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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 Plummets
Wave Length: 635nm
Operating Range: 610m with Detector
Leveling Accuracy: 1.6mm@30.5m h. 3.2mm@30.5m v.
Self Leveling Range: ±5°
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 manufacturers 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: ±5°
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: ±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.

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 +/-.

- 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 manufacturers defect
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: ±5°  
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 manufacturers 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. Use the left and right arrows to tilt the beam along the x-axis.
- 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 us the directional arrows to move the beam. Press the “Scan” key again to widen the beam area and again to go to point mode.
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/I 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

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

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<th>Range Finding Mode Key</th>
<th>Standard Deviation Accuracy</th>
<th>Measuring Time</th>
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<td>Precision Measuring Prism</td>
<td>± (2mm+2ppm · D)</td>
<td>&lt; 1.2 s</td>
</tr>
<tr>
<td>Mini Prism</td>
<td>± (5mm+2ppm · D)</td>
<td>&lt; 0.5 s</td>
</tr>
<tr>
<td>Reflector</td>
<td>± (5mm+2ppm · D)</td>
<td>&lt; 1.2 s</td>
</tr>
<tr>
<td>Reflectorless</td>
<td>± (5mm+2ppm · D)</td>
<td>&lt; 1.2 s</td>
</tr>
</tbody>
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<tr>
<th>Range Finding Mode</th>
<th>Measuring Distance</th>
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<td>Normal Conditions w/ Prism</td>
<td>2000 m</td>
</tr>
<tr>
<td>Reflector</td>
<td>700 m</td>
</tr>
<tr>
<td>Reflectorless</td>
<td>300 m</td>
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TRIPODS

VAT91
Heavy Duty aluminum, Flat Head Quick Clamp

VAT96
Heavy Duty with elevator column

VWFT100A
Wood/fiberglass (DUAL Clamp) wing nut and Quick Clamp
**LEVELING RODS**

**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
TRIBRACHS & ACCESSORIES

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
PRISM POLES

**VPP01**
1 section prism pole

**VPP02**
2 Section prism pole

**VPP03**
3 section, 5m prism pole

**VPP05C**
Composite GPS pole, 2m, 2 sections
ValPar’s premium quality products are proven and tested in the toughest conditions on earth to improve uptime and reduce operating costs for all makes and applications.

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