade	9 Blade
To Fit Groundsman PTO Aerators			
8120 Groundsman Aerator	FCC8	x	х
12180 Groundsman Aerator	х	x	FCC12
To Fit Utility Vehicles and Tractors			
Tractor and 3 Point Linkage	FCCTM7C	x	FCCTM9C
Turf Vehicle Mounting	x	x	FCCTVM9
To Fit Other PTO Aerators			
Standard PTO Aerators	FCCPTO12	FCCPTO15	FCCPTO18
John Deere 1500 Aerator	x	FCCJD1500	x
Weidenmann Terra Spike SL6	x	FCCWSL6	x
To Fit Pedestrian Aerators			
Toro ProCore 648	FCCTP648	x	х

The Flexblade Core Collector is available to order for other Aerators

SEE PAGE 16 for further technical information

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3 (25,400sq/yds) 3 (25,400sq/yds)

SOIL / CORE COLLECTION

To fit Groundsman Aerators



To fit Wiedenmann Terra Spike Aerators



Stand-alone to fit Turf Tractors



To fit John Deere Aerators



To fit Toro Procore Aerators



Stand-alone to Fit Turf Utility Vehicles



Overall Dimensions :	1.2m	1.5m	1.8m
(Without attaching Brackets)	7 Blade	7 Blade	9 Blade
Width	155cm (61")	175cm (69")	200cm (78")
Length	76cm (39")		
Height	46cm (30")		
Weight	46kg (100lbs)	50kg (110lbs)	61kg (135lbs)

Specifications for Flexblade Core Collector attached to Groundsman PTO Aerators

	Groundsman 8120 Aerator & FCC8 Collector	Groundsman 12180 Aerator & FCC12 Collector
Max Groundspeed MPH	9.32	9.32
Max Groundspeed KPH	15	15
Avg Coverage m ² /min	200	267
Avg Coverage sq.yds/min	233	287

Coverage for other core collector models is determined by Pedestrian Aerator or Tractor Speed

TURF SOD CUTTERS

Model: TMC26

The TMC26 Turf Sod Cutter is a professional general purpose Turf Sod Cutter ideal for contract hire and landscapers It is a two wheel drive with a rear caster wheel for manoeuvrability. The caster can be locked for straight line cutting and released for curve cutting.

FEATURES

- Exceptional Traction & Cut Turf Quality
- Low Operator Hand Arm Vibration Levels (HAV)
- 30, 35, 40, 45, 50, & 60cm (12" to 24") Sod Cutting Widths
- Mole-drain, De-compaction, Trenching and Cable insertion attachment
- Locking Caster-wheel for Straight or Curve Cutting
- Separate Blade & Ground Drive Clutch for Safe Loading
- Flat-belt Blade-drive for Quiet Running & Easy Maintenance
- Low Maintenance Oil Filled Gear Clutch Ground Drive.

Model: TMC46

The TMC46 is a precision turf sod cutter with the ability to cut fine turf of re-laying quality consistently even on rolling terrain. It has four wheel drive for maximum traction and stability, the ability to cut deep in rough matted grass as well as fine turf.

FEATURES

- Precision Cutting & Consistent Depth even on Rolling Terrain
- 4 Wheel Drive for Maximum Traction in all conditions
- Low Operator Hand Arm Vibration Levels (HAV)
- 30, 35, 40, 45, 50, & 60cm (12" to 24") Sod Cutting Widths Mole-drainage, and De-compaction Blades to 5" deep
- Trench Blades 6" Widths to 4" depth
- Cable insertion attachment
- Flat Belt Blade Drive for Quiet Running & Easy Maintenance
- Low Maintenance Oil Filled Gear Clutch Ground Drive

Model: TMC48

The TMC48 is probably the most versatile Turf Sod Cutter on the market. It is a 9HP version of the TMC46 with the same precision plus it has the power to operate attachments such as the Guillotine Chop-off attachment to measure and chop the sod to length.

FEATURES

- Precision Cutting & Consistent Depth even on Rolling Terrain
- 4 Wheel Drive gives Maximum Traction in all Conditions
- Low Operator Hand Arm Vibration Levels (HAV)
- 30, 35, 40, 45, 50, & 60cm (12" to 24") Sod Cutting Widths
- Mole-drainage, and De-compaction Blades to 5" deep
- Trench Blade 6" widths to 4" depth
- Reel Insertion Attachment (RIA) Inserts Cable or Irrigation pipe to 5" depth in a one-pass operation
- Guillotine Chop-off Attachment Cuts Sod to Preset Lengths







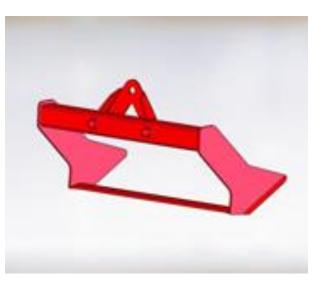


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TURF MULTI CUTTER BLADES

Sod-Blades

All Groundsman blades are manufactured from durable high tensile steel with excellent wear qualities. The patented cross section of the bottom blade provides a stiffening to reduce blade bow, this is especially important in the wider thinner cuts. The side knives give exceptionally cleanly cut edges. The three bolt Tri-pad mounting provides a secure method of attaching the blade while allowing the blade to be set perfectly parallel across the width of cut before finally tightening the bolts. Sod blades are available in 30cm, 35cm, 40cm, 45cm, 50cm, 55cm and 60cm (12" to 24") widths for all the Turf Multi Cutter (TMC) models. Cutting depths are infinitely adjustable between 0 to 7cm (0-3") depth. The blade cutting angle is infinitely adjustable between 0 and 6 degrees to ensure a perfect cut finish in all conditions and depths. Please refer to our price-list for part numbers and prices.



Revetting Blades (multi strip)

Revetting or centre knife blades cut two strips of turf sod at the same time in one pass. These blades can be fitted to all the Turf Multi Cutter models and are available in all widths from 2 x 15cm to 2 x 30cm. Revetting blades mount in exactly the same way as the standard sod blades, depth and blade angle settings are set in the same manner. Revetting Blades are useful to provide turf for the building of sod walls such as when creating a golf bunker or a landscape terrace or simply to double the output of a standard 30cm Sod Blade.



Blade-Wheels

Blade-wheels are required for the TMC46 and TMC48 models. They are available in a range of widths to match the width of blade being used and therefore are not supplied with the machine but purchased separately as an accessory. Matching the blade-wheel width to the blade ensures maximum stability and therefore accuracy of sod thickness. The Blade-wheels are attached using the a three stud mounting as with the front wheels. A Tee-wrench is supplied with the machine to change the blades and bladewheels if necessary. Refer to the Groundsman price-list for part numbers and prices.



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TURF MULTI CUTTER BLADES

Trench Blades

Trench Cutting Blades are available to fit the full range of Turf Multi Cutters. They produce a cleanly cut narrow strip of turf down to 10cm (4") deep that can be lifted out before digging a trench and replaced when work is complete. Available in 6" widths. Special spades are available to match the blade widths to clean out the loose material from the bottom of the trench or to deepen it.

De-compactor & Mole-drain Blades

De-compactor Blades have been developed by Groundsman Industries to cut a single slit in the ground down to 12cm (5") depth. The tail of the blade is offset to shift and disturb the soil at the bottom of the slit under the surface to cultivate and relieve compaction.

Mole-drain Blades work in the same way as the Decompactor blade cutting a single slit in the ground. And a bullet at the lower edge of the blade puts a drain down to 25cm (5") under the surface. Mole Blades are available with different sizes of bullets to produce 16mm 20mm & 25mm drains. The Mole and De-compactor blades are centrally mounted on the machine via the Tri-pad mounting. These blades are also available mounted in pairs 30, 35, 40 & 45cm apart (12" to 18")

Trench Plough Attachment

The Trench Plough is an attachment for the TMC46 Turf Cutter that follows the trench blade to remove a strip of sod (down to 5" / 120cm depth), placing it at the side of the trench

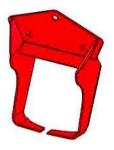


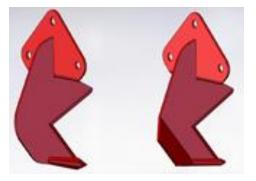
Cable Insertion Attachment

Cable insertion attachment inserts down to 10cm (4") depth for low voltage or robotic mowing applications.

Single centre mounted attachment available or twin offset right and left to insert close to kerbs, borders and fences.











TMC48 ATTACHMENTS TCGCO GUILOTINE Attachment

A Guillotine Chop-off Attachment can be fitted to the Groundsman model TMC48 Turf Multi Cutter to chop the turf to preset lengths for relaying or just for easy handling. This compact attachment picks up the drive from an auxiliary sprocket on the Turf Cutter crank-shaft and the turf lengths are measured by an infinitely adjustable meter wheel which runs along-side the rear axle on the Turf Cutter. The attachment is complete with a caster safety frame which supports the machine in the raised position for easy handling. Guillotine blades are available for 30cm, 35cm, 40cm, 45cm, 50cm & 60 wide cuts. Gas spring assistance raises and holds the machine out of work.





- Compact and easy to operate
- Power assisted raising and lowering in and out of work
- Infinitely adjustable sod cut lengths from 1metre to 5 metres
- Chop blades for 30, 35, 40, 45, 50 & 60 cm wide sod
- Durable industrial rolling key blade clutch for positive chop activation

Guillotine Blades

Part No:

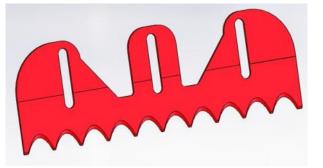
TCCO30 Width 30cm (12") TCCO35 Width 35cm (14") TCCO40 Width 40cm (16") TCCO45 Width 45cm (18") TCCO50 Width 50cm (20") TCCO60 Width 60cm (24")

The guillotine blades are designed to cut through the sod with the minimum of force to avoid any machine heave that would disrupt consistency in the thickness of the cut sod.

Blades are available with fine and course serations. The blade is attached to the Guillotine blade mounting bar with three mounting bolts. The depth of cut is adjusted by sliding the blade up or down on the blade mounting slots.

Custom blades can be made to order





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