

TRIMBLE UNIVERSAL TOTAL STATION



**ROBOTIC, REFLECTORLESS
AND MACHINE CONTROL
FEATURES SATISFY ALL
SITE POSITIONING AND
MACHINE CONTROL NEEDS**

**INDUSTRY-LEADING 20 HZ
DYNAMIC POSITIONING
UPDATE RATE**

**ACTIVE TARGET
FUNCTION GUARANTEES
RELIABLE LOCK ON THE
CORRECT TARGET**

**DR PLUS LONG-RANGE
REFLECTORLESS
MEASUREMENTS
ELIMINATE THE RISK AND
DELAY OF WALKING THE
SURFACE WITH A TARGET**

**TRIMBLE MAGDRIVE
SERVOS PROVIDE
UNMATCHED INSTRUMENT
TURNING AND
TRACKING SPEEDS**

THE ALL-IN-ONE, UNIVERSAL TOTAL STATION

The Trimble® SPS630, SPS730 and SPS930 Universal Total Stations can tackle any measurement, stakeout or machine control task on the job site— all from the same instrument. Universal Total Stations are packed with market leading features such as:

- Long life integrated batteries for a full day of interrupted work
- Bluetooth for cable free operation
- Choice of Trimble TSC3, Trimble Tablet, and TCU controllers to suit your site needs
- Intuitive SCS900 Site Controller Software
- Optional machine control mode

These features make the Universal Total Stations easy to use for all your jobsite needs. No matter what job you are doing, SPS total stations will deliver unmatched user experience, all round capability and incredible results.

DR Plus Long-Range Reflectorless Measurement

The DR Plus™ long-range reflectorless measurement capability allows you to measure hard-to-reach or unsafe places up to 2 kilometers (1.2 miles) away. There is no need to walk the surface with a target, so you'll increase productivity and safety when measuring stockpiles, profiling cuttings and rock faces.

Trimble MultiTrack Technology

Trimble MultiTrack™ technology locks on and tracks passive prisms for monitoring or control measurements and active targets for dynamic measurement, stakeout and grade control. Active targets guarantee lock to the correct target, especially in dusty construction site conditions. Up to 16 unique channels of target identification can be used to differentiate survey crews and grade checkers from machines eliminating down time caused by unnecessary interference.

Unmatched Dynamic Positioning

Trimble's patented MagDrive™ servo technology utilizes magnetic levitation to eliminate friction. Fast response time and fast servos allow the instrument to change direction, and track more reliably. Trimble Universal Total Stations can provide highly accurate machine guidance for excavation, grading, compaction, milling, and paving projects. Using the same Trimble total station, your machines can work to tight construction tolerances, save expensive materials, avoid rework and get to grade faster.



TRIMBLE UNIVERSAL TOTAL STATION

ANGLE MEASUREMENT

Horizontal Accuracy SPS630, SPS730, SPS930

Standard deviation based on DIN 18723 5", 3", 1" (1.5, 1.0, 0.3 mgon)

Vertical Accuracy SPS630, SPS730, SPS930

Standard deviation based on DIN 18723 5", 2", 1" (1.5, 0.6, 0.3 mgon)

Angle Reading (least count)

Standard mode 1" (0.3 mgon)

Tracking mode2" (0.6 mgon)

Dual-axis compensator $\pm 6'$ (± 100 mgon)

DISTANCE MEASUREMENT ACCURACY

Prism Mode

Standard mode $\pm(2 \text{ mm} + 2 \text{ ppm}) \pm(0.0065 \text{ ft} + 2 \text{ ppm})$

Tracking mode¹ $\pm(4 \text{ mm} + 2 \text{ ppm}) \pm(0.013 \text{ ft} + 2 \text{ ppm})$

Synchronized angle and distance measurements Yes

Position update rate Up to 20Hz

DR Reflectorless Mode

Standard mode $\pm(2 \text{ mm} + 2 \text{ ppm}) \pm(0.0065 \text{ ft} + 2 \text{ ppm})$

Scanning mode $\pm(4 \text{ mm} + 2 \text{ ppm}) \pm(0.013 \text{ ft} + 2 \text{ ppm})$

MEASUREMENT RANGE

Prism Mode (under clear conditions^{2,3})

1 prism 2,500 m (8,202 ft)

1 prism (long range mode) 5,500 m (18,044 ft)

DR Reflectorless Mode⁴

Kodak Gray Card (18% reflective) >600 m (1969 ft)

Kodak Gray Card (90% reflective) >1300 m (4265 ft)

Servo system MagDrive servo technology, integrated servo/angle sensor, electromagnetic direct drive

Rotation speed 115 degrees/sec (128 gon/sec)

Clamps and slow motions Servo-driven, endless fine adjustment

Positioning speed 180 degrees (200 gon) 3.2 sec

TELESCOPE

Magnification 30x

Field of view 2.6 m at 100 m (8.5 ft at 328 ft)

Shortest focusing distance 1.5 m (4.92 ft) – infinity

Illuminated crosshair Variable (10 steps)

POWER SUPPLY

Internal battery Rechargeable Li-Ion battery 11.1 V, 4.4 Ah

Operating time⁵ Approximately 6 hours on one internal battery

WEIGHT

Instrument with internal battery 5.25 kg (11.57 lb)

ROBOTIC SPECIFICATIONS

Range² 700 m (2,297 ft)

Shortest search distance 0.2 m (0.65 ft)

ATS MODE FOR GRADE CONTROL

Range to target (MT900)^{1,2,3} 700 m (2,297 ft)

Search time (typical)⁶ 2-10 s

Search area 360 degrees (400 gon)
or defined horizontal and vertical search window

Maximum velocity of target

Radial speed 114°/s

Axial speed 6 m/s

Data output

Rate 20 Hz

Timing ± 1 ms

Latency over radio 40 ms

Synchronized measurement data <1 ms

Number of Target ID channels 16

Specifications subject to change without notice.

1 The accuracy statement is valid for a static target or a target moving at constant speed. During acceleration or deceleration, or a target moving with high speed >15 kph (9.3 mph) the accuracy will decrease.

2 Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.

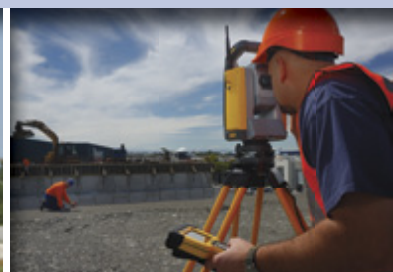
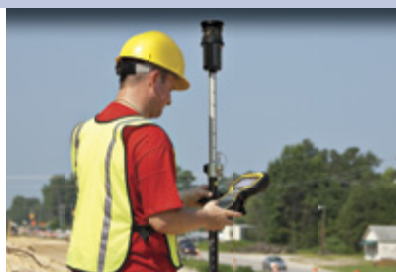
3 Range and accuracy depend on atmospheric conditions, size of prisms and background radiation.

4 Kodak Gray Card, number E1527795

5 The capacity at -20 °C (-5 °F) is 75% of the capacity at +20 °C (68 °F).

6 Dependent on selected size of search window.

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SITECH Indonesia

Gedung TMT 2, Suite GF.01
Jl. Cilandak KKO No. 1 Jakarta 12560, Indonesia
62(21) 2997.6896 Office
website: www.SITECH-ID.com
email: info@SITECH-ID.com

NORTH AMERICA

Trimble Heavy & Highway Division
10355 Westmoor Drive, Suite #100
Westminster, Colorado 80021
USA
800-361-1249 (Toll Free)
+1-937-245-5154 Phone
+1-720-587-4685 Fax
www.trimble.com

EUROPE

Trimble Germany GmbH
Am Prime Parc 11
65479 Raunheim
GERMANY
+49-6142-2100-0 Phone
+49-6142-2100-550 Fax

ASIA-PACIFIC

Trimble Navigation
Singapore PTE Ltd.
80 Marine Parade Road
#22-06, Parkway Parade
Singapore, 449269
SINGAPORE
+65 6348 2212 Phone
+65 6348 2232 Fax