

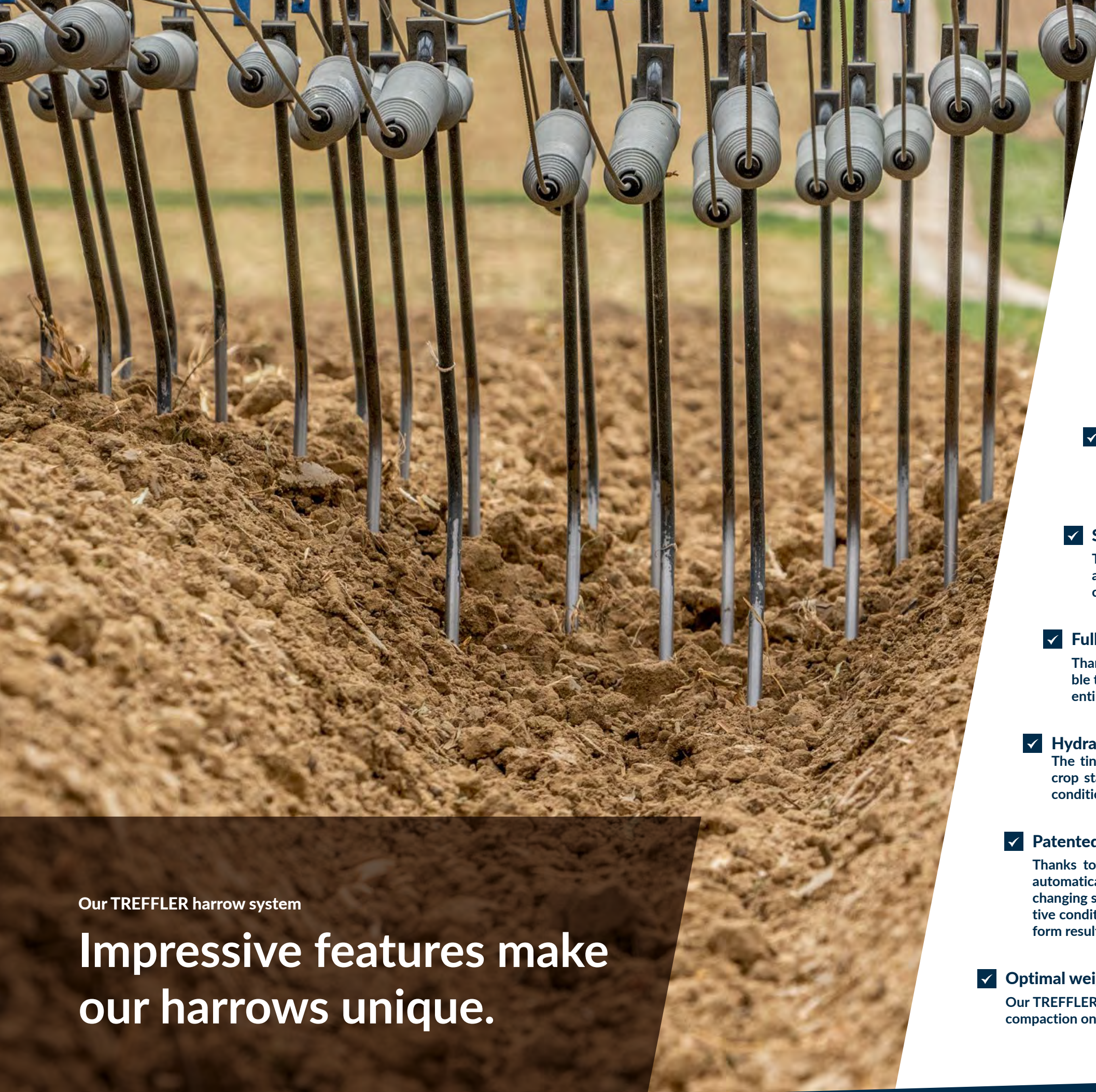


HARROWING

EXACTLY WHAT YOU NEED.



TS precision tine harrow
0.8 - 29 m (2' 7" - 95') available working widths



Our TREFFLER harrow system

Impressive features make our harrows unique.

✓ **Tines adjust to uneven ground**

Each tine is individually pivot-mounted on the frame and tensioned with a spring. Thanks to this patented solution, all the tines adapt to the field independently for perfect contouring.

✓ **Even tine pressure**

Thanks to the patented tine system, the pre-set tine pressure remains the same across the entire swivel range of 57 degrees.

✓ **Uniquely large tine pressure range
from 100 - 5000 g (3.5 oz - 11 lb.)**

The patented pre-tensioning of the springs is carried out using a rotatable draw tube. Together with the patented combi springs, the tine pressure of 100 - 5000g (3.5 oz - 11 lb.) is distributed over 31 cm (1') spring, guaranteeing precise adjustment.

✓ **Stable tines**

The springs are assembled under the frame ensuring low lateral load on the tines and the 8 cm (3") wide patented tine bearings. This guarantees the exact lateral guidance of the tines.

✓ **Self-sharpening carbide tines**

The low penetration resistance ensures more precise depth guidance, better lateral stability, prevents smear layers in the soil, excellent crust breaking and crop protection.

✓ **Full coverage especially beneficial in the crop rows**

Thanks to the optimised tine spacing of 2.8 cm (1.1") and the stable tines, the harrow is extremely effective and accurate over its entire working width.

✓ **Hydraulic adjustment of the tine pressure**

The tine pressure can be infinitely adjusted depending on the crop stage and sensitivity, to adapt to changing soil- and crop conditions or to release residue if necessary.

✓ **Patented (Electronic) Automatic Depth Control ADC**

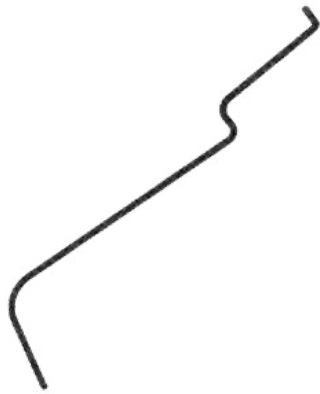
Thanks to the special sensors, the harrow constantly adjusts automatically to the desired working depth- especially useful in changing soil conditions. The depth is evenly controlled in sensitive conditions like pre-emerging sugar beets, guaranteeing uniform results.

✓ **Optimal weight, stable, tried-and-tested since 2004**

Our TREFFLER harrow system is lightweight, yet stable, for less compaction on your fields.

Success with patented technology.

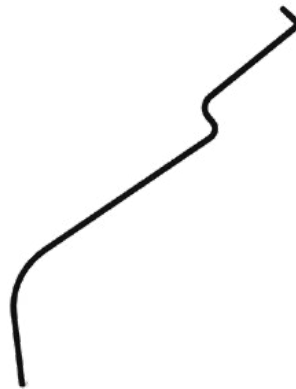
Tines



105° tine

Standard

The 105° tine works “on grip”. This makes it the perfect tool for farms without specialty crops.



120° tine

Optional

The 120° tine has a more gentle angle, less digging and more drag along the ground. This makes it the ideal feature for farms using a mulch tillage system or on specialty crops such as vegetables, herbs, sugar beets, soy, corn, etc.

Tine tips



Standard tip

Standard

The standard tip made from high-quality spring steel is recommended for less intensive area coverage and on soils with little crusting.

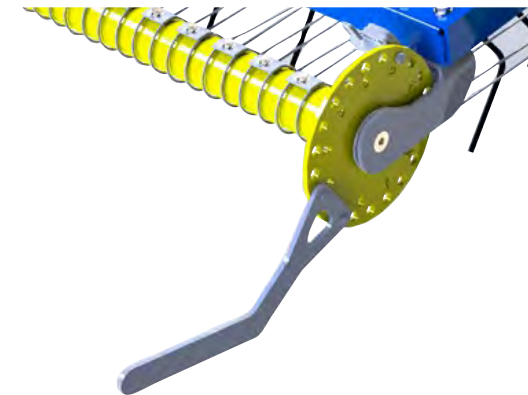


Carbide tip

Optional

In addition to a longer life span, the carbide tip ensures more precise depth guidance, better lateral stability, no smearing of the subsoil, excellent crust breaking and guaranteed crop protection. It is strongly recommended in abrasive soil.

Adjusting the tine pressure



Manually

Standard

The tine pressure is adjusted individually for each field. Adjust and secure the tension bar with a (specially provided) wrench.

* up to 13.50 m (44' 4") working width



Hydraulically

Optional

You can adjust the tine pressure hydraulically from the ease of your tractor seat to compensate for varying field conditions, tension on tender young seedlings or to easily release any organic material build-up.

* from 13.60 m working width, standard configuration

Springs



Standard spring

Standard

From 500 - 5000g (1.1 - 11lb), the standard spring guarantees consistent tine pressure. This spring is suitable for harrowing cereals and grassland



Combi spring

Optional

From 100 - 5000g (0.2 - 11lb), the combi spring with its spring-in-spring system guarantees consistent tine pressure in the initial stages of harrowing. The inner spring is essential for use at extremely early crop stages, particularly for corn, soy, sugar beet, ridge crops and other vulnerable crops.

A perfectly equipped harrow.



Lug tread

Standard

Agricultural lug tread tires leave the soil looser and with less compaction. Running these tires before the harrow allows the tines to more easily bury the weeds. When lug tread tires are used behind the harrow, less surface compaction is created, thus reducing the potential for weeds to germinate.



Hydraulically adjustable support wheel

Optional

A support wheel that can be hydraulically adjusted on the track is our solution for farms with variable row spacing. DA control units allow you to react flexibly and to easily adapt the support wheel as required.



Support wheels at the back/caster wheels

Optional

The castor wheels at the back, which can be adjusted for height and track width, ensure that the frame adapts perfectly to uneven ground. 16 x 6.5-8 tires are installed as standard. We recommend sizes of 18x8.5 6PR for uneven terrain and stony soils.



Track harrows

Optional

Castor wheels at the back of the harrow compress the soil. As a result, the weed regulation in the tire track is not optimal. Track harrows can be installed to ensure successful weed control in the tire track.

Parallelogram-guided pendulum support wheel for ridged crops

Optional

This pendulum support wheel in a horizontal parallelogram keeps the support wheel flexible between the two ridges. The wheel follows the course of

the ridge. As a result, the frame is guided exactly in height and the ridge remains undamaged. Especially useful in imprecise connecting passes.



E-box

Optional

Control all hydraulic functions with a 1 DA control unit. The so-called E-box is used for attaching the harrow on the front or when there is a limited number of DA control units.



(Electronic) Automatic Depth Control ADC

Optional

The ADC checks the set desired working depth and, if necessary, the tine pressure is automatically adjusted. This ensures consistent work results, especially with inconsistent soil types.



Rear and front attachment

Optional

The optional front extension makes it possible to combine our weed harrow with other machines in just one pass. For example, grassland is tilled/sown in the front and rolled in the rear.



Sowing systems

Optional

The sowing of underlay seeds, additional or new seeds via deflector plates ensures optimal stand/space placement distribution. The tine precisely covers light germinators with soil.



For more equipment options, see our website: www.treffler.net





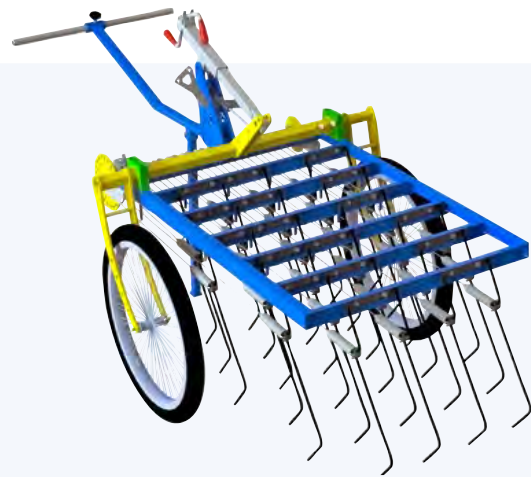
Patented and reliable

Proven technology from the pioneer of the modern harrow.

Thanks to our sophisticated, patented system, you can successfully harrow (almost) all crops in all stages from sowing to row closure. The features on our precision tine harrow support

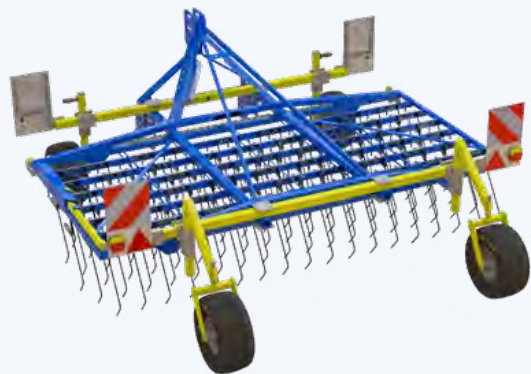
you in the precise control of weeds at the white root and cotyledon stages. By reducing weed competition and saving soil moisture, you increase the yield potential of your crops.

For all size fields.



Tiny TREFFLER

Hand-drawn harrow or 3-pt hitch attachment
Working widths from 0.80 m - 1.30 m
(2'7" - 4'3")



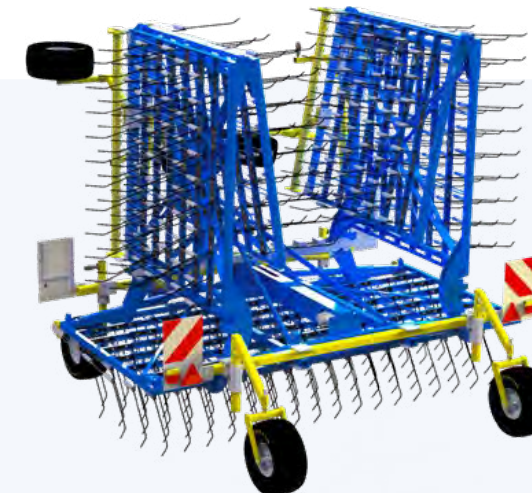
TS Precision tine harrow

1-section version | 3-pt attachment
Working widths from 1.70 m - 3.00 m
(5'7" - 9'11")



TS Precision tine harrow

3-section version | 3-pt attachment
Working widths from 3.20 m - 9.20 m
(10'6" - 30'2")



TS Precision tine harrow

5-section version | 3-pt attachment and
Quick Hitch Adaptable (N. America)
Working widths from 6.20 - 16.20 m (53'2" - 59'8")
7-section version | 3-pt attachment and
Quick Hitch Adaptable (N. America)
Working widths from 16.20 - 18.20 m (53'2" - 59'8")



TS Precision tine harrow Semi-Mounted

5-section version
Working widths from 12.20 - 15.20 m (40' - 49'10")
7-section version
Working widths from 16.20 - 20.20 m (53'2" - 66'3")



TS Precision tine harrow Trailed

Working widths from 21.20 - 29.20 m (69'7" - 95'10")

Uses

More yield from your crops.

Use our equipment to precision harrow your crops. Control weeds in any row, regardless of the sowing or planting width. Harrow sown crops during

pre-emergence and post-emergence, as early as the 2-leaf stage. For the best effect, planted cultures must be firmly established in the soil.



Broad beans



Peas



Strawberries



Fennel



Forest



Cereals



Grassland



Potatoes



Cabbage



Pumpkin



Corn (Maize)



Lettuce



Soy



Sunflowers



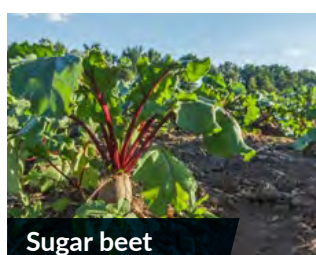
Asparagus



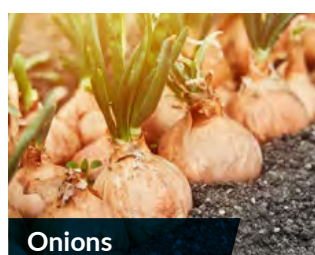
Spinach



Tomatoes



Sugar beet



Onions

and much more...



For videos on our harrows on various crops, see: www.treffler.net/videos



Areas of application

You benefit as a user.

Choose from a wide variety of harrows and custom-fit them to your farm. Our Precision Tine harrow will significantly reduce the amount of manual labor

required in forestry, vegetable and herb cultivation. Regulate the weeds in arable farming and levelling in meadow cultivation. 100% mechanically.



Cultivation

- Effective weed control
- Save groundwater
- Increased water infiltration
- Better gas exchange
- Increased yields



Vegetables & herbs

- Wide variety of models to choose from
- Row-independent and full-field work capacity
- Effective especially within the crop row
- Can be used as early as the 2-leaf stage
- Drip irrigation remains unharmed in the bed



Grassland




- Increased yields
- Leveling (e.g. molehills)
- Tilling grasses
- Harrowing out rough meadow-grass
- Weed control in pasture
- Spreading organic fertilizer remains
- Spreading residue



Forest

- Weed control in bare-root plants
- Any seed, plant or bed width
- Effective especially within the crop row
- Save groundwater
- Increased water infiltration

Technical data

Modell*	Working width (ft)	Weight (lb/oz)	Transport width (ft)	Transport height (ft)**	Tractive power requirement from (kW/HP)	Number of fields	Possible working widths (ft)			
Tiny 80	2' 7"	187 lb 2998 oz	3' 7"	4' 3"		1	2' 7"	-	-	-
Tiny 100	3' 3"	253 lb 3880 oz	4'	4' 3"		1	3' 3"	-	-	-
Tiny 130	4' 3"	353 lb 5644 oz	5' 3"	4' 3"		1	4' 3"	-	-	-
TS 130	4' 3"	441 lb 7055 oz	4' 3"	5' 7"	11/15	1	4' 3"	-	-	-
TS 170	5' 7"	485 lb 7760 oz	5' 7"	5' 7"	15/20	1	5' 7"	-	-	-
TS 200	6' 7"	551 lb 8818 oz	5' 7"	5' 7"	18/25	1	6' 7"	-	-	-
TS 220	7' 3"	595 lb 9524 oz	7' 3"	5' 7"	18/25	1	7' 3"	-	-	-
TS 260	8' 6"	617 lb 9877 oz	8' 6"	5' 7"	18/25	1	8' 6"	-	-	-
TS 280	9' 2"	661 lb 10582 oz	9' 2"	5' 7"	18/25	1	9' 2"	-	-	-
TS 300	9' 10"	772 lb 12346 oz	9' 9"	5' 7"	22/30	1	9' 10"	-	-	-
TS 320 M	10' 6"	860 lb 13757 oz	8' 2"	6' 7"	26/35	3	10' 6"	5' 7"	-	-
TS 320 Z2	10' 6"	970 lb 15521 oz	9' 2"	6' 11"	26/35	3	10' 6"	5' 7"	-	-
TS 360 Z2	11' 10"	1036 lb 16579 oz	9' 2"	7' 10"	26/35	3	11' 10"	5' 7"	-	-
TS 450 Z2	14' 9"	1146 lb 18343 oz	8'	9' 10"	30/40	3	14' 9"	4' 11"	-	-
TS 470 Z2	15' 5"	1191 lb 19048 oz	8' 2"	9' 10"	30/40	3	15' 5"	5' 7"	-	-
TS 470 M3	15' 5"	1235 lb 19753 oz	9' 10"	7' 9"	30/40	3	15' 5"	9' 10"	-	-
TS 520 Z2	17' 1"	1257 lb 20106 oz	9' 10"	10' 10"	37/50	3	17' 1"	5' 7"	-	-
TS 520 M3	17' 1"	1279 lb 20459 oz	9' 10"	8' 6"	37/50	3	17' 1"	9' 10"	-	-
TS 600 M2	19' 8"	1587 lb 25397 oz	7' 12"	11' 2"	44/60	3	19' 8"	6' 7"	-	-
TS 620 Z2	20' 4"	1653 lb 26456 oz	8'	11' 12"	44/60	3	20' 4"	5' 7"	-	-
TS 620 M2	20' 4"	1653 lb 26456 oz	8'	11' 6"	44/60	3	20' 4"	6' 7"	-	-
TS 620 M3	20' 4"	1742 lb 27866 oz	9' 9"	9' 10"	44/60	3	20' 4"	9' 10"	-	-
TS 770 M3	25' 3"	2006 lb 32099 oz	9' 10"	12' 4"	44/60	3	25' 3"	9' 10"	-	-
TS 770 M3 5	25' 3"	2315 lb 37038 oz	9' 9"	9' 10"	44/60	5	25' 3"	20' 4"	9' 10"	-

*Not all models are available in all countries **Transport height at 1' 7" ground clearance (unless stated otherwise)

Modell*	Working width (ft)	Weight (lb/oz)	Transport width (ft)	Transport height (ft)**	Tractive power requirement from (kW/HP)	Number of fields	Possible working widths (ft)			
TS 820 M3	26' 11"	2249 lb 35979 oz	9' 9"	13' 1"	48/65	3	26' 11"	9' 10"	-	-
TS 920 M3	30' 2"	2315 lb 37038 oz	9' 9"	14' 9"	48/65	3	30' 2"	9' 10"	-	-
TS 920 M3 5	30' 2"	2601 lb 41623 oz	9' 9"	12' 4"	48/65	5	30' 2"	25' 3"	9' 10"	-
TS 920 M3 5N	30' 2"	2756 lb 44092 oz	9' 9"	9' 10"	48/65	5	30' 2"	20' 4"	9' 10"	-
TS 1000 M3 5	32' 10"	2866 lb 45856 oz	9' 9"	12' 4"	52/70	5	32' 10"	25' 3"	9' 10"	-
TS 1020 M3 5	33' 6"	2910 lb 46562 oz	9' 9"	11' 12"	52/70	5	33' 6"	25' 3"	9' 10"	-
TS 1100 M3	36' 1"	2910 lb 46562 oz	9' 9"	12' 4"	59/80	5	36' 1"	25' 3"	9' 10"	-
TS 1220 M3	40'	3307 lb 52911 oz	9' 9"	12' 4"	66/90	5	40'	25' 3"	9' 10"	-
TS 1240 M3	40' 8"	3505 lb 56086 oz	9' 9"	12' 4"	66/90	5	40' 8"	25' 3"	9' 10"	-
TS 1360 M3	44' 7"	4189 lb 67021 oz	9' 10"	13' 1" (at 1' 6")	74/100	5	44' 7"	27' 3"	9' 10"	-
TS 1520 H	49' 10"	4519 lb 72312 oz	9' 10"	14' 5" (at 1' 4")	102/140	5	49' 10"	30' 2"	9' 10"	-
TS 1520 H N	49' 10"	5401 lb 86421 oz	9' 10"	13' 1" (at 1' 8")	102/140	5	49' 10"	30' 2"	9' 10"	-
TS 1520 H N F5	49' 10"	6393 lb 102295 oz	9' 10"	13' 1" (at 1' 8")	102/140	5	49' 10"	30' 2"	9' 10"	-
TS 1620 H	53' 2"	4850 lb 77603 oz	9' 10"	15' 1" (at 1' 8")	102/140	5	53' 2"	31' 10"	9' 10"	-
TS 1620 H7	53' 2"	6173 lb 98767 oz	9' 10"	13' 1"	110/150	7	53' 2"	39' 4"	24' 7"	9' 10"
TS 1620 F	53' 2"	6834 lb 109349 oz	9' 10"	13' 1"	88/120	7	53' 2"	43' 4"	27' 3"	9' 10"
TS 1820 D7	59' 9"	7496 lb 119932 oz	9' 10"	13' 1" (at 1' 4")	133/180	7	59' 9"	46' 7"	28' 7"	9' 10"
TS 1820 F	59' 9"	8157 lb 130514 oz	9' 10"	13' 1"	88/120	7	59' 9"	46' 7"	28' 7"	9' 10"
TS 2000 M3 5	65' 7"	7716 lb 123459 oz	9' 10"	13' 5"	133/180	5	65' 7"	42' 8"	9' 10"	-
TS 2020 F	66' 3"	8157 lb 130514 oz	11' 6"	14' 5"	118/160	7	66' 3"	51' 6"	32' 2"	11' 6"
TS 2120 M3	69' 7"	14330 lb 229281 oz	9' 8"	13' 1"	118/160	5	69' 7"	42' 8"	-	-
TS 2420 M3	79' 5"	18739 lb 299829 oz	9' 8"	13' 1"	133/180	5	79' 5"	37' 9"	-	-
TS 2720 M3	89' 3"	21605 lb 345685 oz	9' 8"	13' 1"	133/180	5	89' 3"	50' 6"	-	-
TS 2920 M3	95' 10"	23810 lb 380959 oz	9' 10"	13' 1"	133/180	5	95' 10"	56' 1"	-	-

*Not all models are available in all countries **Transport height at 1' 7" ground clearance (unless stated otherwise)



Additional models can be requested by phone or online at www.treffer.net





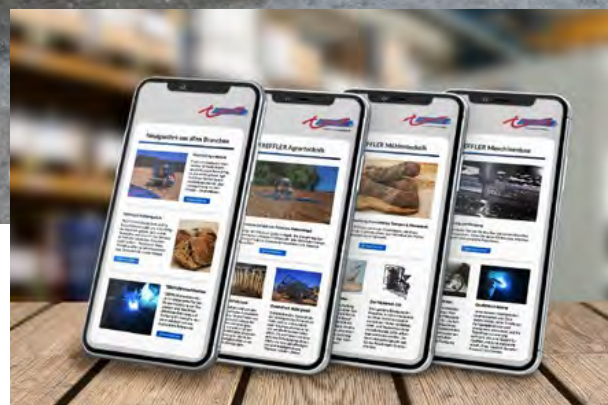
TREFFLER quality

Precision-built. In Bavaria. For the world.

As a family-owned company with strong regional roots, we stand for precision, pioneering spirit, down-to-earth attitude and our commitment to sustainability, people and nature.

Our global customers rely on our refined, precise machines, which always provide them with the desired competitive edge.





Our services

Reliable, we are here for you.

Quality only arises together. In the team. From our agricultural or milling technology to distribution or customer service- at TREFFLER we provide you with a wide range of services. One thing that unites us all: your satisfaction as our customers. We look forward to serving you.

- Extensive advice, even after the purchase
- Competent service support, also via e-mail to service@treffler.net
- Service on-site with the TREFFLER service vehicle

The company

Quality and precision, always aiming for a better future

With tradition comes responsibility. That is why today we are also thinking about tomorrow. We demand a lot- both of ourselves and the quality of our

products- always exploring and creating innovative solutions for even the most complex issues. This defines the culture and the mindset of our company.



GET A GRIP ON YOUR WEEDS. MECHANICALLY.

TG-series



TF-series



TGA-series

TKM-series



TH-series



TSW-series



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