



HARROWING

EXACTLY WHAT YOU NEED.



TS precision tine harrow
0.8 - 29 m (2.5 - 95 ft) available working widths





Our TREFFLER harrow system

These 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.

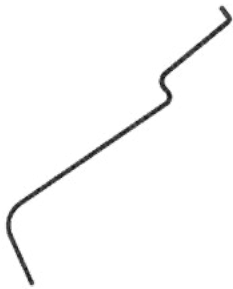
✓ **Optimal weight, stable, tried-and-tested since 2004**

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

Innovative and proven

Success with patented technology.

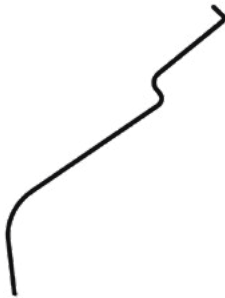
Tines



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.

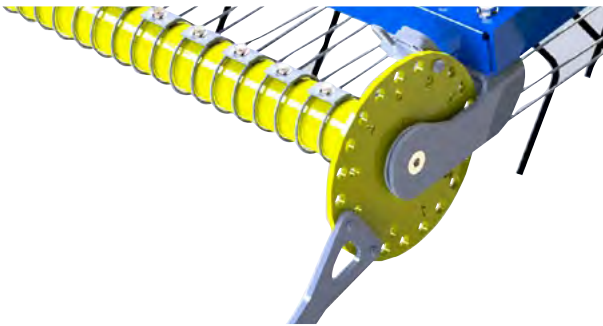


Carbide tip

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



Combi spring

Optional

From 100 - 5000 g (0.2 - 11 lb), 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.

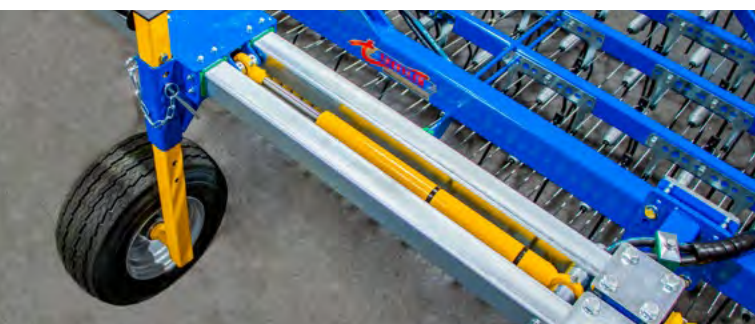
A perfectly equipped harrow.



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/castor 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 18 x 8.5 6 PR 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

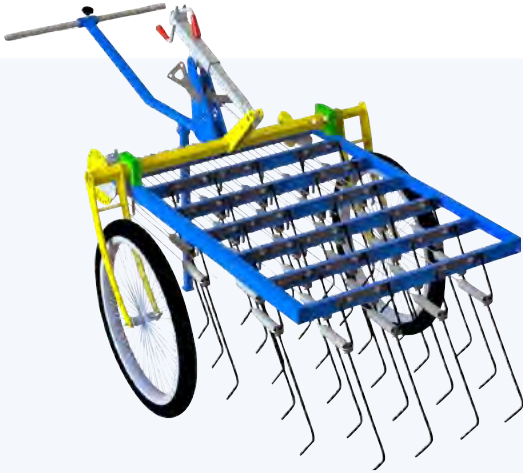
Proven technology from the pioneer of the modern harrow.

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.

Working widths and models

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

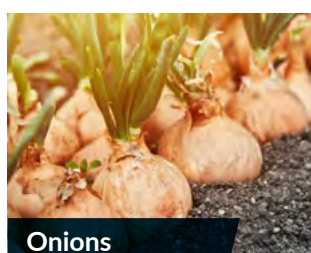
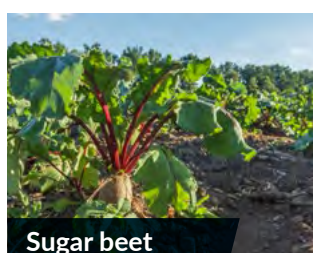
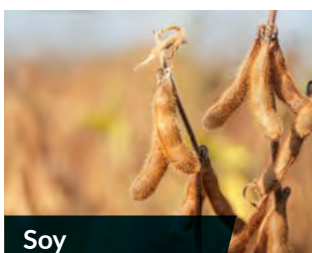
Working widths from 21.20 - 29.20 m (69'7" - 95'10")

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.



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



Cultivation



Vegetables & herbs



Grassland



Forest

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




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

- 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

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

- 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 (cm/ft) | Weight (kg/lb) | Transport width (m/ft) | Transport height (m/ft)** | Tractive power requirement from (kW/HP) | Number of sections | Possible working widths (m/ft) | | | |
|-------------|-----------------------|--------------------|------------------------|---------------------------|---|--------------------|--------------------------------|------------------|------------------|---|
| Tiny 80 | 80 cm 2' 7" | 85 kg 187 lb | 1,10 m 3' 7" | 1,30 m 4' 3" |  | 1 | 0,80 m 2' 7" | - | - | - |
| Tiny 100 | 100 cm 3' 4" | 110 kg 253 lb | 1,23 m 4' | 1,30 m 4' 3" |  | 1 | 1,00 m 3' 3" | - | - | - |
| Tiny 130 | 130 cm 4' 3" | 160 kg 353 lb | 1,60 m 5' 3" | 1,30 m 4' 3" |  | 1 | 1,30 m 4' 3" | - | - | - |
| TS 130 | 130 cm 4' 3" | 200 kg 441 lb | 1,30 m 4' 3" | 1,70 m 5' 7" | 11/15 | 1 | 1,30 m 4' 3" | - | - | - |
| TS 170 | 170 cm 5' 7" | 220 kg 485 lb | 1,70 m 5' 7" | 1,70 m 5' 7" | 15/20 | 1 | 1,70 m 5' 7" | - | - | - |
| TS 200 | 200 cm 6' 7" | 250 kg 551 lb | 1,70 m 5' 7" | 1,70 m 5' 7" | 18/25 | 1 | 2,00 m 6' 7" | - | - | - |
| TS 220 | 220 cm 7' 3" | 270 kg 595 lb | 2,20 m 7' 3" | 1,70 m 5' 7" | 18/25 | 1 | 2,20 m 7' 3" | - | - | - |
| TS 260 | 260 cm 8' 6" | 280 kg 617 lb | 2,60 m 8' 6" | 1,70 m 5' 7" | 18/25 | 1 | 2,60 m 8' 6" | - | - | - |
| TS 280 | 280 cm 9' 2" | 300 kg 661 lb | 2,80 m 9' 2" | 1,70 m 5' 7" | 18/25 | 1 | 2,80 m 9' 2" | - | - | - |
| TS 300 | 300 cm 9' 10" | 350 kg 772 lb | 2,98 m 9' 9" | 1,70 m 5' 7" | 22/30 | 1 | 3,00 m 9' 10" | - | - | - |
| TS 320 M | 320 cm 10' 6" | 390 kg 860 lb | 2,50 m 8' 2" | 2,00 m 6' 7" | 26/35 | 3 | 3,20 m 10' 6" | 1,70 m 5' 7" | - | - |
| TS 320 Z2 | 320 cm 10' 6" | 440 kg 970 lb | 2,80 m 9' 2" | 2,10 m 6' 11" | 26/35 | 3 | 3,20 m 10' 6" | 1,70 m 5' 7" | - | - |
| TS 360 Z2 | 360 cm 11' 10" | 470 kg 1036 lb | 2,80 m 9' 2" | 2,40 m 7' 10" | 26/35 | 3 | 3,60 m 11' 10" | 1,70 m 5' 7" | - | - |
| TS 450 Z2 | 450 cm 14' 9" | 520 kg 1146 lb | 2,45 m 8' | 3,00 m 9' 10" | 30/40 | 3 | 4,50 m 14' 9" | 1,50 m 4' 11" | - | - |
| TS 470 Z2 | 470 cm 15' 5" | 540 kg 1191 lb | 2,49 m 8' 2" | 3,00 m 9' 10" | 30/40 | 3 | 4,70 m 15' 5" | 1,70 m 5' 7" | - | - |
| TS 470 M3 | 470 cm 15' 5" | 560 kg 1235 lb | 3,00 m 9' 10" | 2,35 m 7' 9" | 30/40 | 3 | 4,70 m 15' 5" | 3,00 m 9' 10" | - | - |
| TS 520 Z2 | 520 cm 17' 1" | 570 kg 1257 lb | 3,00 m 9' 10" | 3,30 m 10' 10" | 37/50 | 3 | 5,20 m 17' 1" | 1,70 m 5' 7" | - | - |
| TS 520 M3 | 520 cm 17' 1" | 580 kg 1279 lb | 3,00 m 9' 10" | 2,60 m 8' 6" | 37/50 | 3 | 5,20 m 17' 1" | 3,00 m 9' 10" | - | - |
| TS 600 M2 | 600 cm 19' 8" | 720 kg 1587 lb | 2,43 m 7' 12" | 3,40 m 11' 2" | 44/60 | 3 | 6,00 m 19' 8" | 2,00 m 6' 7" | - | - |
| TS 620 Z2 | 620 cm 20' 4" | 750 kg 1653 lb | 2,45 m 8' | 3,65 m 11' 12" | 44/60 | 3 | 6,20 m 20' 4" | 1,70 m 5' 7" | - | - |
| TS 620 M2 | 620 cm 20' 4" | 750 kg 1653 lb | 2,45 m 8' | 3,50 m 11' 6" | 44/60 | 3 | 6,20 m 20' 4" | 2,00 m 6' 7" | - | - |
| TS 620 M3 | 620 cm 20' 4" | 790 kg 1742 lb | 2,98 m 9' 9" | 3,00 m 9' 10" | 44/60 | 3 | 6,20 m 20' 4" | 3,00 m 9' 10" | - | - |
| TS 770 M3 | 770 cm 25' 3" | 910 kg 2006 lb | 2,99 m 9' 10" | 3,75 m 12' 4" | 44/60 | 3 | 7,70 m 25' 3" | 3,00 m 9' 10" | - | - |
| TS 770 M3 5 | 770 cm 25' 3" | 1050 kg 2315 lb | 2,98 m 9' 9" | 3,00 m 9' 10" | 44/60 | 5 | 7,70 m 25' 3" | 6,20 m 20' 4" | 3,00 m 9' 10" | - |

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

| Modell* | Working width (cm/ft) | Weight (kg/lb) | Transport width (m/ft) | Transport height (m/ft)** | Tractive power requirement from (kW/HP) | Number of sections | Possible working widths (m/ft) | | | |
|----------------|-----------------------|----------------------|------------------------|--|---|--------------------|--------------------------------|-------------------|------------------|------------------|
| TS 820 M3 | 820 cm 26' 11" | 1020 kg 2249 lb | 2,98 m 9' 9" | 4,00 m 13' 1" | 48/65 | 3 | 8,20 m 26' 11" | 3,00 m 9' 10" | - | - |
| TS 920 M3 | 920 cm 30' 2" | 1050 kg 2315 lb | 2,98 m 9' 9" | 4,50 m 14' 9" | 48/65 | 3 | 9,20 m 30' 2" | 3,00 m 9' 10" | - | - |
| TS 920 M3 5 | 920 cm 30' 2" | 1180 kg 2601 lb | 2,98 m 9' 9" | 3,75 m 12' 4" | 48/65 | 5 | 9,20 m 30' 2" | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 920 M3 5N | 920 cm 30' 2" | 1250 kg 2756 lb | 2,98 m 9' 9" | 3,00 m 9' 10" | 48/65 | 5 | 9,20 m 30' 2" | 6,20 m 20' 4" | 3,00 m 9' 10" | - |
| TS 1000 M3 5 | 1000 cm 32' 10" | 1300 kg 2866 lb | 2,98 m 9' 9" | 3,75 m 12' 4" | 52/70 | 5 | 10,00 m 32' 10" | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 1020 M3 5 | 1020 cm 33' 6" | 1320 kg 2910 lb | 2,98 m 9' 9" | 3,65 m 11' 12" | 52/70 | 5 | 10,20 m 33' 6" | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 1100 M3 | 1100 cm 36' 1" | 1320 kg 2910 lb | 2,98 m 9' 9" | 3,75 m 12' 4" | 59/80 | 5 | 11,00 m 36' 1" | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 1220 M3 | 1220 cm 40' | 1500 kg 3307 lb | 2,98 m 9' 9" | 3,75 m 12' 4" | 66/90 | 5 | 12,20 m 40' | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 1240 M3 | 1240 cm 40' 8" | 1590 kg 3505 lb | 2,98 m 9' 9" | 3,75 m 12' 4" | 66/90 | 5 | 12,40 m 40' 8" | 7,70 m 25' 3" | 3,00 m 9' 10" | - |
| TS 1360 M3 | 1360 cm 44' 7" | 1900 kg 4189 lb | 3,00 m 9' 10" | 4,00 m 13' 1" (at 45 cm) (at 1' 6") | 74/100 | 5 | 13,60 m 44' 7" | 8,30 m 27' 3" | 3,00 m 9' 10" | - |
| TS 1520 H | 1520 cm 49' 10" | 2050 kg 4519 lb | 3,00 m 9' 10" | 4,40 m 14' 5" (at 40 cm) (at 1' 4") | 102/140 | 5 | 15,20 m 49' 10" | 9,20 m 30' 2" | 3,00 m 9' 10" | - |
| TS 1520 H N | 1520 cm 49' 10" | 2450 kg 5401 lb | 3,00 m 9' 10" | 4,00 m 13' 1" (at 35 cm) (at 1' 8") | 102/140 | 5 | 15,20 m 49' 10" | 9,20 m 30' 2" | 3,00 m 9' 10" | - |
| TS 1520 H N F5 | 1520 cm 49' 10" | 2900 kg 6393 lb | 3,00 m 9' 10" | 4,00 m 13' 1" (at 35 cm) (at 1' 8") | 102/140 | 5 | 15,20 m 49' 10" | 9,20 m 30' 2" | 3,00 m 9' 10" | - |
| TS 1620 H | 1620 cm 53' 2" | 2200 kg 4850 lb | 3,00 m 9' 10" | 4,60 m 15' 1" (at 35 cm) (at 1' 8") | 102/140 | 5 | 16,20 m 53' 2" | 9,70 m 31' 10" | 3,00 m 9' 10" | - |
| TS 1620 H7 | 1620 cm 53' 2" | 2800 kg 6173 lb | 3,00 m 9' 10" | 4,00 m 13' 1" | 110/150 | 7 | 16,20 m 53' 2" | 12,00 m 39' 4" | 7,50 m 24' 7" | 3,00 m 9' 10" |
| TS 1620 F | 1620 cm 53' 2" | 3100 kg 6834 lb | 3,00 m 9' 10" | 4,00 m 13' 1" | 88/120 | 7 | 16,20 m 53' 2" | 13,20 m 43' 4" | 8,30 m 27' 3" | 3,00 m 9' 10" |
| TS 1820 D7 | 1820 cm 59' 9" | 3400 kg 7496 lb | 3,00 m 9' 10" | 4,00 m 13' 1" (at 40 cm) (at 1' 4") | 133/180 | 7 | 18,20 m 59' 9" | 14,20 m 46' 7" | 8,70 m 28' 7" | 3,00 m 9' 10" |
| TS 1820 F | 1820 cm 59' 9" | 3700 kg 8157 lb | 3,00 m 9' 10" | 4,00 m 13' 1" | 88/120 | 7 | 18,20 m 59' 9" | 14,20 m 46' 7" | 8,70 m 28' 7" | 3,00 m 9' 10" |
| TS 2000 M3 5 | 2000 cm 65' 7" | 3500 kg 7716 lb | 3,00 m 9' 10" | 4,10 m 13' 5" | 133/180 | 5 | 20,00 m 65' 7" | 13,00 m 42' 8" | 3,00 m 9' 10" | - |
| TS 2020 F | 2020 cm 66' 3" | 3700 kg 8157 lb | 3,50 m 11' 6" | 4,40 m 14' 5" | 118/160 | 7 | 20,20 m 66' 3" | 15,70 m 51' 6" | 9,80 m 32' 2" | 3,50 m 11' 6" |
| TS 2120 M3 | 2120 cm 69' 7" | 6500 kg 14330 lb | 2,99 m 9' 8" | 4,00 m 13' 1" | 118/160 | 5 | 21,20 m 69' 7" | 13,00 m 42' 8" | - | - |
| TS 2420 M3 | 2420 cm 79' 5" | 8500 kg 18739 lb | 2,99 m 9' 8" | 4,00 m 13' 1" | 133/180 | 5 | 24,20 m 79' 5" | 11,50 m 37' 9" | - | - |
| TS 2720 M3 | 2720 cm 89' 3" | 9800 kg 21605 lb | 2,99 m 9' 8" | 4,00 m 13' 1" | 133/180 | 5 | 27,20 m 89' 3" | 15,40 m 50' 6" | - | - |
| TS 2920 M3 | 2920 cm 95' 10" | 10800 kg 23810 lb | 3,00 m 9' 10" | 4,00 m 13' 1" | 133/180 | 5 | 29,20 m 95' 10" | 17,10 m 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.treffler.net





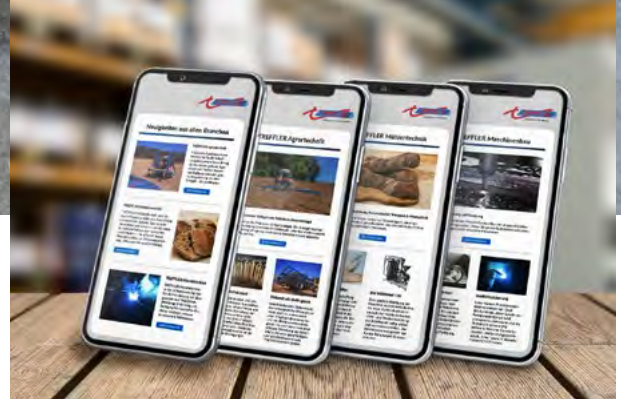
TREFFLER quality

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.



Your TREFFLER distributor:



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