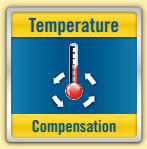
DG613 / DG613G / DG813 DIALGRADE® PIPE LASERS

COMPACT, TOUGH AND SMART – PERFECTION IN A PIPE



DG613 / DG613G / DG813

DG613 / DG613G / DG813 Pipe Lasers

Designed to fit around tighter inverts, the Spectra Precision DG813, DG613 and DG613G deliver the most productive pipe laying experience in the market. They are extremely rugged and thrive in demanding underground conditions. Benefitting from the latest technology developed by Spectra Precision, the beams move quickly and accurately for alignment and grade. The top of the range model, DG813, comes with a smart Spot Finder, which the laser can align to automatically and can also calculate the grade – great for checking previous work on a second day set-up.

Simple to use, with the new menu driven user interface , the DG813 and DG613(G) help you improve efficiency and provide unprecedented performance and reliability. Working in the trenches just got easier with the new range of pipe lasers from Spectra Precision.

Key Features

- Shorter length
- Grade range -12% to +40%
- Self-leveling over the entire grade range and full cross axis compensation
- Ultra-fast beam movement
- Operating range up to 150 m (500 ft) with radio / IR remote control
- Large intuitive graphical display on the laser and remote control
- IP68 protection (dust and waterproof)
- Flexible power options (NiMH / Alkaline)
- Advanced functions squeezing working time: Line Set/Check (first day setup), Line Scan (second day setup) and Line Alert
- Automatic functions for beam alignment, beam detection, and grade calculation (DG813 only)

DG613 / DG613G / DG813

Self-Leveling

The DG813 and DG613(G) feature the largest automatic leveling range in the industry providing quick, easy setups, regardless of grade. Unlike traditional pipe lasers, they eliminate the need for rough leveling and minimize crew training. Simply set up the laser in the pipe, manhole or open cut without the need to swivel or rough level the unit.

Line Alert

This unique feature is ideal for working in high-vibration or wet conditions where the pipe lasers may be disturbed. The beam flashes to notify you that the setup line has been disturbed, eliminating the necessity of rework. Combined with the self-leveling warning, you'll always complete the DG613(G)/DG813 job correctly, on time and on budget!

Line Set

The Line Set/Check capability of both pipe lasers allows you to raise the beam up to 100% outside of the trench for fast line setup or checking. Raising the laser beam out of the trench to an above-ground stake saves you time—instead of having to move the excavator off line during setup of the pipe laser, you can just get on with your job. In addition, the Line Set-Check feature is ideal for rechecking the line for pipe jacking after each push.

Spot Finder SF803

This advanced tool detects manual and automatic beams of the Dialgrade DG813 Pipe Laser. Spot Align, Spot Match and SpotLok are unique automatic features that make the DG813 the smartest pipe laser in the industry.

Target

Our patented Target Lens collects the beam and transfers the spot up to the pipe layer's angle of view, making it very easy to see the laser beam (inclusive in the standard package).

Included Pipe Laser Components

RC803 Remote

956 / 956G Optically Enhanced Target

1248 Trivet Plate

Q104667 Rechargeable NiMH Pack, 10 Ah

Q104781 Charger

Spot Finder SF803 (DG813)

ST805 Transporter (DG813)

Optional Pipe Laser Accessories

929 Blower

1017 Manhole Mount

936 Adjustable Large Pipe Target

1161 Heavy-Duty Wood Tripod

1263 Sighting Scope with Adapter

1244 T-Bar

1230/1237 Metal Invert Plate

P25 Cable w/ Cigarette Lighter Plug

1239 Extended Height Vertical Pole

P24 Pole Adapter for Spot Finder SF803

DG613 / DG613G DIALGRADE

COMPACT AND POWERFUL

RC803

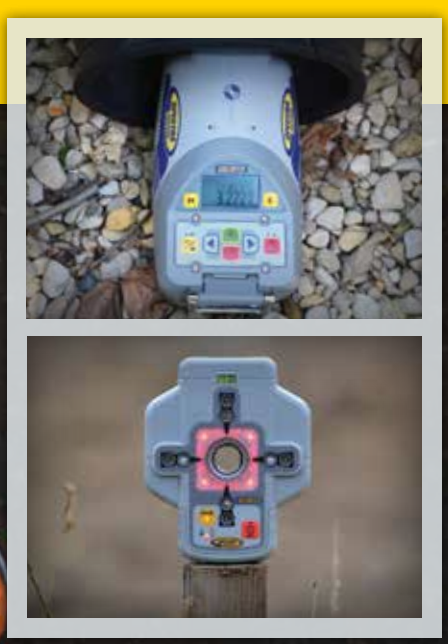
Key Features and Benefits

- New reduced length allows easy set-up even in tight inverts
- Self levelling range of -12% to +40% over the entire grade range
- Cross axis compensation provides a quicker more accurate set-up as the laser does not have to be level in the pipe – place it in the pipe it levels, you work.
- Bright visible beam that works up to 150 m (500 ft)
- RC803 remote works via radio 130 m (430 ft) or infra-red 150 m (500 ft) for both “over-the-top” set-up and in pipe/trench set-up.
- Large, bright, graphical user interface makes the screen easier to see and use when in or out of the pipe. Same graphical user interface can be seen on the remote – what you see on the laser you see on the remote.
- The DG613(G) has flexible power options that provide 40 (30) hours operating time (NiMH rechargeable batteries with worldwide charger). Alkaline batteries can be used directly in the laser without a separate battery pack. Additional car charger can be purchased to keep you working even when out in remote areas.
- The Spectra Precision DG613(G) has advanced functions that make setting up and using it easier and more accurate:
  - Line-Set/Check – allows the user to align the laser to the manhole quickly and easily to set direction. The beam will go up to 100% allowing easy alignment even in short trenches
  - Line Scan – provides a quick alignment to the center of the target for the second day setup
  - Line Alert- notifies the user if the set-up is disturbed eliminating costly re-work from errors

Applications

- Installation of gravity flow sanitary pipelines
- Storm sewer pipelines
- Pipe jacking
- Can be used in a pipe or in “Over the Top” set-ups

Model	Accessory	Power
DG613	Standard package with RC803 Remote Control, 956 Red Target, 1248 Trivet Plate (200 mm / 8 in) (Additional package configurations available)	NiMH Recharge
DG613G	Standard package with RC803 Remote Control, 956G Green Target, 1248 Trivet Plate (200 mm / 8 in)	NiMH Recharge



DG813 DIALGRADE

COMPACT, TOUGH AND SMART – PERFECTION IN A PIPE

SF803

RC803

Key Features and Benefits

- New reduced length allows easy set-up even in tight inverts
- Self levelling range of -12% to +40% over the entire grade range
- Cross axis compensation provides a quicker more accurate set-up as the laser does not have to be level in the pipe – place it in the pipe it levels, you work.
- Bright visible beam that works up to 150 m (500 ft)
- RC803 remote works via radio 130 m (430 ft) or infra-red 150 m (500 ft) for both "Over the Top" set-up and in pipe/trench set-up. Radio range is almost doubled with the use of Transporter ST805. In addition ST805 enables radio connection between RC803 and DG813/613 (G) also inside the open trench at the end of the pipe.
- Large, bright, graphical user interface makes the screen easier to see and use when in or out of the pipe. Same graphical user interface can be seen on the remote – what you see on the laser you see on the remote.
- The DG813 has flexible power options that provide 40 hours operating time (NiMH rechargeable batteries with worldwide charger). Alkaline batteries can be used directly in the laser without a separate battery pack. Additional car charger can be purchased to keep you working even when out in remote areas.
- The Spectra Precision DG813 has advanced functions that make setting up and using it easier and more accurate:
  - Line-Set/Check – allows the user to align the laser to the manhole quickly and easily to set direction. The beam will go up to 100% allowing easy alignment even in short trenches
  - Line Scan – provides a quick alignment to the center of the target for the second day setup
  - Line Alert- notifies the user if the set-up is disturbed eliminating costly re-work from errors
- The SF803 Spot Finder, when used with DG813, provides other automatic functions making it the smartest pipe laser in the industry:
  - Spot Align – automatically aligns the DG813 to the center of the Spot Finder in the pipe or to the direction of the manhole when used in a deep, short trench or "Over the Top" set up.
  - Spot Match – a great tool for checking that pipe has been installed to the correct grade or for finding the grade of existing pipe work. Can also be used to calculate the grade between manholes.
  - SpotLok – can be used to easily establish a steep slope reference or to lock the beam in a desired position for applications such as solar farms where the beam could be subject to drift.
  - Spot Search – can be used to manually locate the beam over long distances out of the trench

Applications

- Installation of gravity flow sanitary pipelines
- Storm sewer pipelines
- Pipe jacking
- Tunnel boring
- Can be used in a pipe or in "Over the Top" set-ups
- Steep slope applications at mountain areas
- Installation of solar farms

Model	Accessory	Power
DG813	Standard package with RC803 Remote Control, SF803 Spot Finder, 956 Red Target, 1248 Trivet Plate (200 mm/8 in), ST805 Transporter (Additional package configurations available)	NiMH Recharge

DG613 / DG613G / DG813 Technical Specifications

Laser

- Accuracy, Self-Leveling (level):[1,3]
  ± 1.5 mm/30 m, (1/16 in @ 100 ft)
  10 arc seconds
- Operating range:[1,2] up to 150 m (500 feet)
- Laser type
  - DG813, DG613:
    red diode laser 600 - 680 nm
  - DG613G:
    green diode laser 510 - 570 nm
- Laser class: Class 3A/3R,
  <5mW OR Class 2
- Self-leveling range
  - Longitudinal: Over the entire grade range with automatic cross axis compensation
- Grade range: -12% to +40%
- Spot Align search range (DG813): up to +45° (with SF803 tilted to the laser)
- Line Range: 20° ±1°
- Leveling indicators: LCD indications; beam and LED flash
- Power source: 10000mAh NiMH battery pack
- Battery life[1]:
  - DG813, DG613: red - 40 hours NIMH
  - DG613G: green - 30 hours NIMH
- Temperature compensation: Yes
- Length: 25 cm (9.8 in)
- Diameter: 13,5 cm (5.3 in)
- Operating temperature:
  -20°C to 50°C (-4°F to 122°F)
- Storage temperature:
  -20°C to 70°C (-4°F to 158°F)
- Tripod attachments: 5/8 x 11 horizontally
- Dust and Water proof: IP68
- Weight: 3,98 kg (6.61 lbs)
- Low voltage indication: LCD battery indicator
- Low voltage disconnection: unit shuts off

Remote Control RC803

- Radio operating range (Over the Top):[1,2,5]
  up to 130 m (425 ft)
- IR operating range (front):[1,2]
  up to 150 m (500 ft)
- Power source: 2 x 1.5V AA alkaline batteries
- Battery life:[1] 130 hours
- Dust and Water proof: IP66
- Weight (incl. batteries): 0.26 kg (0.57 lbs)

Spot Finder SF803

- Operating range:[1,4,5] up to 150 m (500 ft)
- Power source: 4 x 1.5V AA alkaline batteries
- Battery life:[1] 30 hours
- Dust and Water proof: IP67
- Weight (incl. batteries and slider):
  0.43 kg (0.95 lbs)

Transporter ST805

- Radio operating range:[1,2,4,5]
  up to 120 m (400 ft)
- Power source: 2 x 1.5V AA alkaline batteries
- Battery life[1]: 24 hours (continuous use)
- Dust and Water proof: IP66
- Weight (incl. batteries): 0.3 kg (0.75 lbs)

(1) At 21°Celsius / 70° Fahrenheit
(2) Under optimal atmospheric circumstances
(3) Along the axis
(4) Depending on WIFI/WLAN ambient environment
(5) Depending on product height
(typ.: three feet / one meter)

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