



# BOSCH

## REVOLUTIONIZING LASER GRADING AND LEVELING

Durable design with  
connectivity, dual dial-in slope  
and 18V power

GRL4000-80CH and GRL4000-80CHV  
18V REVOLVE4000 Self-Leveling  
Connected Rotary Laser  
Product Launch



### REVOLVE

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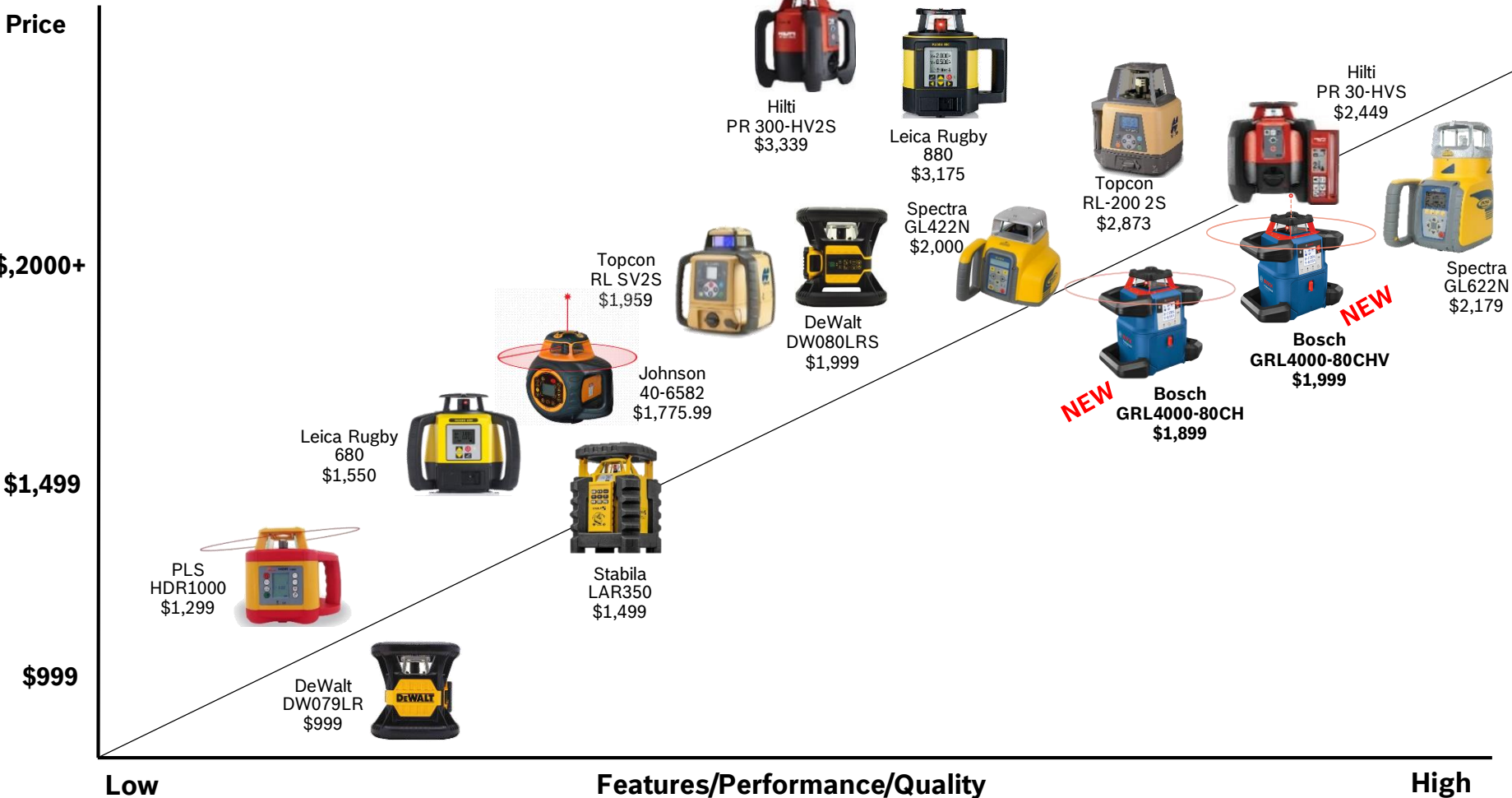
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# MARKET OVERVIEW



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# GRL4000-80CH



## LONG WORKING RANGE

Range of up to 4,000 Ft. with laser receiver, the laser accuracy of up to  $\pm 1/16$  In. at 100 Ft. in horizontal mode and  $\pm 1/8$  In. at 100 Ft.

## DURABLE DESIGN

Engineered with a cage rubber overmold and an innovative handle design to stand up to the toughest jobsites; built to IP68 dust- and water-protection standards

## BLUETOOTH® CONNECTIVITY

Connects to a mobile device, linking to the free Bosch Leveling Remote app, to control sleep mode, Dual Dial-In Slope and more

## ELECTRONIC SELF-LEVELING

Allows for easy setup and use on the job



## DISTURBANCE MONITOR

Indicates if tool position changes, ensuring consistent leveling accuracy

## uCAL

User calibration guiding the user step-by-step to confirm tool status or calibrate the rotary laser to ensure accuracy on the jobsite

## DUAL DIAL-IN SLOPE

Allows slope angle adjustment on both the X and Y axes

## DUAL POWER SOURCE

For extended runtime and option of an 18V CORE18V Lithium-ion 4.0 Ah battery or a battery adapter with four D-cell batteries



# 18V REVOLVE4000 SELF-LEVELING CONNECTED ROTARY LASER PRODUCT LAUNCH

**Model :** GRL4000-80CH

**Date Available:** January 2020

**Number of Executions:** 2



GRL4000-80CH



GRL4000-80CHK

## SPECIFICATIONS

<b>Leveling Accuracy (Horizontal Mode)</b>	±1/16 In. @ 100 Ft.
<b>Working Range (Diameter) with LR40 Receiver</b>	4,000 Ft.
<b>IP Rating</b>	IP68
<b>Self-Leveling Range</b>	±5°
<b>Single/Dual Axis Slope Operation</b>	8.5%
<b>Tripod Mount</b>	5/8 In.-11
<b>Laser Class</b>	2
<b>Approximate Operating Time with CORE18V Lithium-Ion 4.0 Ah Battery</b>	60h
<b>Approximate Operating Time with Alkaline Batteries</b>	70h
<b>Weight (Bare Tool)</b>	8.2 Lbs.

## Features / Benefits

- ✓ **Long Working Range** – Range of up to 4,000 Ft. with laser receiver, the laser accuracy of up to ±1/16 In. at 100 Ft. in horizontal mode and ±1/8 In. at 100 Ft.
- ✓ **uCAL** – User calibration guiding the user step-by-step to confirm tool status or calibrate the rotary laser to ensure accuracy on the jobsite
- ✓ **Dual Dial-In Slope** – Allows slope angle adjustment on both the X and Y axes
- ✓ **Bluetooth® Connectivity** – Connects to a mobile device, linking to the free Bosch Leveling Remote app, to control sleep mode, Dual Dial-In Slope and more
- ✓ **Disturbance Monitor** – Indicates if tool position changes, ensuring consistent leveling accuracy
- ✓ **Durable Design** – Engineered with a cage rubber overmold and an innovative handle design to stand up to the toughest jobsites; built to IP68 dust- and water-protection standards
- ✓ **Electronic Self-Leveling** – Allows for easy setup and use on the job
- ✓ **Dual Power Source** – For extended runtime and option of an 18V CORE18V Lithium-ion 4.0 Ah battery or a battery adapter with four D-cell batteries



# GRL4000-80CHV

## LONG WORKING RANGE

Range of up to 4,000 Ft. with laser receiver, the laser accuracy of up to  $\pm 1/16$  In. at 100 Ft. in horizontal mode and  $\pm 1/8$  In. at 100 Ft.

## DURABLE DESIGN

Engineered with a cage rubber overmold and an innovative handle design to stand up to the toughest jobsites; built to IP68 dust- and water-protection standards

## BLUETOOTH® CONNECTIVITY

Connects to a mobile device, linking to the free Bosch Leveling Remote app, to control sleep mode, Dual Dial-In Slope and more

## ELECTRONIC SELF-LEVELING

Allows for easy setup and use on the job



# REVOLVE

## DISTURBANCE MONITOR

Indicates if tool position changes, ensuring consistent leveling accuracy

## VERTICAL-BEAM FUNCTIONALITY

Provides a vertical beam at 90° point for layout, squaring and plumb applications

## uCAL

User calibration guiding the user step-by-step to confirm tool status or calibrate the rotary laser to ensure accuracy on the jobsite

## DUAL DIAL-IN SLOPE

Allows slope angle adjustment on both the X and Y axes

## VARIABLE-SPEED AND SCAN-ANGLE SELECTION

Allows for maximum visibility at different lighting conditions

## DUAL POWER SOURCE

For extended runtime and option of an 18V CORE18V Lithium-ion 4.0 Ah battery or a battery adapter with four D-cell batteries



**Model :** GRL4000-80CHV  
**Date Available:** January 2020  
**Number of Executions:** 2



GRL4000-80CHV



GRL4000-80CHVK

## SPECIFICATIONS

<b>Leveling Accuracy (Horizontal Mode)</b>	±1/16 In. @ 100 Ft.
<b>Leveling Accuracy (Vertical Mode)</b>	±1/8 In. @ 100 Ft.
<b>Working Range (Diameter) with LR40 Receiver</b>	4,000 Ft.
<b>IP Rating</b>	IP68
<b>Self-Leveling Range</b>	±5°
<b>Single/Dual Axis Slope Operation</b>	8.5%
<b>Rotational Speed</b>	150/300/600 min-1
<b>Scan Angle For Line Operation</b>	0°/10°/25°/50°
<b>Tripod Mount</b>	5/8 In.-11
<b>Laser Class</b>	2
<b>Approximate Operating Time with CORE18V Lithium-Ion 4.0 Ah Battery</b>	60h
<b>Approximate Operating Time with Alkaline Batteries</b>	70h
<b>Weight (Bare Tool)</b>	8.2 Lbs.

## Features / Benefits

- ✓ **Long Working Range** – Range of up to 4,000 Ft. with laser receiver, the laser accuracy of up to ±1/16 In. at 100 Ft. in horizontal mode and ±1/8 In. at 100 Ft.
- ✓ **uCAL** – User calibration guiding the user step-by-step to confirm tool status or calibrate the rotary laser to ensure accuracy on the jobsite
- ✓ **Dual Dial-In Slope** – Allows slope angle adjustment on both the X and Y axes
- ✓ **Vertical-Beam Functionality** – Provides a vertical beam at 90° point for layout, squaring and plumb applications
- ✓ **Variable-Speed and Scan-Angle Selection** – Allows for maximum visibility at different lighting conditions
- ✓ **Bluetooth® Connectivity** – Connects to a mobile device, linking to the free Bosch Leveling Remote app, to control sleep mode, Dual Dial-In Slope and more
- ✓ **Disturbance Monitor** – Indicates if tool position changes, ensuring consistent leveling accuracy
- ✓ **Durable Design** – Engineered with a cage rubber overmold and an innovative handle design to stand up to the toughest jobsites; built to IP68 dust- and water-protection standards
- ✓ **Electronic Self-Leveling** – Allows for easy setup and use on the job
- ✓ **Dual Power Source** – For extended runtime and option of an 18V CORE18V Lithium-ion 4.0 Ah battery or a battery adapter with four D-cell batteries



18V REVOLVE4000 SELF-LEVELING CONNECTED ROTARY LASER PRODUCT LAUNCH

**BLUETOOTH® STATUS**  
To pair GRL with app (short press) and with additional receiver or remote (long press)

**SPOT/SWEEP/MASK STATUS\***

**ADS STATUS**

**SPEED STATUS\***

**BATTERY GAUGE**

**PLUMB POINT STATUS\***  
(vertical use only)

**ON/OFF**  
To switch the tool on and off and to activate or deactivate ADS and sleep mode

**STATUS INDICATION LED**  
If steady green, tool is levelled

**SETTING OF ROTATION SPEED\***  
Select between 150, 300 and 600 rpm (300 is default)

**X AND Y STATUS**  
Shows the status of each axis (% slope or manual mode)

**SETTING OF SWEEP ANGLE\***  
Select between 0°, 10°, 25°, 50° and 360°

**MOVE AXIS ANGLE UP OR MOVE SPOT/SWEEP COUNTERCLOCKWISE**  
Depending on the previous selected function

**MOVE AXIS ANGLE DOWN OR MOVE SPOT/SWEEP CLOCKWISE**  
Depending on the previous selected function

**MANUAL MODE ACTIVATION**  
Deactivate self leveling for X, Y or both

**SETTING OF SLOPE ANGLES**  
Select between X and Y and directly dial in the needed angle

\*Only available on GRL4000-80CHV



## Power Source

- **Dual Power Source**

- Compatible with all Bosch rechargeable 18V Lithium-ion batteries up to 8.0 Ah
- Standard battery in scope of delivery: CORE18V Lithium-ion 4.0 Ah (gives approximately 60 hours of run time)
- (4) D-cells (LR20) with BA1 adapter using the same interface (gives approximately 70 hours run time)

- **Spring-supported ejecting of battery and adapter for more convenience**



# LR40

### DUAL-SIDED BACKLIT LCD DISPLAY

Provides easy visual readout on both sides of the receiver



### ATTACHMENT HOOK

For secure attachment to surfaces

### LED INDICATORS

Enable simple operation

### BUILT-IN MAGNETS

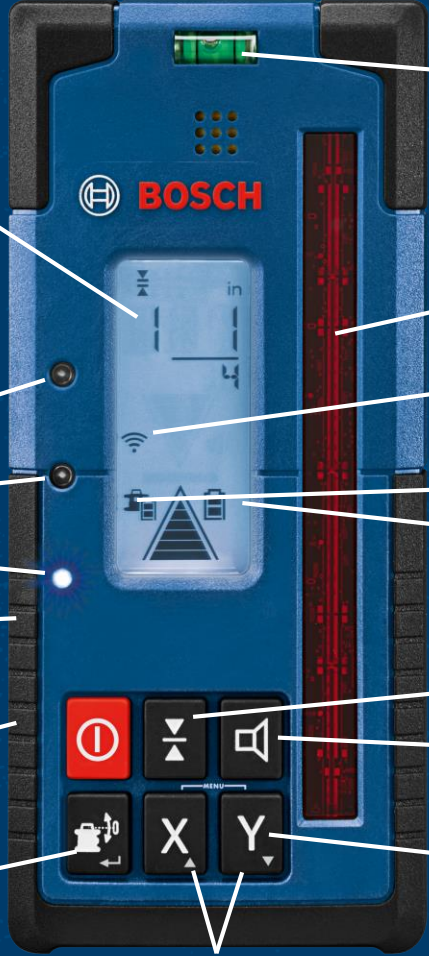
Allow for secure attachment to metal surfaces, mainly for calibration purposes

### ERGONOMIC SOFT GRIP

Provides secure handling and comfort

### CENTER LINE BUTTON

Activates the center line function



**SETUP MENU**  
Short press X and Y simultaneously

**IP67**  
Water and dust protected

**RECEIVER VIAL**  
Helps ensure accurate leveling results

**OVERSIZED DETECTION AREA**  
Enables fast laser reception

**CONNECTION INDICATOR**  
Displayed when receiver is paired with the GRL

**GRL BATTERY STATUS**

**RECEIVER BATTERY STATUS**

**ACCURACY BUTTON**  
Adjusts the receiving sensitivity

**VOLUME BUTTON**  
Adjusts or turns of the receiver volume

**Y AXIS CENTER LINE BUTTON**  
To activate center line in the Y axis



## Executions

### GRL4000-80CH



**Includes:**

- GRL4000-80CH 18V REVOLVE4000 Self-Leveling Connected Rotary Laser
- LR40 Laser Receiver with Bracket
- BA1 Battery Adapter
- GBA18V40 18V CORE18V Lithium-Ion 4.0 Ah Compact Battery
- GAL18V-40 18V Charger
- (2) AA Batteries and (4) D-Cell Batteries
- Carrying Case

### GRL4000-80CHK



**Includes:**

- GRL4000-80CH 18V REVOLVE4000 Self-Leveling Connected Rotary Laser
- LR40 Laser Receiver with Bracket
- BT170HD Tripod
- GR13 Grade Rod
- BA1 Battery Adapter
- GBA18V40 18V CORE18V Lithium-Ion 4.0 Ah Compact Battery
- GAL18V-40 18V Charger
- (2) AA Batteries and (4) D-Cell Batteries
- Carrying Case

### GRL4000-80CHV



**Includes:**

- GRL4000-80CHV 18V REVOLVE4000 Self-Leveling Connected Rotary Laser
- LR40 Laser Receiver with Bracket
- BA1 Battery Adapter
- GBA18V40 18V CORE18V Lithium-Ion 4.0 Ah Compact Battery
- GAL18V-40 18V Charger
- RC5 Remote
- WM6 Wall Mount
- (4) AA Batteries and (4) D-Cell Batteries
- Carrying Case

### GRL4000-80CHVK



**Includes:**

- GRL4000-80CHV 18V REVOLVE4000 Self-Leveling Connected Rotary Laser
- LR40 Laser Receiver with Bracket
- BT170HD Tripod
- GR13 Grade Rod
- BA1 Battery Adapter
- GBA18V40 18V CORE18V Lithium-Ion 4.0 Ah Compact Battery
- GAL18V-40 18V Charger
- RC5 Remote
- WM6 Wall Mount
- (2) AA Batteries and (4) D-Cell Batteries
- Carrying Case



## Pricing Information

Model #	Description	10-Digit #	Suggested Industry Price	Tier 1	Tier 2
GRL4000-80CH	18V REVOLVE2000 Self-Leveling Connected Rotary Laser Kit	0601061J10	\$1,899	\$1,481.22	\$1,424.25
GRL4000-80CHV	18V REVOLVE2000 Self-Leveling Connected Rotary Laser Kit	0601061F10	\$1,999	\$1,559.22	\$1,499.25
GRL4000-80CHK	18V REVOLVE2000 Self-Leveling Connected Rotary Laser Kit	0601061J11	\$1,999	\$1,559.22	\$1,499.25
GRL4000-80CHVK	18V REVOLVE2000 Self-Leveling Connected Rotary Laser Kit	0601061F11	\$2,099	\$1,637.22	\$1,574.25

## Set-Up Information

Model #	Bare Product Weight (Lbs.)	Pack Weight (Lbs.)	Pkg. Qty.	UPC	Packaging Dimensions (In.)	Cube (Ft.)	Pallet Qty.	Pallet Cube (Ft.)	Harmonized Tariff No.	Country of Origin
GRL4000-80CH	8.2	TBD	1	000346643015	TBD	TBD	TBD	TBD	9031499000	China
GRL4000-80CHV	8.2	TBD	1	000346643039	TBD	TBD	TBD	TBD	9031499000	China
GRL4000-80CHK	8.2	TBD	1	000346643022	TBD	TBD	TBD	TBD	9031499000	China
GRL4000-80CHVK	8.2	TBD	1	000346643046	TBD	TBD	TBD	TBD	9031499000	China

NOTE: Contact Carlos Kubler at time of launch for outstanding information.



# WHY BOSCH



## Why Bosch

### User Needs:

### Bosch Delivers:

✓ Ready for the Toughest Jobsite Conditions

- Robust design with 2m tripod tip over rating
- IP68 protected against dust and water (including battery compartment)

✓ Ease of Use

- Intuitive operation with screen on main unit to visualize and simplify main functions including dual slope setting
- Connectivity through the Levelling Remote app for an enhanced interface and additional features
- High quality receiver with 5 In. reception area, dual-sided display and offset feature in mm and inches

✓ Reliability

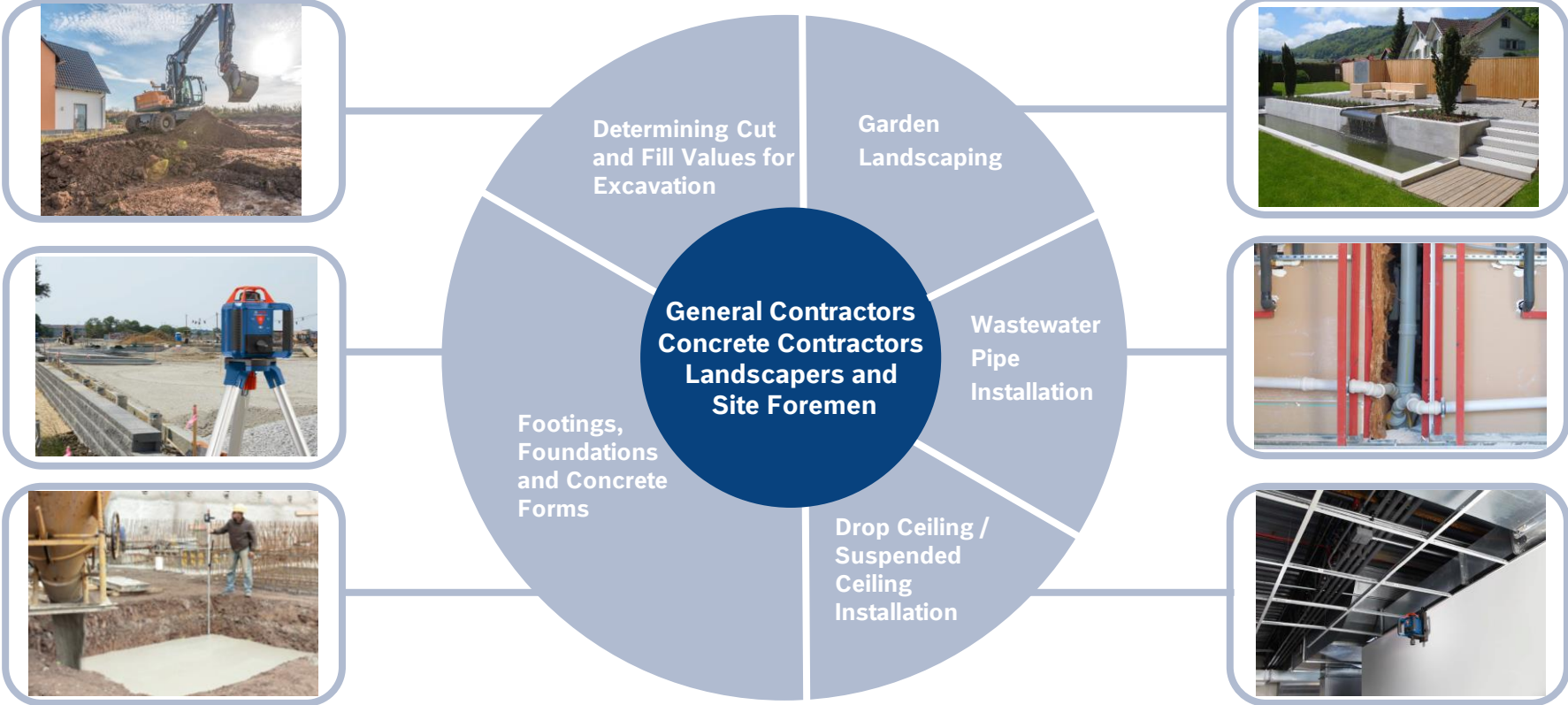
- Highly accurate up to  $\pm 1/16$  In. @ 100 Ft.
- Quick and easy user calibration with uCAL and app
- Long battery life with dual power source (CORE18V Lithium-ion 4.0 Ah batteries and four D-cell batteries)



# TARGET USERS & APPLICATIONS



# Target Users & Applications



# COMPETITIVE COMPARISONS



## Competitor Overview



	<b>Spectra</b>	<b>Topcon</b>	<b>Hilti</b>	<b>DeWalt</b>	<b>Stabila</b>	<b>Leica Rugby</b>	<b>Bosch</b>
<b>Model</b>	GL422N	RL SV2S	PR 300-HV2S	DW080LRS	LAR 350	CLX 400	GRL4000-80CHVK
<b>Accuracy</b>	± 1/16" @ 100 Ft.	± 1/16" @ 100 Ft.	± 1/16" @ 100 Ft.	± 1/16" @ 100 Ft.	± 1/8" @ 100 Ft.	± 1/16" @ 100 Ft.	up to ± 1/16" @ 100 Ft.
<b>Range w/ Receiver (Diameter)</b>	2,600 Ft.	2,600 Ft.	2,000 Ft.	2,000 Ft.	2,625 Ft.	4,000 Ft.	4,000 Ft.
<b>Slope</b>	Dual Dial-In	Dual Dial-In	Dual Dial-In	Dual Dial-In	Dual Manual	Dual Dial-In	Dual Dial-In
<b>Slope Range</b>	-10% to +15%	±5%	25%		8%	8%	8.5%
<b>IP Rating</b>	IP66	IP66	IP66	IP67	IP65	IP68	IP68
<b>Drop Rating</b>	1m; 1.5m Tripod Drop		1.5m	2m	1.8m		2m Tripod Tip Over
<b>Battery</b>	(D) Alkaline, NiMH	(D) Alkaline, NiMH	Lithium-Ion	18V Lithium-Ion	D Alkaline	Lithium-Ion	Alkaline, 18V Lithium-Ion
<b>Upgradable</b>	No	No	No	No	No	Yes	No
<b>Connected</b>	No	No	No	Yes	No	No	Yes
<b>User Calibration</b>	No	No	No	No	No	No	Yes
<b>Price</b>	\$2,000	\$1,959	\$3,339	\$1,299	\$1,499	\$2,010	\$2,099



# Head-to-Head vs. Key Competitor Execution



vs.



**GRL4000-80CHVK**      **\$2,099**

- ✓ Full range of accessories including tripod and grade rod
- ✓ Receiver with over 3 In. long reception area
- ✓ 4,000 Ft. range
- ✓ ± 1/16 In. accuracy @ 100 Ft.
- ✓ IP68 rating
- ✓ Connected tool
- ✓ CORE18V compatible
- ✓ LCD screen

**DW080LRS**      **\$1,299**

- Does not include tripod and grade rod
- Receiver reception area 1-3/4 In.
- Lower retail price
- ± 1/16 In. accuracy @ 100 Ft.
- IP67 rating
- 2,000 Ft. range

**Bosch Advantage**

- ✓ *Complete kit with tripod, grade rod and all-in-one carrying case*
- ✓ *Oversized reception area for easier detection of the laser beam*
- ✓ *Better range and IP rating*
- ✓ *Same accuracy*



## Head-to-Head vs. Key Competitor Execution



vs.



### GRL4000-80CHVK

**\$2,099**

- ✓ 0.05 mm/m accuracy
- ✓ Robust design with 2m tripod tip-over rating
- ✓ Works with 18V rechargeable and alkaline batteries
- ✓ Connected
- ✓ Dual dial-in slope on unit and app
- ✓ Simple calibration process through app
- ✓ Full range of accessories including tripod and grade rod

### CLH w/CLX 400

**\$2,010**

- 0.05 mm/m accuracy
- No drop rating
- Works with Lithium-ion rechargeable rotary laser specific and alkaline batteries
- Not connected
- Dual dial-in slope on receiver
- Calibration possible with manual – adjustment by user

### Bosch Advantage

- ✓ Same accuracy
- ✓ Jobsite ready; protected against tripod drops
- ✓ Compatible with power tool batteries
- ✓ Ease of use and time saving through intuitive app interface
- ✓ Simple slope setting through visualization
- ✓ Saves time and money for calibration
- ✓ Better value; no need to pay for extra features



# Head-to-Head vs. Key Competitor Execution



vs.



**GRL4000-80CHVK**      **\$2,099**

- ✓ Full range of accessories including tripod and grade rod
- ✓ Receiver with over 3 In. long reception area
- ✓ Competitive retail price
- ✓ ± 1/16 In. accuracy @ 100 Ft.
- ✓ IP68 rating
- ✓ Connected tool
- ✓ CORE18V compatible
- ✓ LCD screen

**PR 300-HV25**      **\$3,399**

- Same dual dial-in slope
- 25% slope range
- No user calibration
- Smaller reception area
- IP66
- ± 1/16 In. accuracy @ 100 Ft.

**Bosch Advantage**

- ✓ *Better range and IP rating*
- ✓ *Connectivity features*
- ✓ *Oversized reception area for easier detection of the laser beam*
- ✓ *Competitive price*
- ✓ *User calibration*
- ✓ *Same accuracy*

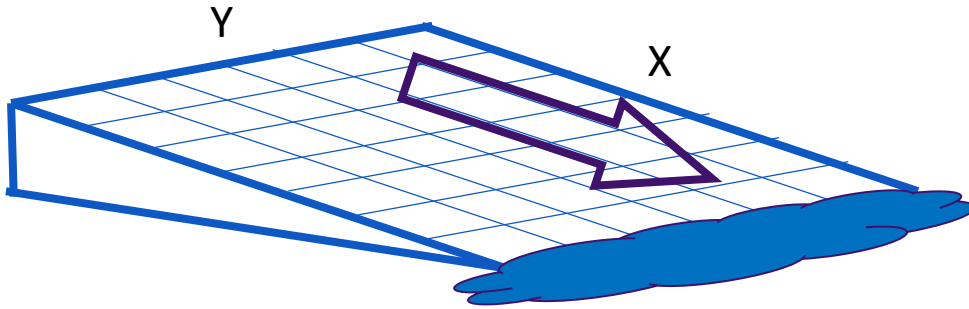


# FREQUENTLY ASKED QUESTIONS



## Frequently Asked Questions

**What is the difference between single and dual slope?**

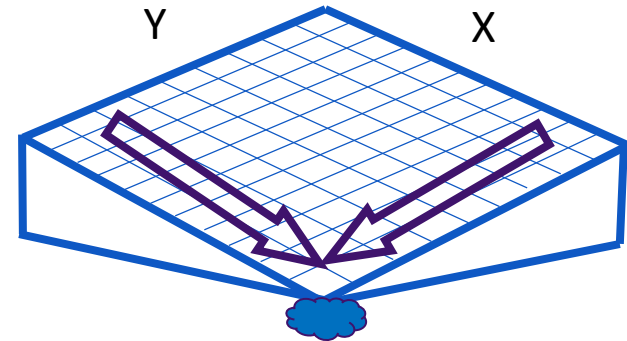


### Single Slope

Y is set to 0°/0%

X is set to e.g. 5% to create one slope

Result: water drains to an area (e.g. drain channel)



### Dual Slope

Y is set to e.g. 5% to create one slope

X is set to e.g. 5% to create one slope

Result: water drains to one point (e.g. gully/shaft)

## Frequently Asked Questions

### **Why does the laser have different rotational speed options?**

Higher rotation speed is optimal for use with receiver (outdoors) and lower speed for the visibility (indoors) of the laser.

### **What is the benefit of the line operation mode (scan angles)?**

In line operation the variable laser beam moves within a limited aperture angle. This increases the visibility of the laser beam in comparison to rotational operation.

### **How does the ADS/shock warning function work?**

ADS is active by default and monitors the tool position continuously. If the tool is moved the head stops rotating and the disturbance ADS alarm is activated. Check the position of the laser and restart it by pressing OK (Slope button).

### **What is dial-in/automatic slope?**

Dial in slope means that a slope value is directly entered and shown on a screen (on the unit, receiver, remote or app)

### **What is level-off/manual mode and why do I need it?**

The self-leveling of the GRL can be turned off if an inclination greater than 8.5% is needed. This can be achieved by activating the level-off mode and tilting the device. The slope % will not be shown on the screen anymore (manual slope). To indicate that the unit is not leveled the X and/or Y status will be shown as 'level-off' and the LED will be red.

### **How often does the rotary laser need to be calibrated?**

If the rotary laser has been dropped or if the storage or operating temperature has been exceeded (see specifications), an accuracy check should be performed before beginning any job. In addition, if the accuracy deviation is outside the maximum permitted limit perform a calibration or have the laser tool checked by a Bosch service center.



## Frequently Asked Questions

### How can I pair my receiver and remote?

When delivered in the scope of supply of GRL4000-80C the receiver and remote will be paired to the GRL. If you need to pair another receiver or remote:

- Long press the *Bluetooth®* button on the GRL until the pairing with receiver/remote screen appears
- To pair a receiver – long press the X and Y button on the receiver simultaneously
- To pair a remote – long press the ‘clockwise’ and ‘counter clockwise’ button on the remote simultaneously
- A confirmation (or an error) will be shown on the screen

### Why do I have X and Y LEDs on the remote control?

The X and Y LEDs indicate the respective axis status. **Green** indicates self levelling (slope = 0%), **red** indicates slope set or level-off/manual mode

### What is plumb down mode?

In vertical mode the laser point can be aligned vertically for plumb applications. This function is available through the remote control and the Levelling Remote app

### Which batteries can I use for my GRL4000-80C?

Any Bosch 18V Lithium-ion battery can be used except the 12.0 Ah battery. Four D-cell batteries with the alkaline adapter (included in the kit) may also be used.



## Frequently Asked Questions

### **How can I enter the receiver menu?**

To enter the receiver menu, short press the X and Y button simultaneously. Within the menu the user can change the units of measure, adjust the brightness or turn off the LEDs, turn off and on the Memory function and turn off and on the backlight of the receiver display. To toggle between the different settings, use the X (up) and Y (down) button and to confirm, use the center line button.

### **Why are there different accuracy modes on the receiver?**

The rough modes are used when a high precision level is not required. In that case, the user can quickly position the receiver.


### **What is center line mode and how can I activate it?**

- Use the Center Line function for automatic positioning of laser beam on receiver center
- To activate the center line function in the X axis, press the 'center line button' (or the center line + 'X' button simultaneously) on the LR40. Make sure the LR40 is positioned along the X axis of the GRL
- To activate the center line function the Y axis press the 'center line button' + the 'Y' button simultaneously. Make sure the LR40 is positioned along the Y axis of the GRL
- To activate the center line function in both axes use two receivers; one along the X axis and one along the Y axis
- The GRL will automatically position the laser beam on the LR40 center. Once complete, the Slope value (in %) will be indicated on the display



**If you have any product questions,  
please contact Carlos Kubler**

**[Carlos.kubler@us.bosch.com](mailto:Carlos.kubler@us.bosch.com)**

** +224-301-1563**

