



“ROLLER FEATURES - WHY ARE THEY IMPORTANT?”

Explanatory Note re Roller Comparison and the various features of the Tru-Turf RS48-11 Roll ‘n’ Spike Golf Greens Roller.

1. Roll Width

Preference: Wider Swath

Reason: The wider the roll width, the quicker the greens are rolled. Fewer passes across the green lets the operator finish the job and move on quickly to the next green.

Wider rollers reduce the psi on the greens.

2. Number of Smoothing Rollers + Size (Width x Diameter)

Preference: Multiple, small-diameter smoothing rollers.

Split-head smoothing rollers.

Unequally spaced smoothing rollers.

Reason: Smaller-diameter rollers smooth the surface better than larger-diameter rollers.

Larger-diameter rollers tend to follow the “hills and valleys”

Larger-diameter rollers don’t apply sufficient downward pressure on the “hills” or peaks.

Larger-diameter rollers tend to exacerbate the problem by causing surface rippling.

Small rollers and multiple rollers spread the weight of the Roller over a greater surface area, thus reducing the psi.

Multiple unequally spaced rollers apply low psi to the same imperfections and gently “tap” the surface numerous times.

Single rollers tend to roll over the imperfection, either exacerbating the problem or compacting and truing by the use of high psi.

Split-head smoothing rollers allow for contour-following and near zero line creasing of the turf.

3. Number of Drive Rollers + Size (Width x Diameter)

Preference: One or two Drive Rollers

Rubber coated

Shorter Drive Rollers.

Reason: Sufficient to drive the Roller without loss of Traction

Rubber coating aids traction and less likelihood of spinning and burning the turf.

Shorter Drive Rollers allow for more manoeuvrability and sharper turning on complex greens.

4. Weight

Preference: Lightweight

Reason: Reduces the compaction of the turf

Compaction is detrimental to healthy turf.

5. Pounds-Per-Square-Inch (psi)

Preference: As low as possible yet sufficient to achieve the desired smoothing results.

Reason: High psi produces compaction of the turf and soil as does vibration and water.

Compaction inhibits the healthy growth of turf and reduces the intake of moisture, oxygen and fertiliser.

6. Brake

Preference: Type 1.. An easy-to-use method to bring the Roller to a smooth Stop in normal operation.

and

Type 2.. An easy-to-use method to quickly bring the Roller to an emergency Stop.

Reason: Type 1.. Allows smooth braking of the Roller, preventing damage to the turf and allowing the operator to retain full control of the Roller in normal situations.

Type 2.. Ensures full control by the operator in an emergency under an immediate Stop.

7. Trailer

Preference: A light-weight and user-friendly trailer to easily and quickly transport the Roller from green to green.

An integrated trailer.

Reason: Easy and quick method of delivering the Roller to the green and preparing the Roller for operation.

Less stress and physical effort by the operator.

A Roller independent of its trailer will bounce, will be too wide for some paths and will be unstable when towed.

8. Transmission

Preference: A lightweight, powerful, reliable and quick-response transmission that works equally well in both directions.

No belt and pulley arrangement.

Ample capacity to accept harsh and abnormal loads and operating temperature conditions.

Reason: No belt and pulley means no belt slippage in the Drive Train. Reduced loss of power.

Dual chain provides maximum power with minimal loss.

The need to cope with physically large operators.

9. Hydraulic Lines

Preference: Unbreakable; Non-leaking.

Reason: Avoid oil spillage on greens.

10. Transmission Oil Capacity

Preference: Desirable capacity to suit the application Filtered oil.

Reason: Dissipation of heat – avoidance of overheating.

Superior lubrication of components, leading to longer life and reduced maintenance.

Less frequent oil changes and less downtime.

11. Ground Spikers

Preference: With Spikers.

Reason: Spikers aerate the turf and soil, allowing moisture, oxygen and fertiliser to reach the roots.

12. Engine Type

Preference: Sufficiently powerful to allow the Roller to be used in a large variety of situations

Reliable brand

Reason: A large enough engine should have a more than adequate supply of power for all conditions

No need to over specify

The correct amount of power for the Roller weight and transmission needs.

A reliable engine reduces downtime

13. Adjustable Seat

Preference: Non-adjustable

Reason: By adjusting the position of the seat, the weight distribution is not evenly balanced along the full length of the Roller.

If the seat is moved forward, the weight of both the seat and the operator is moved forward.

Greater downward pressure is applied to that end of the smoothing rollers, causing uneven pressure and increased psi on the turf and soil.

Creasing can occur.

14. Lights

Preference: With Lights as an option

Reason: The Roller can be used for early starts and late finishes.

15. Rolls Undulations in any direction

Preference: Flexibility to roll a wider swath in any direction

Reason: Rolling patterns and directions can be changed to suit the greens and the operator.

Avoidance of ridging or creasing the surface.

16. Contour-following

Preference: Ability to roll a surface in any direction.

Reason: Split heads allow the offset rollers to operate in patterns and directions to suit the greens and the operator.

17. Climbing Ability

Preference: To climb undulations and hills as and when Required with operators of varying body weights.

Reason: Certain areas are towing vehicle exempt. Rollers must have the ability to be driven from cart paths to the green irrespective of the slopes.

18. Steering

Preference: Light, user-friendly and positive.

Reason: Heavy steering generates operator discomfort or tiredness.

Vague steering is detrimental to operator safety and to correct rolling of greens.

19. Maximum Speed

Preference: Fast but not dangerous.

Reason: Provides the facility to complete the rolling efficiently and time-effectively.

20. Time Taken to Roll 18 Greens

Preference: To finish the rolling as quickly as possible with no greens damage and without placing the operator in any danger.

Reason: The quicker the greens are rolled, the quicker the operator can continue onto other jobs.

The greens become ready for play as soon as possible and ground staff need to keep ahead of the playing field.

21. Straight Roll Sq. Ft./Hr.

Preference: A measure of how quickly the job can be finished.

Reason: Allows comparison between various rollers as a guide to the time taken to roll the greens.

22. Roller Weight Balance

Preference: Even weight distribution left-to-right and front-to-rear; 50:50.

Reason: Necessary for smooth rolling of the turf in all directions.

Eliminates creasing of the greens, thus eliminating ball tracking.

Reduces operator effort.

Can be upset if the seat is adjustable.

23. Seat Height from Ground

Preference: Low.

Reason: A low seat height lowers the centre of gravity.

Low centre of gravity reduces the likelihood of the roller tipping over and reduces the chance of injury to the operator.

Low centre of gravity reduces the likelihood of roller vibration and thus compaction of the turf.

Low centre of gravity provides more stability.