

"ROBUST" TS-R10

Precision Total Station

1"/1.5" angular accuracy | 1000m without prism | 3.2-inch screen | Photoelectric Compensator



Precision Total Station

Originated from European optical technology, TS-R10 comes out with a brand new hardware structure and new measuring tape, and static absolute encoder. The 1"/1.5" angle measurement accuracy and the 1000m non-prism measuring range enable the ROBUST TS-R10 to do various kinds of precision measurements.



Lithium-ion Battery
Working time up to 25 hours.

Touch Measurement
The touch trigger key helps mitigate the impact of jitter on the measurement.

Handy Brake Wrench
User never feels tired with the ergonomic design which fits human fingers. Lock and unlock with a gentle press on the wrench.

Coaxial Laser Plummet
Coaxial laser plummet makes it more convenient to track the targets.

Advanced Optical System
Europe optical technology helps effectively suppress chromatic aberration and make clearer observation.

BLE 5.0
Low energy enables more ways of measurement.

Processor
Equipped with ARM architecture arm processor to lower energy and improve the stability of the total station.

USB Flash Drive
Support data upload and download and update firmware.

High-precision Ranging Technology

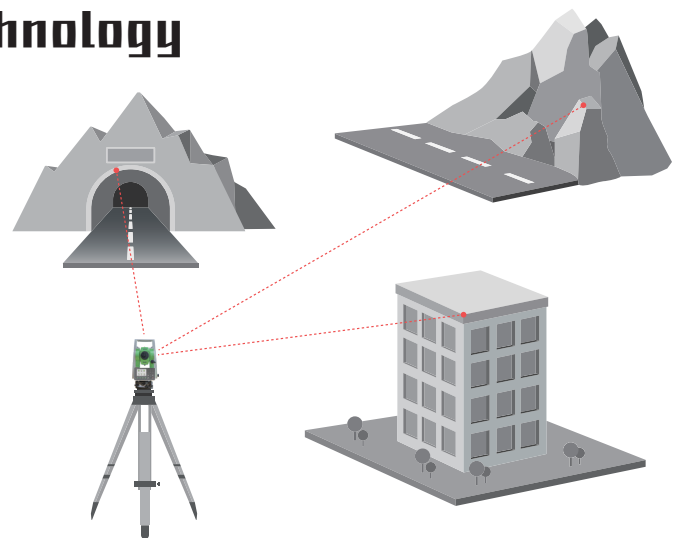
ROBUST TS-R10 can achieve fast and accurate ranging through built-in eight adaptive high-frequency measuring rulers and advanced phase laser ranging algorithm, meeting the accuracy requirements of various advanced engineering measurements.

1,000m

Without Prism

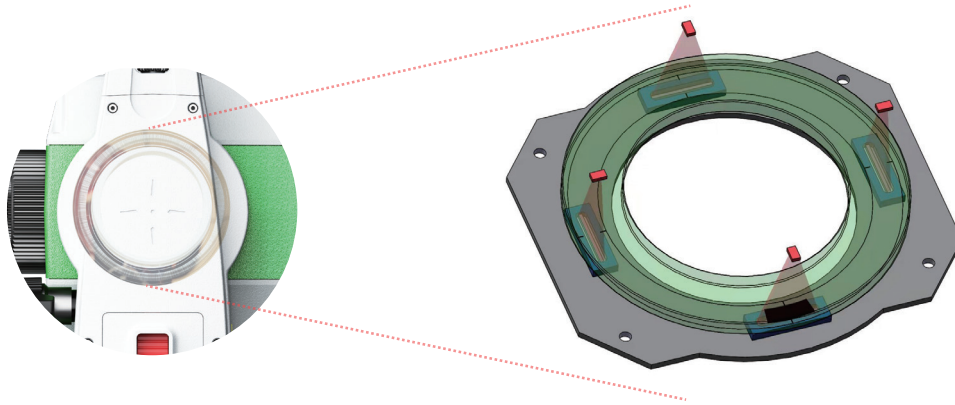
5,000m

With Prism



Angle measuring technology

Absolute encoder enables angle measurement accuracy in dusty, humid and other harsh conditions. Starting up without initialization, all information will be kept after power interruption, power off or restart. The self-developed precision angle sensor design, error compensation algorithm, combined with photoelectric decoding, top-notch precision photolithographic absolute coding disk, brings stable and reliable accuracy.



Photoelectric Compensator

The compensator is located just above the vertical axis, and the accurate compensation is obtained quickly between rotations. At the same time, the CCD is used for accurate calibration, and the compensation range is as high as 6', high operation efficiency.



Superfine Shafting

The high-quality alloy steel is heat-treated several times being processed with a specially designed ultra-high precision grinder. The G3 top-grade steel balls are selected and ground through dozens of procedures to meet the strict requirements of 1"/1.5" accuracy instruments.



Strong Protection

Powerful and precise electronic compensation and high redundancy angle measurement algorithm enable the total station to work efficiently and reliably in all kinds of extreme environments.



User-friendly High-precision Total Station



Equipped with a full-featured operation panel, 3.2-inch bright colour screen, and buttons with comfortable spacing and without sound. Built-in commonly used measurement functions, standard Bluetooth 5.0 for convenient data transmission, and the third-party application. ROBUST TS-R10 is a combination of advanced hardware and software!

3.2-inch Color Screen

Larger screen brings more data display and good viewing experience.

Rounded backlight button

The rounded backlight button makes it easier for measurement work at night.

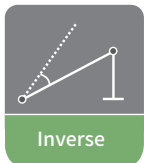
Customized Fn Function Key

The customized function key for a personalized total station.

One-touch Laser Fixed

One touch, rapid centring and leveling up for measurement.

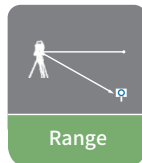
On-board Measurement Software



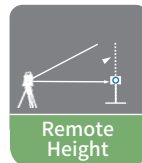
Inverse



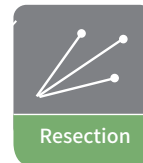
Repeated measurement



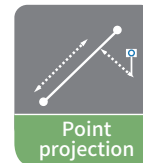
Range



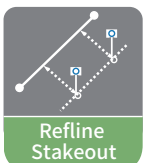
Remote Height



Resection



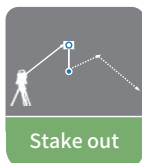
Point projection



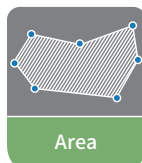
Refine Stakeout



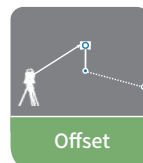
Coordinate measurement



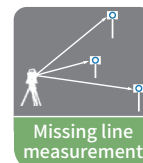
Stake out



Area



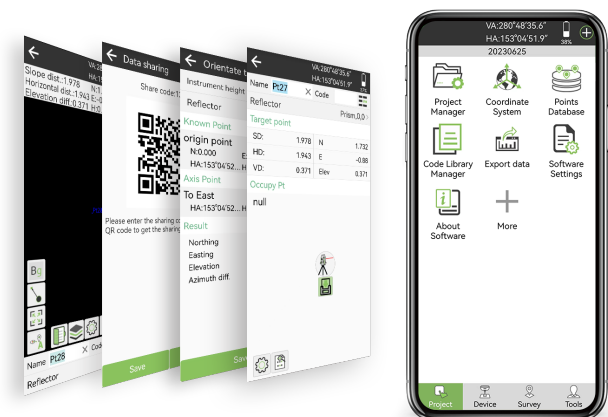
Offset



Missing line measurement

Third-party APP Support

ROBUST TS-R10 supports Dimap Pro and other third party softwares. The involvement of cell phones gives an intelligent edge to the traditional engineering total station.



Accuracy you can count on for high-grade engineering



Tunnel

With unique angle measurement technology and Well operation under dust and condensation conditions; with laser indicator and keyboard backlight, ROBUST TS-R10 is fully qualified for tunnel measurement applications.



With anti-fouling code wheel design, the code wheel can still accurately measure angles when 70% of the code wheel is blocked.

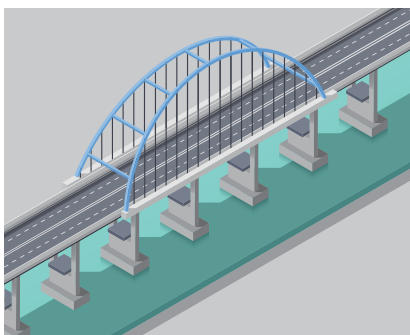


Foundation Pit

ROBUST TS-R10 has an angle measurement accuracy of 1" and a distance measurement accuracy of up to 1+1, fully complying with foundation pit monitoring specifications.

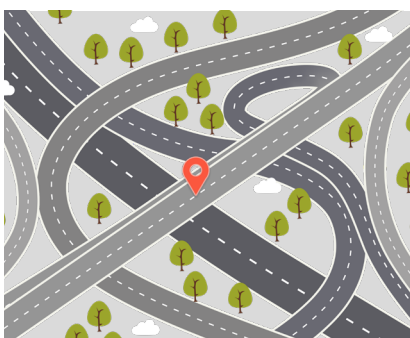


Configured online power supply and debugging functions makes ROBUST TS-R10 can be widely used for monitoring and system integration applications.



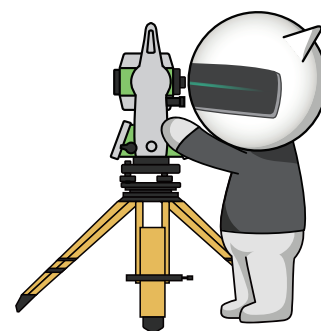
Bridge

ROBUST TS-R10 has excellent distance measurement performance, with fast short-distance ranging speed and high long-distance accuracy, making it suitable for bridge installation and construction.



Roadways

ROBUST TS-R10 has excellent angle measurement accuracy, distance measurement accuracy and compensator accuracy, and is suitable for highways and high-precision rail transit.



Professional Set



| | |
|-----------------|----|
| Total station | X1 |
| Battery | X2 |
| Charger | X1 |
| Tool bag | X1 |
| Manual | X1 |
| Warranty Card | X1 |
| Certificate | X1 |
| USB flash drive | X1 |
| RP60 reflector | X1 |
| RP30 reflector | X1 |
| Objective cap | X1 |

Technical Specification

"ROBUST" TS-R10

| | | | | |
|-------------------------------|------------------------|---|--|---------------|
| Telescope | Image | Right-reading | | |
| | Magnification | 30x | | |
| | Field Of View | 1°30' | | |
| | Minimum Focus | 1m | | |
| | Resolution | 2.8" | | |
| Angle Measurement | Accuracy | 1.5" | 1" | |
| | Reading System | Absolute Encoders | | |
| | Minimum Reading | 1" | 1"/0.2" (Optional) | |
| Distance Measurement | Measuring Accuracy | Non-Prism | 1000m | 1000m |
| | | Reflector Sheet | 2000m | 2000m |
| | | Single Prism | 5000m | 5000m |
| | Measuring Accuracy | Non-Prism | $\pm (3\text{mm} + 2 \times 10^{-6} \times D)$ | |
| | | Reflector Sheet | $\pm (3\text{mm} + 2 \times 10^{-6} \times D)$ | |
| Compensator | Time | Single Prism(1.5") | $\pm (2\text{mm} + 2 \times 10^{-6} \times D)$ | |
| | | Single Prism(1") | $\pm (1\text{mm} + 1 \times 10^{-6} \times D)$ | |
| | Time | Fine :0.7s | Rapid:0.5s | Tracking:0.3s |
| | Minimum Display | Fine/Tracking:0.1mm | | |
| | Compensator Type | Dual axis | | |
| Laser Plummet | Compensator Range | $\pm 6'$ | | |
| | Compensator Resolution | 1" | | |
| | Accuracy | 1.5mm@1.5m | | |
| Level Vial Sensitivity | Wavelength | 635nm | | |
| | Safety | Class2 | | |
| | Output Power | 0.7-1.0nw | | |
| Keyboard | Tubular Level | 30"/2mm | | |
| | Circular Level | 8'/2mm | | |
| Communication | Screen | 3.2-inch colour screen (both side) | | |
| | Key | x26 (Identical Dual Display) | | |
| | Backlight | Support | | |
| Power | Port | USB, Bluetooth | | |
| | Data Memory | 120000 points/2GB Internal 32GB External | | |
| | Battery | 2600mAH & 3400mAh Li-ion battery | | |
| Physical | Battery | Low voltage alert | | |
| | Working Time | 36 hours+ angle mode 25 hours+ angle and distance mode | | |
| Physical | Operating Temperature | -20°C ~ +55°C | | |
| | Storage Temperature | -30°C ~ +65°C | | |
| | Water/Dust Proof | IP66 | | |

*The above technical parameters are for your reference. The company reserves the right to change the design and planning of the product based on the actual product.

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