

ValPar

Precision Instruments

PRODUCT GUIDE













Lasers
Levels
Tripods
Leveling Rods
Prism Poles

Spring 2019



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VCL Series

Contractor's Automatic Level

Image: Erect

Objective Aperture: 30.48m

Field of View: 1°1.5m

Resolution: 1.06m

Graduation: 1°

Sensitivity of Circular Vial: 2.44m/2mm

Compensator Type: Magnetic Dampen, Steel Cage, Wire Hung, Safety Lock

Compensation Range: ±4.5m

Tripod Adaptor: 5/8 x 11 thread

Magnification: 22x 26x 32x

Working Range: 60m 91m 121m

Leveling Accuracy: 1.56mm 1.56mm 1.56mm
@30m @45m @76m



VCL Series Package

Package Includes:

- VCL Series Contractor Automatic Level
- Contractor Tripod
- 9ft. Aluminum Rod
- Carrying Case
- Plumb Bob
- Manual



The VCL Series auto levels are ideal for surveying and grading applications. The common uses of this instrument are:

1. Checking elevations
2. Tying into vertical benchmarks on site
3. Measuring cut/fill

Key features:

- Advanced magnetic compensator w/wide working range
- Compensator lock to protect level in transportation
- Continuous tangent drive for convenient and fast operations
- Multi-layer coated lens provides sharper image and readings
- Reflective prism for easy bubble viewing
- Industrial grade dust and water resistance (IP54)

Key operations:

- Elevation measurement - Read the measurement at the center of the crosshair on the grade rod.
- Measure horizontal angle - Sight the instrument on target. Turn horizontal circle to "0". Turn instrument to desired angle.
- Measure height - Sight in on grade rod. Count the increments on grade rod between top and bottom line. Multiply by 100.
- Check the compensator - Sight in on grade rod. Press and release compensator lock. Reading should remain the same.

VRL602

Auto Level Rotary Laser

Laser Beam: Horizontal, Zenith, and Plummet

Wave Length: 635nm

Operating Range: 610m with Detector

Leveling Accuracy: 1.6mm@30.5m h. 3.2mm@30.5m v.

Self Leveling Range: $\pm 5^\circ$

Slope Function: Manual

Tripod Adaptor: 5/8 x 11 thread

Includes: Remote Control, Grid Target, Glasses, Batteries and Charger, Carrying Case and Manual



VRL602 Packages

Exterior Package Includes:

- VRL602 Rotary Laser
- Remote Control
- Detector w/ Clamp
- Grid Target and Laser Glasses
- Batteries and Charger
- Contractor's Tripod
- Aluminum Rod
- Carry Case and Manual

Interior Package Includes:

- VRL602 Rotary Laser
- Remote Control
- Grid Target and Laser Glasses
- Batteries and Charger
- Universal Ceiling Bracket
- Carry Case and Manual



The VRL602 Rotary Laser is a three beam (horizontal, zenith, and plumb) self-leveling laser ideal for interior as well as exterior applications. The common uses of this instrument are:

1. Drop ceiling installations
2. Vertical alignment
3. Point transferring
4. Setting up concrete forms
5. Checking elevations
6. Establishing grade

Key features:

- Slope match capable. By multiplying your grade percent as a decimal and your distance (Run) you will find how much higher or lower you will need to slope your instrument.
- Working range of 610m with the VLD5G detector
- Accuracy of 1.6mm horizontal and 3.2mm vertical at 30.5m
- Hold mode will not self-level the instrument. To be used when manual leveling is desired.
- Scan and point mode to concentrate the beam in one area when a 360 beam is not needed
- Vertical measuring by placing the instrument bracket down or securing the built in bracket to a tripod.
- The battery life for the VRL602 is approximately 15 hours with a charging time of approximately 4 hours.
- Has a 3 year warranty period from manufacturer's defect

Key operations:

- Self-level - Press the power key.
- Self-level vertically - Place the instrument bracket down or securing the built in bracket to a tripod then pressing the power key.
- Set slope match - Press the "Grade" key twice. Use the up and down arrows to tilt the beam along the x-axis.
- Scan mode - Press the "Scan" key and use the directional arrows to move the beam. Press the "Scan" key again to widen the beam area.
- Point mode - Press the "Point" key and use the directional arrows to move the beam.



VRL800

Auto Level Rotary Laser

Laser Beam: Horizontal

Wave Length: 635nm

Operating Range: 610m with Detector

Leveling Accuracy: 1.6mm@30.5m h.

Self Leveling Range: $\pm 5^\circ$

Self Leveling Method: Electronic Servo Motors

Bumper Sensor: On Board

Weight: 12lbs.

Tripod Adaptor: 5/8 x 11 thread

Includes: Remote Control, Bracket, Rechargeable Batteries and Charger, Carrying Case and Manual



VRL800 Package

Exterior Package Includes:

- VRL800 Rotary Laser
- Bracket and Remote Control
- Detector w/ Clamp
- Batteries and Charger
- Contractor's Tripod
- 9ft. Aluminum Rod
- Carry Case and Manual



The VRL800 Rotary Laser is a single horizontal beam self-leveling laser ideal for exterior applications. The common uses of this instrument are:

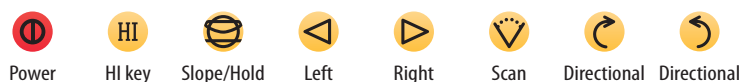
1. Setting up concrete forms
2. Checking elevations
3. Establishing grade

Key features:

- Slope match capable. By multiplying your grade percent as a decimal and your distance (Run) you will find how much higher or lower you will need to slope your instrument.
- Working range of 610m with the VLD5G detector
- Accuracy of 1.6mm at 30.5m
- Height of instrument protection (HI) in case the instrument or surface that it is mounted on gets moved or bumped. When the HI feature is on the instrument will not self-level after being taken out of level. This feature is commonly used when the user will be taking measurements and not near the instrument.
- Hold mode will not self-level the instrument. To be used when manual leveling is desired.
- Scan and point mode to concentrate the beam in one area when a 360 beam is not needed.
- The battery life for the VRL800 is approximately 15 hours with a charging time of approximately 4 hours.
- Has a 3 year warranty period from manufacturer's defect

Common operations:

- Self-level - Press the power key.
- Set height of instrument (HI) - Press the "HI" key twice.
- Set slope match - Press the "Slope/Hold" key twice. Use the left and right arrows to tilt the beam along the x-axis.
- Scan mode - Press the "Scan" key and use the directional arrows to move the beam. Press the "Scan" key again to widen the beam area and again to go to point mode.



VRL800X

Dial-In Grade Laser

Laser Beam: Horizontal & Zenith

Wave Length: 635nm

Operating Range: 610m with Detector

Leveling Accuracy: 1.6mm@30.5m h. 3.2mm@30.5m v.

Grade Setting Method: Dial-In Automatic

Programmable Grade Settings: $\pm 8\%$

Power: Rechargeable Batteries

Tripod Adaptor: 5/8 x 11 thread

Includes: Remote Control, Grid Target, Glasses, Bracket, Rechargeable Batteries and Charger, Carrying Case and Manual



VRL800X Package

Exterior Package Includes:

- VRL800X Grade Laser
- Bracket and Remote Control
- Detector w/ Clamp
- Grid Target and Laser Glasses
- Rechargeable Batteries and Charger
- Contractor's Tripod
- 9ft. Aluminum Rod
- Carry Case and Manual



The VRL800X Rotary Laser is a dual beam (horizontal and zenith) self-leveling, single axis programmable laser ideal for exterior as well as interior applications. The common uses of this instrument are:

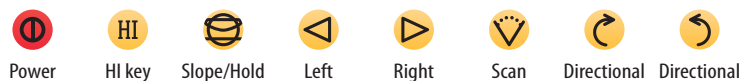
1. Setting up concrete forms
2. Checking elevations
3. Establishing accurate grades
4. Vertical alignment

Key features:

- Programmable grade mode. Can be programmed +/- 8 percent in increments of one thousandth.
- Working range of 610m with the VLD5G detector
- Accuracy of 1.6mm horizontal and 3.2mm vertical at 30.5m
- Height of instrument protection (HI) in case the instrument or surface that it is mounted on gets moved or bumped. When the HI feature is on the instrument will not self-level after being taken out of level. This feature is commonly used when the user will be taking measurements and not near the instrument.
- Hold mode will not self-level the instrument. To be used when manual leveling is desired.
- Scan and point mode to concentrate the beam in one area when a 360 beam is not needed
- Vertical measuring by placing the instrument handle down or securing to provided bracket and securing to a tripod.
- The battery life for the VRL800X is approximately 15 hours with a charging time of approximately 4 hours.
- Has a 3 year warranty period from manufacturer's defect

Key operations:

- Self-level - Press the power key
- Self-level vertically - Place the instrument handle down or securing to provided bracket and securing to a tripod then pressing the power key
- Set height of instrument (HI) - Press the "HI" key twice
- Set slope mode - Press the "Slope/Hold" key twice. Use the "HI" key to move to the next place.
- Use the left and right arrows to change digits and between +/-.
- Scan mode - Press the "Scan" key and use the directional arrows to move the beam. Press the "Scan" key again to widen the beam area and again to go to point mode.



Power

HI key

Slope/Hold

Left

Right

Scan

Directional

Directional

VRL802

General Purpose Laser

Laser Beam: Horizontal & Zenith

Wave Length: 635nm

Operating Range: 610m with Detector

Leveling Accuracy: 1.6mm@30.5m h. 3.2mm@30.5 v.

Self Leveling Range: $\pm 5^\circ$

Tripod Adaptor: 5/8 x 11 thread

Includes: Remote Control, Grid Target, Glasses, Bracket, Batteries and Charger, Carrying Case and Manual



VRL802 Packages

Exterior Package Includes:

- VRL802 Rotary Laser
- Bracket and Remote Control
- Detector w/ Clamp
- Grid Target and Glasses
- Batteries and Charger
- Contractor's Tripod
- 9ft. Aluminum Rod
- Carry Case and Manual

Interior Package Includes:

- VRL802 Rotary Laser
- Universal Wall Mount / Ceiling Bracket
- Remote Control
- Grid Target and Glasses
- Batteries and Charger
- Carry Case and Manual



The VRL802 Rotary Laser is a dual beam (horizontal and zenith) self-leveling laser ideal for exterior as well as interior applications. The common uses of this instrument are:

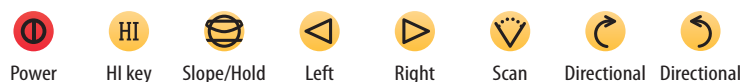
1. Setting up concrete forms
2. Checking elevations
3. Establishing grade
4. Vertical alignment

Key features:

- Slope match capable. By multiplying your grade percent as a decimal and your distance (Run) you will find how much higher or lower you will need to slope your instrument
- Working range of 610 m with the VLD5G detector
- Accuracy of 1.6mm horizontal and 3.2mm vertical at 30.5 m
- Height of instrument protection (HI) in case the instrument or surface that it is mounted on gets moved or bumped. When the HI feature is on the instrument will not self-level after being taken out of level. This feature is commonly used when the user will be taking measurements and not near the instrument.
- Hold mode will not self-level the instrument. To be used when manual leveling is desired.
- Scan and point mode to concentrate the beam in one area when a 360 beam is not needed
- Vertical measuring by placing the instrument handle down or securing to provided bracket and securing to a tripod.
- The battery life for the VRL802 is approximately 15 hours with a charging time of approximately 4 hours.
- Has a 3 year warranty period from manufacturer's defect

Common operations:

- Self-level - Press the power key
- Self-level vertically - Place the instrument handle down or securing to provided bracket and securing to a tripod then pressing the power key
- Set height of instrument (HI) - Press the "HI" key twice
- Set slope match - Press the "Slope/Hold" key
- twice. Use the left and right arrows to tilt the beam along the x-axis.
- Scan mode - Press the "Scan" key and use the directional arrows to move the beam. Press the "Scan" key again to widen the beam area and again to go to point mode.



Power

HI key

Slope/Hold

Left

Right

Scan

Directional

Directional

VTS02B/ VTS02S

Total Station

TELESCOPE

Magnification: 30x, 1°20' Field of View

Resolving Power: 4.0"

Minimum Sight Distance: 1.2m

ANGLE MEASUREMENT

Measuring Method: Absolute Encoder

Minimum Display: 1"/5"/10", selectable

Detection Method: Level Radial, Vertical Radial

Angle Measurement Accuracy: 2"

RANGE FINDING

Reflectorless/Laser Pointer: Class 3R/IIIa

EDM: Coaxial

Automatic Correction of Input Parameters:

Meteorological, Atmospheric Refraction, Earth Curvature

INSTRUMENT

Display: LCD, 6 lines x 12 characters

Internal Memory: 20,000 points

Data Port: I/O, RS-232C, USB, Bluetooth, Micro SD, SD Card, USB Stick

Operating Time: 9 hours

Display: LCD, 6 lines x 12 characters

Battery: Rechargeable Lithium Ion Battery

Weather Proof: IP55 (IEC60529)

Operating Temperature: -20°C to +50°C



LEVEL VIAL SENSITIVITY

Plate Level: 7.62mm / 2mm

Circular Level: 2.4m / 2mm

COMPENSATION

Method: Electronic automatic

Range: +/- 3'

Resolving Power: 3"

LASER PLUMMET

Accuracy: +/- 0.8mm @ 1.5m

Laser Class: 2/1 EC60825-1

The VTS02 series are 2” reflectorless total stations capable of measuring distances up to 2000 m and saving 20,000 points on board or working with a data collector with SurveyPro or SurvCe software. It is typically used by surveyors and civil engineers for:

1. Topographic surveys
2. Construction project layout
3. Leveling
4. Data collection
5. Cadastral surveying

Key features:

- Adjustable minimum readings of 25mm, 127mm, and 254mm
- Measures in metric and imperial
- Multiple on board measuring tools
- Automatic atmospheric correction on NTS02S
- Has a 3 year warranty period from manufacturers defect

Range Finding Mode Key	Standard Deviation Accuracy	Measuring Time
Precision Measuring Prism	$\pm (2\text{mm}+2\text{ppm} \cdot D)$	< 1.2 s
Mini Prism	$\pm (5\text{mm}+2\text{ppm} \cdot D)$	< 0.5 s
Reflector	$\pm (5\text{mm}+2\text{ppm} \cdot D)$	< 1.2 s
Reflectorless	$\pm (5\text{mm}+2\text{ppm} \cdot D)$	< 1.2 s

Range Finding Mode	Measuring Distance
Normal Conditions w/ Prism	2000 m
Reflector	700 m
Reflectorless	300 m

Key operations:

- Turn instrument on - Press the power key
- Select data port - Press menu, then “8” to select RS-232 or Bluetooth.
- For NTS02S select drive to save info - Press menu, then “9” to select Flash, SD, or USB
- Angle measurement - Turn the instrument on then press the angle key. Use “F4” to navigate the angle menu
- Distance measurement - Turn the instrument on then press the distance key . Use “F4” to navigate the distance menu
- Coordinate measurement - Turn the instrument on then press the coordinate key. Use “F4” to navigate the coordinate menu



VAT91

Heavy Duty aluminum, Flat Head Quick Clamp



VAT96

Heavy Duty with elevator column



VWFT100A

Wood/fiberglass (DUAL Clamp) wing nut and Quick Clamp



VAR16M

5M aluminum rod, E Block/MM 5 Sections



VAR5M-E

NAR5M/E 5 Meter aluminum, Metric/8th, 5 section



VAR5M-M

NAR5M/M 5 Meter aluminum, .5 cm/mm, 5 section



VXR25M

7 Meter oval surveyors fiberglass rod, E Block/mm



VTB11

Tribrach with optical plummet



VAD11

Tribrach adaptor without optical plummet



VMP52

Mini prism package, metal yoke, prism mount



VPA62

Adjustable prism assembly, tilt, -30mm offset



VPP01

1 section prism pole



VPP02

2 Section prism pole



VPP03

3 section, 5m prism pole



VPP05C

Composite GPS pole, 2m, 2 sections





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