

# Total Stations



# THE COMPLETE INSTRUMENT

## SOPHISTICATED TO MAKE SURVEYING SIMPLE



### **The HORIZON HTS-550 Series**

The HORIZON HTS-550 Series Total Station is a complete package solution. It covers the entire field process in detail.

Many improvements have been made to the HTS-550 Series. The robust exterior shell has been tested to withstand even greater rigorous use in various weather conditions

The HTS-550 Series now features an ergonomic keyboard, and wide screen for user comfort. Simplified for ease of operation and programmed with new application features, like Coordinate Setting Out, it's easy to

grow in confidence with each usage.

The HTS-550R Series Reflectorless Total Station offers the user the advantage of measurement without Reflectors and Prisms, while maintaining the features of the HTS-550 Total Station. A highly versatile laser aids the user in sighting and measurement of a distant target, increasing measurement effectiveness offered by the Reflectorless Technology of the HTS-550R.

### **Product Features**

#### **Multi Features to suit all users**

HTS-550 Series Total Station is equipped with complete set of

Surveying Programs and data record and parameter setting functions, and is applicable for professional all types of survey work.

#### **Simplicity of Operations**

The operation of HTS-550 Series Total Station is user friendly and easy to learn for the first timer.

#### **Excellent Memory Management**

The instrument adopts the program module with internal memory and can record 10 000 points of data. The user can manage the memory with ease and add, delete, modify and transfer the data as required.

#### **Auto Data Collection & Transfer**

With the Automated Data Collection Software, the user can record Surveying Data and Coordinate Data automatically, and transfer them between the instrument and computer for post-survey digital processing.

#### **The New EDM Head: Smaller & Faster**

The appearance and internal structure of the Total Station has been designed for greater efficiency.

The EDM head is now smaller and faster, making it more convenient for survey usage.

#### **Special Surveying Programs**

Besides the Basic Surveying Modes (Angle, Distance, coordinate measurement), this instrument is equipped with special surveying programs that can carry out REM, Angle Offset, MLM, Stalling-out by distance or coordinate-setting, among others, to meet even the more obscure requirements of professional surveying.

#### **Reflectorless Mode for HTS-550R Series**

The Reflectorless function in the HTS-550R Series enables the user

to carry out longer distance and measurements with high accuracy, without the use of Prisms or other Reflector Systems. The instrument emits a Laser Beam which directly measures against visible targets. Quick measuring and computing times 0.8s (Reflectorless Models) and 1.8s (Regular Models).

### Application of HTS-550/550R Series

- Remote Elevation Measurement (REM)
- Missing Line Measurement (MLM)
- Coordinate Set Out
- Area Calculation
- Point to Line Measurement
- Distance Offset Measurement
- Angle Offset Measurement
- Plane Offset Measurement
- Column Offset Measurement

Plus other applications



HORIZON HTS-550 Series (Front View)



HORIZON HTS-550 Series (Back View)

Total Station 550 series Specifications	HTS-552R	HTS-555R	HTS-552	HTS-555
	Reflectorless Model		Standard Model	
Laser Class	Class 3R Laser Product		NA	
Conformity	IEC 60852-1:2001		EN 60825-1:1994 + A11: 1996	
<b>Telescope</b>	Fully Transiting, Coaxial Sighting & Distance Measuring Optics			
Image	Erect			
Magnification	30x			
Objective Aperture	45mm, EDM: 48mm			
Resolving Power	3"			
Field of View	1°30'			
Minimum Focus	1.3m			
Stadia Ratio	100m			
Sight Distance Precision	≤0.4%D			
Tube Length	52mm			
<b>Angle Measurement</b>	Photoelectrical Scanning & Diameter Deduction			
Unit	Degree/Gon/Mil, selectable			
Display Resolution(Selectable)	1" / 5"			
Accuracy (DIN 18723)	2"	5"	2"	5"
Measuring Time	0.8 sec		1.8 sec	
Measuring Mode	H: Clockwise/Counterclockwise, Selectable, 0 Set, Angle Input, Availability. V: Zenith 0/ Horizontal 0, Selectable			
Vertical Measurement	On / Off Selectable			
<b>Distance Measurement</b>	Modulated Laser Type: 0.670μm, Basic Frequency: 60MHz, Coaxial EDM		Infra-red	
Laser Spot	7 x 14mm / 20m		NA	
Unit	Meters / Feet / Selectable			
<b>Measuring Range:</b>				
1. Single Prism (64mm diameter)	4000m*1	3000m	2500m	2000m
2. Triple Prism (64mm diameter)	5000m	4600m	3000m	2500m
3. Mini Prism (25.4mm diameter)	800m	800m	500m	500m
4. Retro Target	500m *2	300m	NA	NA
5. Reflectorless	120m *3	80m	NA	NA

Total Station 550 series Specifications		HTS-552R	HTS-555R	HTS-552	HTS-555
<b>Display Resolution</b>		1mm			
Accuracy					
1. Fine mode with Prism	2mm + 2ppm × D* 4	3mm + 2ppm × D	2mm + 2ppm × D	3mm + 2ppm × D	
2. Track mode with Prism	3mm + 2ppm × D	5mm + 2ppm × D	2mm + 3ppm × D	5mm + 2ppm × D	
3. Reflectorless	5mm + 2ppm × D	5mm + 2ppm × D	NA	NA	
Measuring Time					
1. Fine mode with Prism	1.4sec	1.6sec	1.8sec	1.8sec	
2. Track mode with Prism	1.2sec	1.2sec	0.7sec	0.7sec	
3. Reflectorless	0.8sec	0.8sec	NA	NA	
Metrologic Correction		Manual Input, Auto Correction			
Atmospheric Refraction & Earth Curvature Correction		Selectable K=0.14 / 0.02			
Sensitivity of Vials:		1. Plate Vial - 30"/2mm 2. Circular Vial - 8"			
<b>General</b>					
Display Keyboard		Alphanumeric / Dot Matrix LCD / Backlight / on both faces, 48 keys			
Data Storage		10 000 points			
Interface		Serial RS232C Compatible Port			
Software On-Board		REM, MLM, Missing Line, Area, Point to Line, Layout, Offsets, ZCoordinates			
Laser Pointer		Yes	No		
Tribrach		3-pin forced grove, Detachable			
Plummet		Optical Plummet: Erect Image, 3x0.3m to ∞, Field of view 5° Optional Integrated Laser Plummet Class II Laser Product Programmable On-board			
Battery		Compact Ni-H Battery, 6V DC, Operation Time 8 hrs (Angle Measurement Mode)			
Charger		Quick Battery Charger with separate Power Cord			
Operating Temperature		-20°C to +50°C			
Size & Weight		160 × 150 × 330mm, 5.4kg *1 Under good conditions: No haze, Visibility about 40km (25 miles), Overcast, No Scintillation *2 With HORIZON retro target / white side of a KODAK Grey Card Reflective (A4 x 18% x gray 0.18°) *3 At dawn & dusk or when the target is shadowed *4 (D=Measuring distances, unit: mm)			

**Class IIIR Laser Product**  
Avoid Direct Contact with Eye

## Standard Accessories



**Adaptor**  
for power supply



**Rechargeable Battery**  
8hr Usage Time



**Tool Kit**  
for light maintenance



**Plumb Bob**  
For levelling



**Lens Cover**  
Protection against dust & scratches



**Hard Carry Case**  
Durable for robust use



**Operations Manual**



**Raincoat Covering**  
To Protect Total Station  
from wet weather

## Optional Accessories



**Diagonal Eyepiece**  
For viewing odd angles



**Data Transfer Cable**  
for power supply