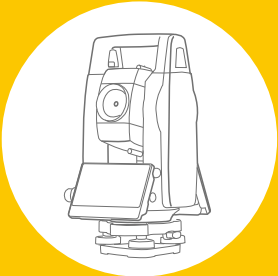


Stay Strong. Be Tough.

10



CONSTRUCTION

Robotic Total Station

- 10.1 NS10
- 10.1 NS30
- 10.1 AMTS Outdoor Mate Intelli-Cover

Total Station

- 10.3 Navi Station
- 10.3 N1
- 10.3 A1
- 10.5 N7/N9
- 10.5 N40
- 10.7 N8
- 10.7 N6+
- 10.7 N3
- 10.7 NTS-332R10
- 10.9 **Equipment List**
- 10.11 **Accessories for Total Station**

Theodolite

- 10.13 NT-023
- 10.13 ET Series

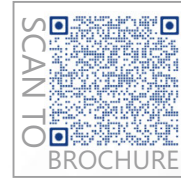
Digital Level /Auto Level

- 10.15 DL-2003A
- 10.15 DL Series
- 10.15 DSZ Series
- 10.17 NL Series
- 10.17 ALTAS

Plumb Laser

- 10.17 ML-401/ML-402

NS10 Robotic Total Station



- High-speed ultrasonic motor built in, fully robotic with automatic search
- Powerful tracking engine to automatically keep tracking prisms in target areas
- Ultralong range Bluetooth to connect with data controller for better flexibility
- Long range measurement with prism, 6000m; reflectorless, 1000m
- Android 9.0 OS, superior performance with full graphics and high-resolution touch display
- Data storage either on board or in removable flash drive, data transfer via Bluetooth or Wi-Fi



NS30 Robotic Total Station



- Hyperdrive engine, powered by worm and gear technology
- Long range measurement with prism, 3500m; reflectorless, 1000m
- Reliable prism search within 300m, and auto prism recognition up to 1200m
- LocknTRack function and user-friendly software Survey Star on board
- Stable remote control connection within 450m enabled by Zigbee technology
- Data transfer via USB OTG, TF card and Bluetooth, optional



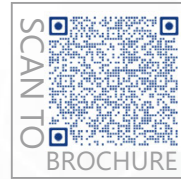
Intelli-Cover II AMTS Outdoor Mate

- Setup within minutes, unattended operation with fully automated covering/uncovering by time-program commands
- Rugged and durable, designed to withstand nearly all-weather conditions
- More economical and time-saving compared with concrete shelter establishment
- Compatible with the robotic total station of all major brands on the market
- Able to work with rain gauge, tilt sensor, etc. to trigger retraction in case of bad conditions



Navi Station

Total Station Integrated with GNSS

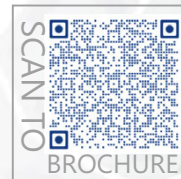


- A total station fully integrated with GNSS receiver and antenna on top
- Set up station location anywhere, no known points needed
- An incredibly powerful EDM, reflectorless range up to 2000m
- Bluetooth 4.0, cable free operation
- Android 6 OS, smart workflow enabled



N1

Android Total Station



- Android 11 OS, amazing user experience
- 5.5-inch color touchscreen and EDM trigger key available
- Intuitive software Survey Star on board
- Enjoys greater convenience compared to conventional total station survey
- Best for topography and construction stake-out
- Simple, fast, and flexible data transfer



A1

Android Total Station



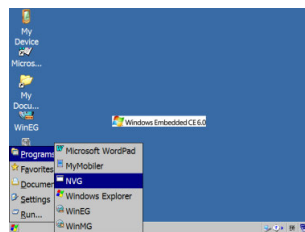
- World's first Android total station, built for developer
- Iconic onboard software with abundant applications, simple but not simplistic
- Bluetooth/Wi-Fi/USB/Hotspot optional for transfer, auto height available
- Bright and sharp guide light (as option) for target aiming



N7/N9 Series Win-CE Total Station

- World's first dual-laser EDM model
- 1" (N9) and 2" (N7) angle accuracy
- Reflectorless range up to 2000m
- Smaller laser spot for minimal measuring error
- Windows CE 6.0 OS, with software WinTS, WinEG, WinMG on board, featuring field-to-office programs like COGO, Road, Resection, Stake-out, Construction Deformation, Mapping & Drawing, etc.

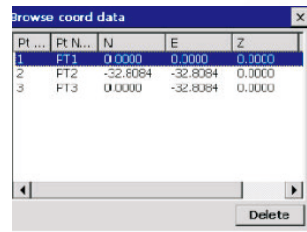
Onboard Software – WinTS, WinEG, WinMG



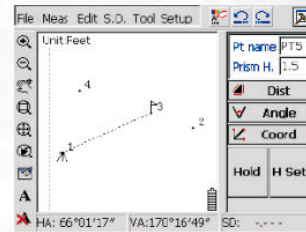
► Windows CE 6.0,
fully open platform



WinTS
(standard survey)



WinEG
(professional survey)



WinMG
(professional mapping)

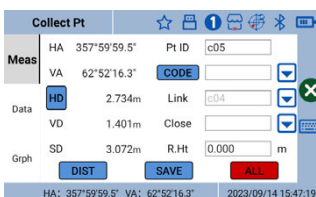


N40 Graphic Total Station

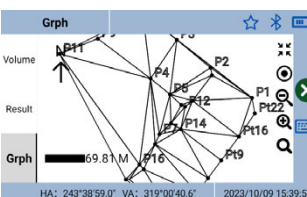
- Auto instrument height and guide light on board
- Customized camera for target collimation
- Ultra-large 4-inch color touch screen
- Intuitive graphic display to increase job efficiency
- Flexible data transfer via USB, Bluetooth or even email



► Main Menu
Icon menu, intuitive and
impressive



Basic Measurement
Nearly all settings to complete
in one page



Graphic Display
Measure, link automatically,
then generate a sketch



Stake-out
Electronic compass available.
All stake-out types included



N8 Series Dual-laser Total Station

- World's first dual-laser EDM total station
- 2" accuracy, reflectorless range up to 2000m
- Incredibly fast measurement within 0.3 sec
- 2.7-inch bright screen, easy to read
- Cable free connection

N6+ Series Best-selling Total Station

- 2" and 5" angle accuracy
- Reflector range up to 5000m and reflectorless, 1000/1500m
- Trigger key and hot key for fast operation
- Battery endurance up to 10 hours
- Bigger internal memory, 96,000 data blocks to save

N3 Total Station with Auto Height

- 2" angle accuracy, 1000m reflectorless EDM
- 3-inch display, large and high resolution
- Quick and Easy trigger key available
- Auto instrument height function on board
- Built-in guide light for easier stake-out

NTS-332R10 Entry-level Total Station

- 2" angle accuracy, 1000m reflectorless EDM
- Simple and practical onboard software
- Auto instrument height function as an option
- Arctic exclusive, NTS-332RT for low temperature (-35°C)



2000m



Hardware		NS10	NS30	NAVI/N1	N7/N9	N8	N6+	A1	N40	N3	332R10
APR		√	√	×	×	×	×	×	×	×	×
Prism Search		√	√	×	×	×	×	×	×	×	×
LocknTrack		√	√	×	×	×	×	×	×	×	×
Remote Control		√	√	×	×	×	×	×	×	×	×
Accuracy	0.5"	√	√	×	×	×	×	×	×	×	×
	1"	√	√	×	√	×	×	√	√	×	×
	2"	×	×	√	√	√	√	√	√	√	√
	5"	×	×	×	×	×	√	×	×	×	×
Distance	With Reflector	√	√	√	√	√	√	√	√	√	√
Measurement	Without Reflector	√	√	√	√	√	√	√	√	√	√
Reflectorless Range	600m	×	×	×	×	×	×	×	×	×	√
	1000m	√	√	○	√	√	√	√	√	√	×
	1500m	×	×	○	○	○	○	×	×	×	×
	2000m	×	×	○	○	○	×	×	×	×	×
EDM Laser Level (IEC 60825)	Class 3R	√	√	√	√	√	√	√	√	√	√
	Class 1	×	×	×	×	×	○	×	×	×	×
EDM Trigger Key		√	×	√	×	×	√	√	√	√	√
Plummet	Laser	√	√	√	√	√	√	√	√	√	√
	Optics	×	×	×	○	○	○	○	○	○	○
Auto Instrument Height		○	×	×	×	×	×	○	○	○	○
Full Numeric Keyboard		×	×	×	√	√	√	×	√	√	√
Color Screen		√	√	√	√	√	×	√	√	√	×
Touch Display		√	√	√	√	×	×	√	√	√	×
Camera ^{*1}		√	×	×	×	×	×	×	○	×	×
WLAN		√	√	×	√	×	×	√	×	×	×
Bluetooth		√	√	√	√	√	√	√	√	√	√
Communication Port	RS-232	√	√	√	√	√	√	√	√	×	×
	Mini USB	×	×	×	√	√	√	×	√	×	×
	Micro USB	√	×	×	×	×	×	√	×	×	×
	USB Memory Stick	√	○	○	√	×	×	√	√	√	√
	SD Card	×	×	×	√	√	√	×	√	×	×
	TF Card	×	√	√	√	×	×	×	×	×	○
Low-Temperature Version (-35°C)		×	×	×	×	×	×	×	×	×	×

Program		NS10	NS30	NAVI/N1	N7/N9	N8	N6+	A1	N40	N3	332R10
Basic Survey	Angle/Distance/Coordinate	√	√	√	√	√	√	√	√	√	√
	Station Setup	√	√	√	√	√	√	√	√	√	√
	Point to Line	√	√	√	×	×	×	√	√	√	×
	Backsight Check	√	√	√	√	√	√	√	√	√	×
	Height Transfer	√	√	√	√	×	×	√	√	√	×
Data Collect	Offset (Standard & Column)	√	√	√	√	√	√	√	√	√	√
	MLM / Tie Distance	√	√	√	√	√	√	√	√	√	√
	REM / Remote Height	√	√	√	√	√	√	√	√	√	√
	Radiation	√	√	√	√	×	×	√	√	×	×
	Stake Out	√	√	√	√	√	√	√	√	√	√
Stake Out	Stake Points	√	√	√	√	√	√	√	√	√	√
	Reference Line S.O	√	√	√	√	×	×	√	√	√	×
	Alignment S.O	√	√	√	√	×	×	√	√	×	×
	Cross-section S.O	×	×	×	√	×	×	×	×	×	×
	COGO	√	√	√	√	×	×	√	√	×	×
COGO	Calculator	√	√	√	√	×	×	√	√	×	×
	Inverse	√	√	√	√	×	×	√	√	√	×
	Coordinate Calculation	√	√	√	√	×	×	√	√	√	×
	Intersections	√	×	×	√	×	×	√	√	×	×
	Z Coordinate	×	×	×	×	√	√	×	×	×	√
Program	Point to Line Inverse	√	×	×	√	√	√	√	√	√	√
	Area & Girth	√	√	√	√	√	√	√	√	√	√ ^{*2}
	Volume	√	√	√	√	×	×	√	√	×	×
	Traverse	×	√	√	√	×	×	×	√	×	×
	Batter Boards	×	×	×	√	×	×	×	×	×	×
Program	Tape Dimensions	×	×	×	√	×	×	×	×	×	×
	Graphic Display	√	√	√	√	×	×	√	√	×	×
	Road	√	○	○	√	√	√	√	√	√	√
	Tunnel	×	○	○	×	×	×	×	○	×	×
	Mining	×	×	×	○	×	×	×	×	×	×

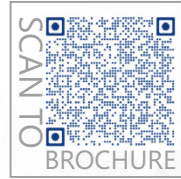
√ - Available × - Not Available ○ - Optional

*1: Camera is an additional option for N41 *2: NTS-332R10 is not able to calculate girth.

Accessories				
Power Supply			Eyepiece	
Battery	LB-01	Li-ion battery, grey color, 7.4V, 3100mAh, 23Wh, rechargeable for N6/N7/N8/N9/N1/Navi Station	NE-20	Diagonal eyepiece, for N6/N7/N8/N9 series total station and ET series theodolite
	LI-39	Li-ion battery, black color, 7.4V, 3900mAh, 29Wh, rechargeable for A1/N4	DFT-2RT	Diagonal eyepiece, for N4/N3/A1 series total station
	LI-30	Li-ion battery, black color, 7.4V, 3000mAh, 22Wh, rechargeable for N3/NTS-332R6	Solar Filter	
Charger	LC-10	Charger for LB-01, including power adapter	NF-20	Objective solar filter for total station
	NC-3	Charger for LI-39 and LI-30, including power adapter	Carry Case	
Cables			T5 Case	Red color, for N7/N8/N9 total station
Y-Cable	Serial data cable, connects 6-pin connector to PC (9-pin RS-232 serial) and USB A		T9 Case	Red color, for N6 total station
Mini USB	Data transfer cable, connects TS to PC, USB mini connector to USB A		RD-1 Case	Yellow color, for A1/N4/N3/NTS-332R6 total station
Micro USB	Data transfer cable, connects A1 total station to PC, USB micro connector to USB A			
OTG Cable	Data transfer cable, connects N7/N9 total station to memory stick			

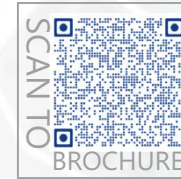
NT-02D Pipe Jacking Theodolite

- Extreme long-range laser, 1000m
- 1000m visible pointer and pinpoint accuracy $\leq 4\text{cm}/1000\text{m}$
- Angular accuracy up to 2"
- Clear and large LCD display
- Designed for pipe jacking in sewer construction



NT-023 Multi-functional Theodolite

- 2" angular accuracy
- Distance measurement up to 300m
- Numeric keypad with 2.7-inch screen
- Angle, distance, axis programs on board



ET Series Most Classic and Best-selling Theodolite

- 2" and 5" angular accuracy
- Laser pointer model, ET-02L/05L; movable tribrach model, ET-05F/05F
- Best interprets reliability and durability
- Unbeatable cost-performance and market-proven quality
- More than 1,000,000 units sold worldwide



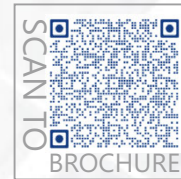
DL-2003A High-accuracy Digital Level

- Amazing accuracy performance
- Height: 0.3mm; Distance: $D \times 0.001\text{mm}$
- Dual-bubble compensator
- 3-inch color touch screen
- Stable Bluetooth remote control



DL Series Cost-performance Digital Level

- 2 models available, DL-202 and DL-2007
- One-key operation
- Enjoys high accuracy and efficiency both
- Automatic saving data while reading
- Speedy data transfer after fieldwork



DL-202

- Height: 1.5mm;
- Distance: $D \leq 10\text{m}: 10\text{mm}$; $D > 10\text{m}: D \times 0.001$
- 2-Line LCD screen with illumination

DL-2007

- Height: 0.7mm;
- Distance: $D \leq 10\text{m}: 10\text{mm}$; $D > 10\text{m}: D \times 0.001$
- 4-Line LCD screen with illumination



DSZ Series Classic Automatic Level

DSZ2

- High resolution 32X telescope
- $\pm 0.3''$ compensator accuracy
- Standard deviation 1.0mm
- IP65 rating, superior waterproof and dustproof

DSZ3

- High resolution 28X telescope
- $\pm 0.4''$ compensator accuracy
- Standard deviation 1.5mm
- IP65 rating, superior waterproof and dustproof



DSZ2



DSZ3



DSZ2 + FS1

DSZ2 + FS1 (micrometer)

- Extremely high accuracy up to 0.5mm

NL Series Entry-level Automatic Level

- Reliable and durable optical devices
- 3 classic types available
- 20X/24X/28X/32X magnification as option
- Stable and accurate compensator on board
- Standard 3-in-1 package ALTAS available

NL G style

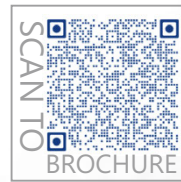
- 20X/24X/28X/32X magnification as option
- Magnetic damping compensator
- Metal housing

NL-C32

- 32X telescope
- Air damping compensator
- Lightweight yet durable housing

NL-A32

- 32X telescope
- Magnetic damping compensator
- Quick response for leveling



NL G style



NL-C32



NL-A32

ALTAS 3-in-1 Levelling Set

Auto Level

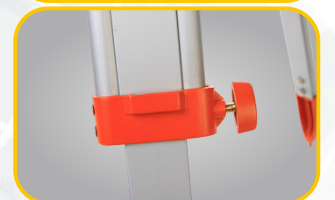
- 20X/24X/28X/32X optional

Tripod

- 5/8 thread, flat head, twist lock
- Lightweight but durable, supplied with carrying strap
- Long-lasting painting
- No shrinking or swelling in touch conditions

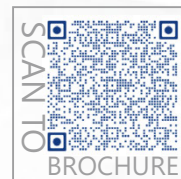
Aluminum Staff

- 5m, 5 sections
- ABS buckle and levelling bubble for precise operation
- Free extension with comfort, and stable structure



ML-401/ML-402 Classic Plumb Laser

- World's first dense-ball bearing
- All-weather dependability, against rainfall and drop in different environments
- Laser pointer (working range 250m) to increase efficiency
- 360° encoder to eliminate errors by dual side measurement
- 2 nos. AA Alkaline battery, power saving tech for longer endurance



ML-401



ML-402

