

# Leica Rugby 320 SG & 410/420 DG

## The toughest players on big fields

Provided by Xpert Survey Equipment  
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n Construction  
n Machine Control  
n Agriculture



**SITE PROOF**  
by Leica Geosystems

- when it has to be **right**

**Leica**  
Geosystems

# Leica Rugby 320 SG & 410/420 DG

## When accuracy is the goal, Leica Rugby makes the grade

Making the grade is what the Leica Rugby is all about. Whether your work requires level, single or dual grades and high accuracy over a long distance range, the Leica Rugby's extensive features will ensure both material and labour savings, keeping you on target to increase your bottom line.

The Leica Rugby Grade Lasers are automatic and self-levelling for jobs of any size, large or small. They can be used for any application involving precise grade control such as:

- n Building pads, parking lots and runways
- n Precise depth control for sub-base and fine grade excavation
- n Agricultural applications such as land leveling or tiling
- n Concrete forming and framework
- n Retention ponds and batters
- n Setting foundations and footings
- n Absolute compatibility with the widest range of machine control solutions

### Why Leica Rugby is the toughest player on the field:

- n Waterproof and dustproof to work reliably in all weather and job site conditions
- n High-impact composite housing with protective rubber overmolding
- n Cast aluminum base withstands rough handling and creates a stable platform
- n Enclosed head for maximum internal component protection
- n Long-range two-way remote control, optional with the Leica Rugby 400 Series
- n Superior battery concept (alkaline or NiMH rechargeable)



- n Control all Rugby functions
- n Change settings "on-the-fly"
- n Large display with backlight
- n Water, dust and shockproof
- n Superior radio performance
- n Simplify workflow and reduce costs

| Remote Control Specifications |                        |
|-------------------------------|------------------------|
| Instrument                    | Leica Rugby 410/420 DG |
| Distance                      | 225 m typical          |
| Battery Type                  | four AAA alkaline      |
| Size (HxWxD)                  | 155 x 70 x 45 mm       |
| Weight                        | 410 g                  |





## Reliable in General Construction



**The Leica Rugby 320 SG/410 DG is perfect for general construction work**

- n Easy foundation setting thanks to the 5-button keypad
- n Superior power management for working without interruptions (up to 130 hours)
- n Full-function long-range two way remote control saves time and reduces communication errors from inside or outside the cab of the machine (Leica Rugby 410/420 DG only)
- n High-power laser beam provides enhanced distance performance
- n Rugged and reliable, works when you need it

## Tough in Machine Control



**In the development of the Leica Rugby 320 SG and 410/420 DG models care was taken to ensure absolute compatibility with the widest range of machine control solutions. Your dealer will be pleased to advise you further.**



# Highest Accuracy in Agriculture



The Leica Rugby 420 DG is perfectly suited for the agriculture market, where accuracy over a long range is required.

- Designed for agriculture applications, such as land leveling and tiling
- Highest accuracy over long distances
- Align the laser with a simple one-person operation using the manual-axis-alignment feature
- Eliminate communication errors using the long-range remote control
- Stable laser plane over the whole temperature range
- High performance for all day use

## User-friendly features give you the competitive edge for precise grade control



**Feature access control**  
using the 5-button concept



**Grade entry**  
of use

**Alert**  
the height to  
elevation errors

**Wind sensitivity settings**  
make it possible to work  
under adverse conditions



**Asking**  
ically shutters  
m for multiple  
age



**HI**  
e rotation  
se operations

**management**  
s battery status

**Your personalized identification**  
port theft protection

**HI**  
ange two-way  
control  
e communication errc

**aving mode**  
longer  
operation times



**Manual mode**  
for special applications



**Axis alignment**  
to increase grade accuracy

225m



| Leica Rugby Series Specifications | Leica Rugby 320 SG   | Leica Rugby 410 DG   | Leica Rugby 420 DG   |
|-----------------------------------|--|--|--|
| Operating Range (Diameter)        | 900 m *  | 800 m *  | 1100 m *   |
| Self-Leveling Accuracy            | ± 1.6 mm per 30 m **   |  |  |
| Self-Leveling Range               | ± 5 °  |  |  |
| Grade Capability                  | - 5 to + 25 %  | - 5 to + 25 % in either axis<br>(- 5 to + 15 % in both axes) | - 5 to + 25 % in either axis<br>(- 5 to + 15 % in both axes) |
| Grade Resolution                  | 0.001 %  |  |  |
| Rotating Speeds                   | 5, 10, 15, 20 RPS  |  |  |
| Laser Diode                       | 635 nm visible red laser   | 780 nm invisible (IR)  | 635 nm visible red laser                                     |
| Size (H x W x D)                  | 265 x 260 x 200 mm   |  |  |
| Weight                            | 5 kg without batteries   |  |  |
| Operating Temperature             | - 20 ° to + 50 ° C   |  |  |
| Battery Type                      | alkaline or NiMH   |  |  |
| Battery Life                      | up to 130 hours with alkaline; up to 100 hours with rechargeable *** |  |  |
| Environmental                     | watertight to IPX-7 standard   |  |  |
| Warranty                          | 2 years factory warranty / additional 3 years on request             |  |  |

\*Tested with Leica receivers (CAB Sensor, MLS700, Rod-Eye Digital/Plus) / \*\*Accuracy is defined at +25°C / \*\*\*Battery life is dependent upon environmental conditions



**5**

**Years Warranty**

2 years standard  
+3 years extension  
optional\*

For terms and conditions please refer to your sales representative.

**Leica Rod Eyes**



**Leica Rod Eye 140 Classic**

**Leica Rod Eye 160 Digital**

**Leica Rod Eye Basic**

Ask your dealer about the right receiver for your job

| Leica Rugby Series Features by Model         | Leica Rugby 320 SG | Leica Rugby 410 DG | Leica Rugby 420 DG |
|--|--------------------|--------------------|--------------------|
| Simple to use 5-Button Keypad                |                    |                    |                    |
| Real-Time Grade Matching                     |                    |                    |                    |
| Superior Dual Battery Concept                |                    |                    |                    |
| Scope Mount in Both Axes                     |                    |                    |                    |
| Laser Beam Visible (Red)                     |                    | -                  |                    |
| Laser Beam Invisible (IR)                    | -                  |                    | -                  |
| Grade Capability X (or Y) Axis - 5 to + 25 % |                    |                    |                    |
| Grade Capability in Both Axes - 5 to + 15 %  | -                  |                    |                    |
| Long Range Remote Control                    | -                  |                    |                    |
| Axis Alignment                               | -                  |                    |                    |
| Laser Plane Stabilization                    | -                  | -                  |                    |
| Enhanced Operating Range                     | -                  | -                  |                    |



Whether you have to precisely lay out a construction site, perform control measurements, collect height and angle data, align concrete forms, install ceilings and partitions, lay gravity flow pipe, locate underground services or complete site preparation and earthworks – Leica Geosystems offers the right instrument, construction laser or machine control installation specifically designed for your construction application.

Easy-to-use, jobsite-tough, accurate and reliable – Leica Geosystems instruments and lasers ensure the efficient use of your materials and resources. High-quality products, such as optical and electronic levels, construction lasers, total stations and machine automation systems, provide fast results, keep you working and increase your profitability.

#### When it has to be right.

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**Leica Rugby 410 DG:**  
Laser class 1 in accordance with  
IEC 60825-1 resp. EN60825-1

**Leica Rugby 320 SG and 420 DG:**  
Laser class 2 in accordance with  
IEC 60825-1 resp. EN 60825-1



**Leica Sprinter**  
Quick, easy and  
efficient digital  
leveling



**Leica Piper 100/200**  
The world's most  
versatile pipe laser



**Leica Rugby 100LR**  
Accurate and reliable  
self-leveling laser



**Leica Rugby 260SG,  
270SG, 280DG**  
Keeps you working



**Leica Builder**  
The theodolite built  
for builder