

# Leica Rugby 600 Series

## Data sheet



Leica Rugby 600 series rotating lasers are designed to achieve any task in all construction applications. They level, align and square quicker than ever before, eliminating costly errors and downtime. These lasers are built to last on tough construction sites with a durable housing and IP67 protection, making them the most rugged and trusted choice for any job.

- Setting foundations and footings has never been more efficient. The Rugby 600 series is fit for any interior and exterior levelling, aligning and squaring application - concrete forming, pad placement and framework levelling.
- Rugby 640G provides outstanding visibility for indoor and outdoor applications with new green beam laser technology
- Rugby 670 and 680 continuously monitor time and temperature changes to ensure accurate performance over the course of the day with the unique Smart Slope function
- Detect the laser beam in any conditions and at any distances with the Leica Rod Eye receiver range - from easy beam detection with Rod Eye Basic to convenient offset readings with Rod Eye 120G/160 and working at long distances with Rod Eye 140/160
- Effortlessly perform slope and plumb applications, move scan lines, change rotating speed, and save on battery power whenever needed (Rugby 640/640G) using the Leica RC 400 remote control with increased functionality and application flexibility

# Leica Rugby 600 Series



|  | Rugby 610  | Rugby 620  | Rugby 640  | Rugby 640G  | Rugby 670   | Rugby 680   |
|--|--|--|--|---|---|---|
| <b>Functionality</b>                       | Self-levelling horizontal, one button laser  | Self-levelling horizontal & manual slope in one axis | Self-levelling horizontal, vertical, 90° and manual slope in dual axis | Self-levelling, horizontal, vertical, 90° and manual slope in dual axis | Self-levelling horizontal, dial-in grade in single axis | Self-levelling horizontal, dial-in grade in dual axis |
| <b>Laser class</b>                         | Class 1  | Class 1  | Class 2  |   | Class 1   | Class 1   |
| <b>Laser type</b>                          | 635 nm (red)   | 635 nm (red)   | 635 nm (red)   | 520 nm (green)  | 635 nm (red)  | 635 nm (red)  |
| <b>Plumb up</b>                            | -  | -  | Yes  | Yes   | -   | -   |
| <b>Accuracy</b>                            | ± 2.2 mm at 30 m (± 3/32" at 100 ft)   | ± 2.2 mm at 30 m (± 3/32" at 100 ft)                 | ± 2.2 mm at 30 m (± 3/32" at 100 ft)                                   | ± 2.2 mm at 30 m (± 3/32" at 100 ft)                                    | ± 1.5 mm at 30 m (± 1/16" at 100 ft)                    | ± 1.5 mm at 30 m (± 1/16" at 100 ft)                  |
| <b>Self-levelling range</b>                | ± 5°   |  |  |   |   |   |
| <b>Grade range</b>                         | -  | -  | -  | -   | ± 8% SG   | ± 8% DG   |
| <b>Smart Slope</b>                         | -  | -  | -  | -   | Yes   | Yes   |
| <b>Rotation</b>                            | 10 rps   | 10 rps   | 0, 2, 5, 10 rps  | 0, 2, 5, 10 rps   | 10 rps  | 10 rps  |
| <b>Scanning</b>                            | -  | -  | 10, 45, 90°  | 10, 45, 90°   | -   | -   |
| <b>Scan90</b>                              | -  | -  | Yes  | Yes   | -   | -   |
| <b>Plumb down</b>                          | -  | -  | Yes  | Yes   | -   | -   |
| <b>Sleep mode</b>                          | -  | -  | Yes  | Yes   | -   | -   |
| <b>Max. range (Ø) - RE Basic</b>           | 500 m (1,650 ft)   | 800 m (2,600 ft)                                     | 400 m (1,300 ft)   | -   | 600 m (2,000 ft)  | 600 m (2,000 ft)                                      |
| <b>Max. range (Ø) - RE120/120G</b>         | 800 m (2,600 ft)   | 800 m (2,600 ft)                                     | 500 m (1,650 ft)   | 400 m (1,300 ft)  | 900 m (2,950 ft)  | 900 m (2,950 ft)                                      |
| <b>Max. range (Ø) - RE140/160</b>          | 1,100 m (3,600 ft)   | 1,100 m (3,600 ft)                                   | 600 m (2,000 ft)   | -   | 1,100 m (3,600 ft)                                      | 1,100 m (3,600 ft)                                    |
| <b>Max. range (Ø) - RC400 remote</b>       | -  | -  | 200 m (650 ft)   | 200 m (650 ft)  | -   | -   |
| <b>Operation time (Li-Ion battery)</b>     | 40 h   |  |  |   |   |   |
| <b>Operation time (Alkaline battery)</b>   | 60 h   |  |  |   |   |   |
| <b>Working temperature</b>                 | -10 to +50 °C (14 to +122 °F)  | -20 to +50 °C (-4 to +122 °F)                        | -20 to +50 °C (-4 to +122 °F)  | -20 to +50 °C (-4 to +122 °F)   | -20 to +50 °C (-4 to +122 °F)                           | -20 to +50 °C (-4 to +122 °F)                         |
| <b>Protection (with &amp; w/o battery)</b> | IP67   |  |  |   |   |   |
| <b>Warranty</b>                            | 3 years no cost (see PROTECT by Leica Geosystems General Terms & Conditions for details) |  |  |   |   |   |



|                                  | Rod Eye Basic        | Rod Eye 120/120G   | Rod Eye 140 Classic  | Rod Eye 160 Digital  |
|----------------------------------|----------------------|--|----------------------|----------------------|
| <b>Max. working diameter</b>     | 600 m (2,000 ft)     | 900 m (2,950 ft) / 400 m (1,300 ft)  | 1,350 m (4,430 ft)   | 1,350 m (4,430 ft)   |
| <b>Extended detection window</b> | 36 mm (1.4 in)       | 70 mm (2.76 in)  | 120 mm (5 in)        | 120 mm (5 in)        |
| <b>Numeric readout height</b>    | -                    | - / 70 mm (2.76 in)  | -                    | 90 mm (3.5 in)       |
| <b>DETECTION ACCURACIES</b>      |                      |  |                      |                      |
| <b>Very fine</b>                 | -                    | -  | -                    | ± 0.5 mm (± 0.02 in) |
| <b>Fine</b>                      | ± 1.0 mm (± 0.04 in) | ± 1.00 mm (± 0.04 in)  | ± 1.0 mm (± 0.04 in) | ± 1.0 mm (± 0.04 in) |
| <b>Medium</b>                    | -                    | ± 2.00 mm (± 0.08 in)  | ± 2.0 mm (± 0.08 in) | ± 2.0 mm (± 0.08 in) |
| <b>Coarse</b>                    | ± 3.0 mm (± 0.12 in) | ± 3.00 mm (± 0.12 in)  | ± 3.0 mm (± 0.12 in) | ± 3.0 mm (± 0.12 in) |
| <b>Very coarse</b>               | -                    | -  | -                    | ± 5.0 mm (± 0.20 in) |
| <b>Warranty</b>                  | 1 year               | 3 years no cost (see PROTECT by Leica Geosystems General Terms & Conditions for details) |                      |                      |

Leica Geosystems AG  
leica-geosystems.com



© 2016 Hexagon AB and/or its subsidiaries and affiliates. Leica Geosystems is part of Hexagon. All rights reserved.

Illustrations, descriptions and technical data are not binding. All rights reserved. Printed in Switzerland - Copyright Leica Geosystems AG, Heerbrugg, Switzerland, 2016. 851210en - 10.16

- when it has to be **right**

**Leica**  
Geosystems