

GPS-Fleet Management for your Irrigation Equipment

raindancer

Overview

- Machine 07**
Irrigator is not moving
Behind the Cottage (Potatoes)
75 of 300m (24%) 3 bar
Est. compl. 16:05 07:45
- Machine 04**
The irrigator has reached its destination
Behind the pit (Potatoes)
302 of 300m (100%) 4.5 bar
Est. compl. 14:05 10:42
18mm (20m/h) Target: 20mm (32 m/h)
Operation scheduled:
Behind the pit - Run 3 (25m/h)
Start straight away, pre-irrigation 20 min
- Machine 02**
Irrigator is operating
Fox Slough (Beet)
15 of 470m (3%) 4.5 bar
Est. compl. 16:05 13:45
30mm (30m/h) Target: 30 mm (30 m/h)

irrigators Pivot Weather

raindancer® - GPS Fleet Management

Using [raindancer](#), you are able to monitor and to control irrigation via Smartphone or PC.

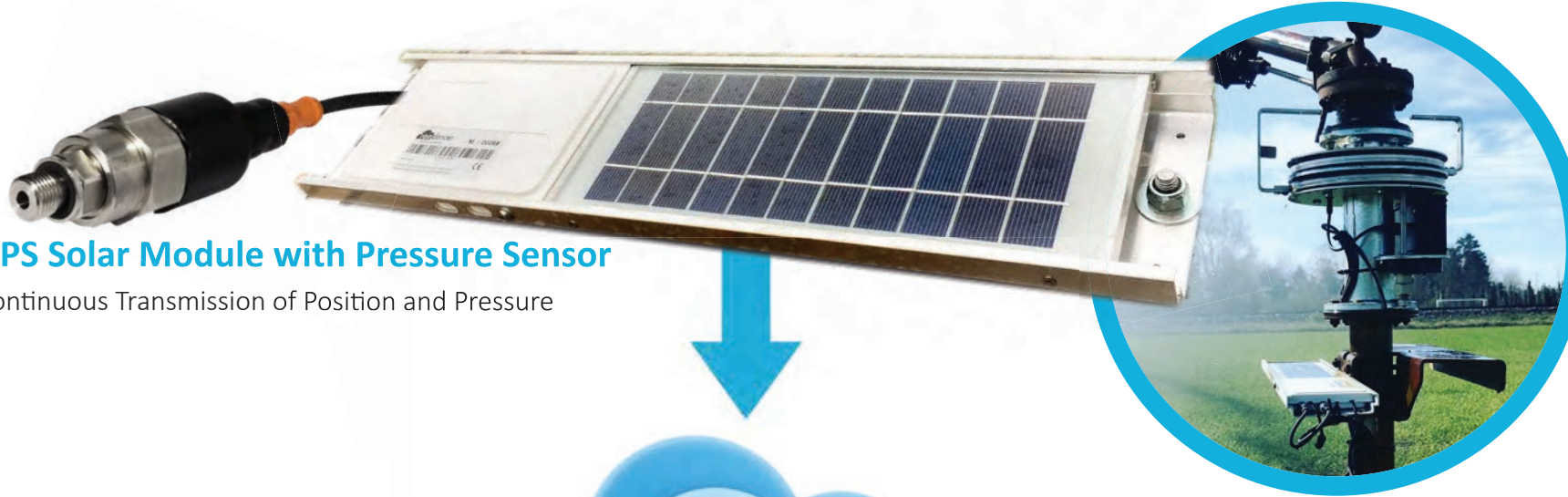
Using [raindancer](#) is very easy and it is available for **every irrigation machine.**

What is it about?

- Information at a Glance
- Handling Malfunctions
- Dispatching and Scheduling Relocations
- Team Management
- Remote Control
- Documentation



how does it work?



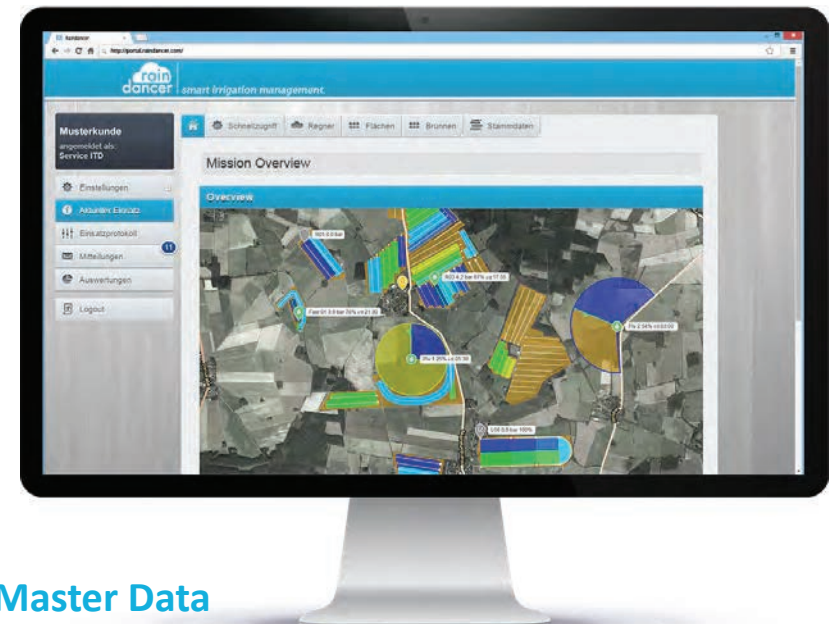
GPS Solar Module with Pressure Sensor

Continuous Transmission of Position and Pressure



Smartphone

iPhone / Android



Maintain Master Data

Web-Browser (Internet Explorer, Firefox, Chrome)

- Fields with Field Borders
- Hose Reels, Wells, Pumps and Meter Units
- Teams, Users and Farms

- GPS Receiver with Solar-Powered Energy Supply
(5-day Battery Life)
- Pressure Sensor with Cable
- Installation only on the Gun Carriage
(no installation on the reel)
- Suitable for All Irrigation Machines

Current position and pressure is transmitted to the [raindancer](#) software.

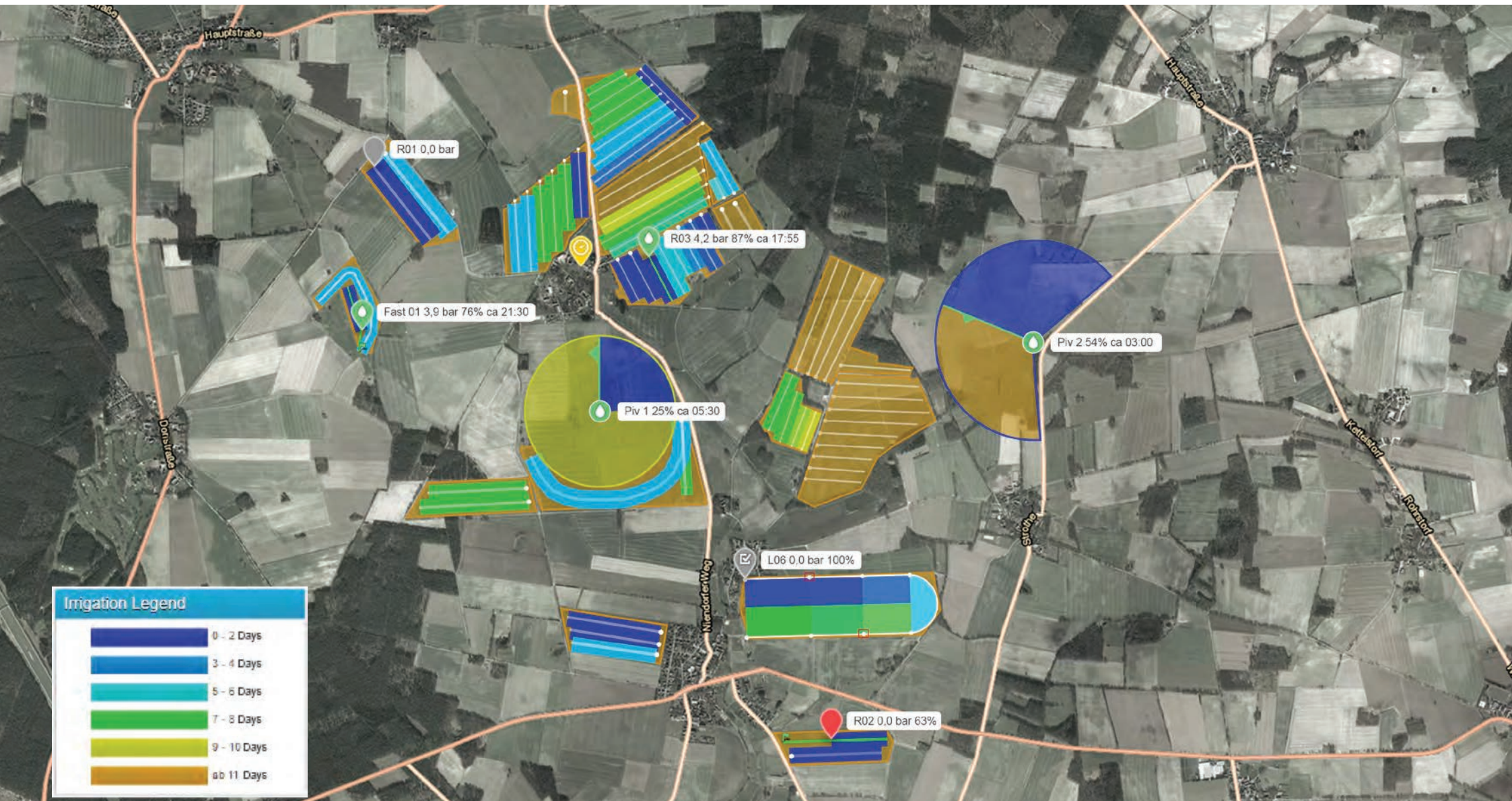


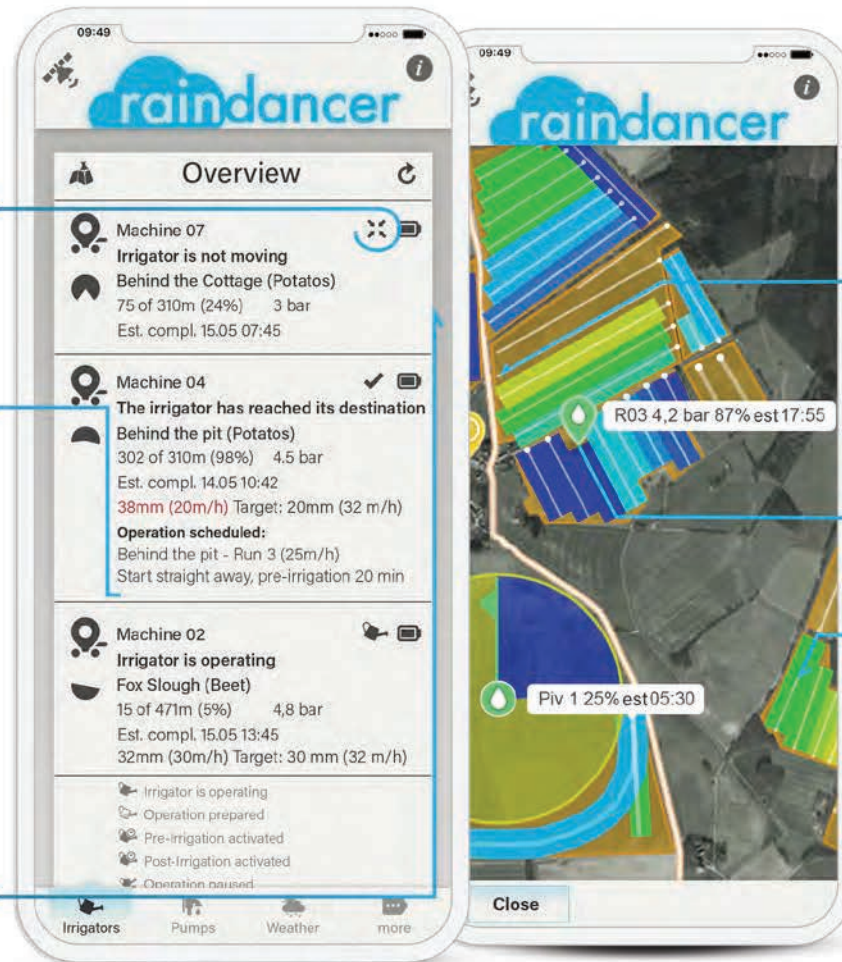
Circular and Linear Irrigators



Hose Reel

Irrigation runs are detected automatically, providing a comprehensive monitoring experience:





Current States of All Your Machines

- ✖ Malfunctions
- ✓ Completed, Ready for Relocation
- 🚰 Irrigating

Every Detail About the Current Operation

- Field
- Distance and Current Progress
- Current Water Pressure
- Current Working Angles
- Estimated Completion
- Scheduled Relocation
- Field, Lane, Irrigation Amount

Intelligent Order

- Machines that requires Action at Top

Keep an Overview

- Completed Irrigation Runs
- Pending Lanes

Monitor the Progress

- Location of the Machine
- Estimated Completion
- Water Pressure

Details About Completed Operations

- Time of Completion
- Amounts, Distances

Order:

- Machines with Malfunctions
- Machines Awaiting Relocation
- Operating Machines Ordered by Estimated Time of Completion
- Machines Currently not Operating

Status Information

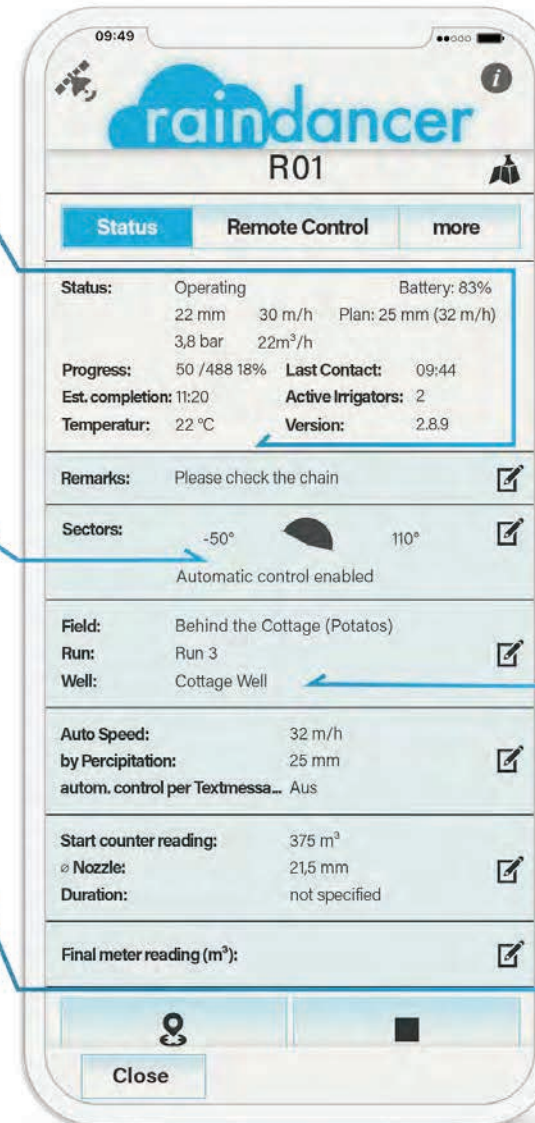
- Pressure
- Irrigation Quantity
- Speed
- Flow Rate
- etc.

Advanced Functions of the raindancer PRO Module

- Temperature at the Machine
- Current Water Meter Reading
- Sectors of Current Irrigation

Operation Details

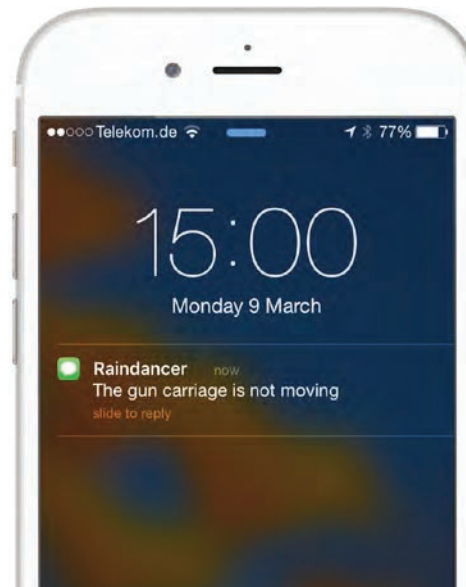
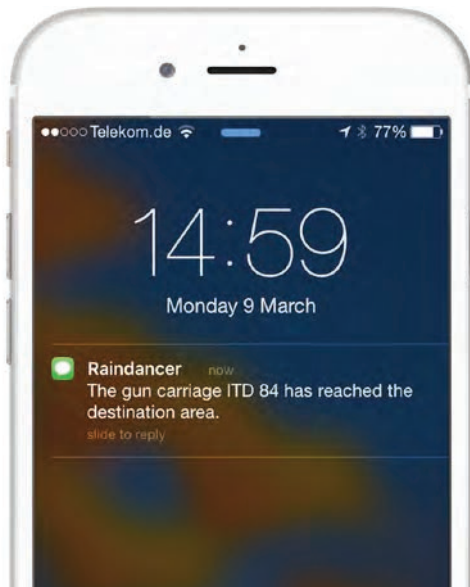
- Irrigation-Related Remarks Help to Organize Daily Work Routine
- Operation Details, Such as Fields or Pumps Recognized Automatically



Text Messages on Malfunctions



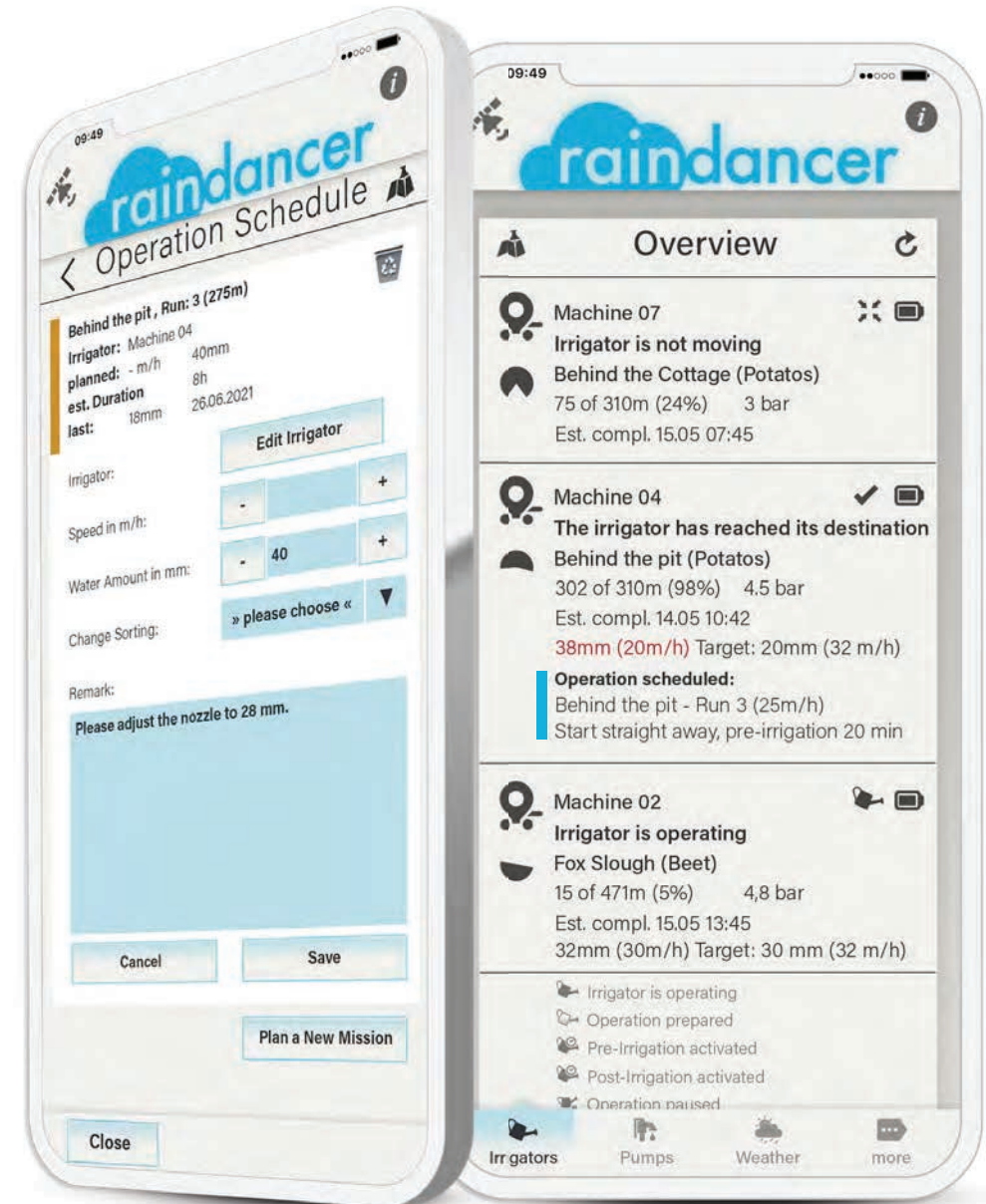
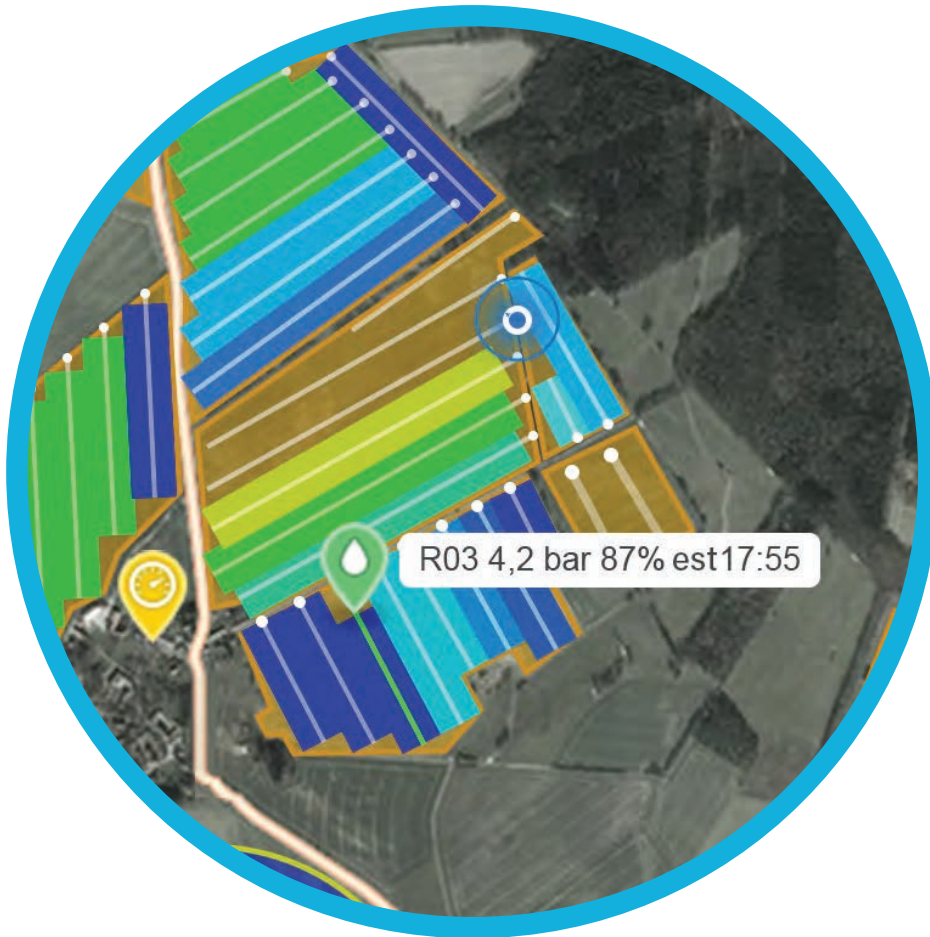
- No Movement
- Pressure Too Low or Too High
- The Gun Carriage Is Tilted
- No shutdown at destination
- Critical Areas Will Be Reached
(e.g. House, Street)



	Alarm areas	Reached Destination	Errors	Warnings
John Dow	✓	✗	✗	✓
Max Power	✓	✗	✗	✓
Reese Field	✓	✗	✓	✓
Administrator User	✗	✗	✗	✓
Service User	✗	✗	✓	✓

Planning Relocations

- The App Shows the Employees the New Operational Area (Field, Lane)
- The Employee will Find the Correct Lane Without any Problem, even in Difficult Areas





The used nozzle can be adjusted on the smartphone



Calculating Irrigation Amounts

- Based on the Pressure and the Gun Parameters, the Irrigation Amount will be Calculated
- The Quantity (m³ and mm) is Assigned to the Irrigation Run and Booked.

Optional: Connection a Water Meter

- A Water Meter can be Connected for Precise Data, for Water Extraction.
- [raindancer PRO Modul](#) is necessary.



- Automatic Logging
(Wells, Fields, Irrigator, Amounts, etc.)
- Reports for Authorities
- Management Views
- Distribution Between Farms
- Export to Excel
- Access via API Possible
(e.g. field index or own applications)

Mission Protocol

Missions

Mission Time	Irrigator	Field	Well	mm	m ³	h	m		
10.06.2016 09:43:29									
09.06.2016 12:04:47	Machine 01	Behind the Cottage	Well 1	26	318	7,5	133	🔍	✖
09.06.2016 22:09:59									
09.06.2016 10:42:37	Machine 02	Behind the Cottage	Well 1	23	895	19,8	486	🔍	✖
10.06.2016 06:38:25									
09.06.2016 09:44:56	Machine 05	Behind the Cottage	Well 1	21	656	15,9	396	🔍	✖
10.06.2016 01:43:29									
09.06.2016 08:57:25	Machine 05	Behind the Highway	Well 15	21	444	9,7	247	🔍	✖
09.06.2016 18:38:22									
09.06.2016 06:37:51	Machine 01	Behind the Highway	Well 15	28	475	0,4	192	🔍	✖
09.06.2016 08:12:11									
08.06.2016 21:20:39	Machine 05	Behind the Cottage	Well 1	25	328	10,3	167	🔍	✖
09.06.2016 07:19:29									
08.06.2016 20:44:06	Machine 01	Redmond Valley	Well 23	21	448,5	9,9	249	🔍	✖
09.06.2016 04:54:24									
08.06.2016 15:49:24	Machine 01	Redmond Valley	Well 23	26	870	16,3	423	🔍	✖
09.06.2016 08:16:24									
08.06.2016 12:09:53	Machine 02	Behind the Cottage	Well 1	22	722	17,0	416	🔍	✖
09.06.2016 05:04:51									

Export Reports to Excel

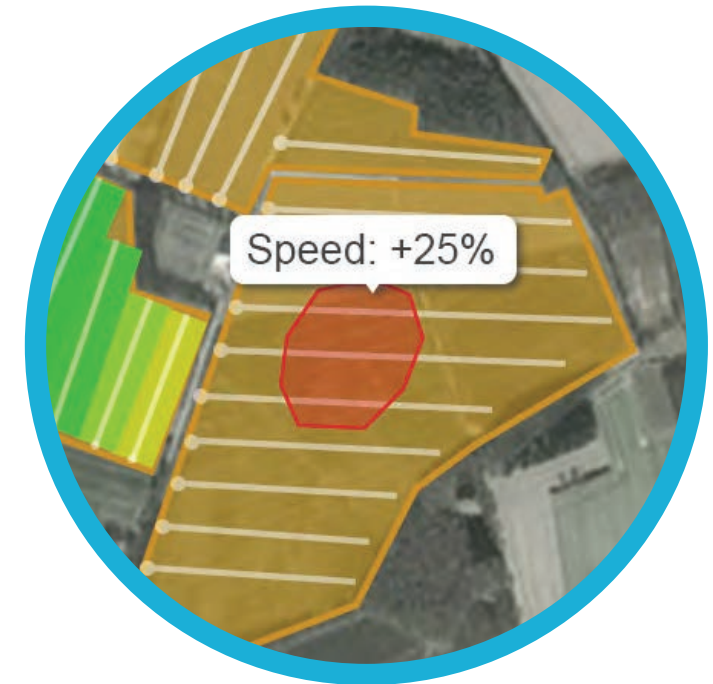
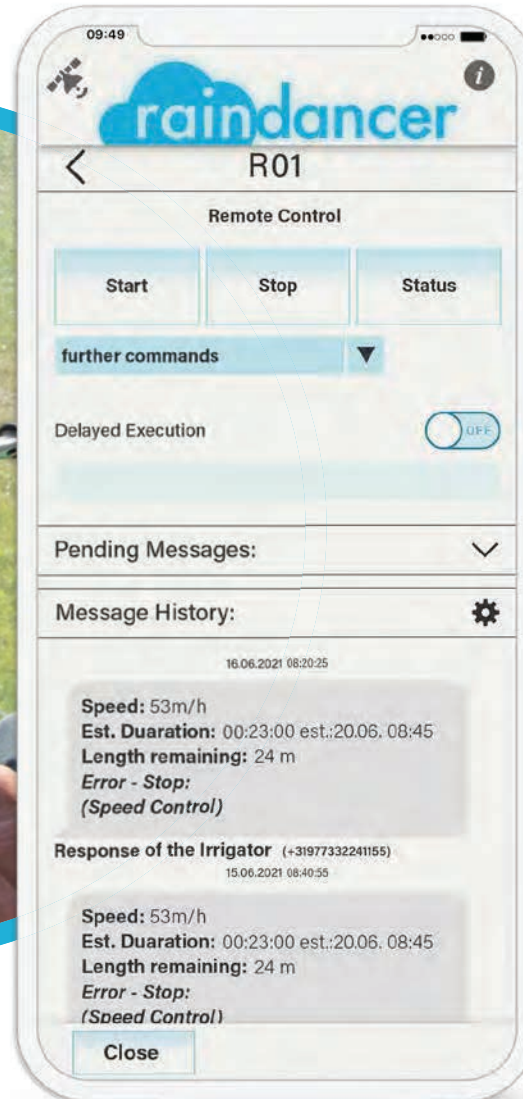
Select by Time Spans, Areas, etc.



Register

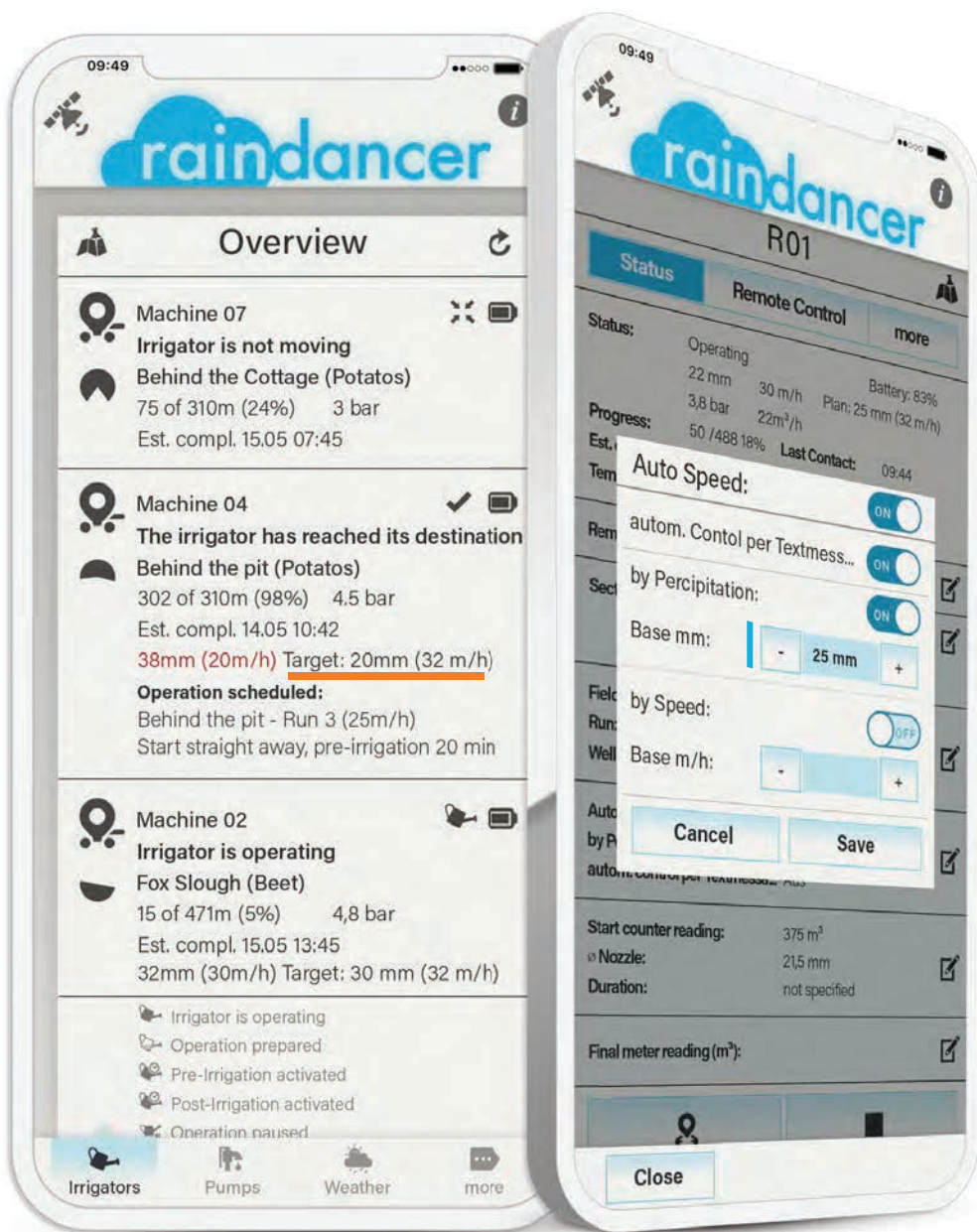
Entnahmestelle / Brunnen	Abrechnungsart	Benutzername	Schlag	Startzeit	Endzeit	mm	h	m ³	m ³ Zaehlerstand Start	m ³ Zaehlerstand Ende	Entfernung Start
Brunnen 1	m3	Max Muster	Waldinsel	03.07.2015 16.27.59	04.07.2015 11.56.06	27	20	975	56773	57097	458
Brunnen 1	m3	Max Muster	Waldinsel	03.07.2015 16.28.26	04.07.2015 16.05.56	29	24	1180	57097	57421	517
Brunnen 1	m3	Max Muster	Waldinsel	04.07.2015 12.21.35	04.07.2015 23.10.07	25	11	540	57421	57745	256
Brunnen 1	m3	Max Muster	Waldinsel	04.07.2015 16.53.01	05.07.2015 12.59.36	29	20	1005	57745	58069	440
Brunnen 1	m3	Max Muster	Waldinsel	05.07.2015 05.02.44	06.07.2015 00.47.32	27	20	985	58069	58393	464
Brunnen 1	m3	Max Muster	Waldinsel	05.07.2015 13.45.12	06.07.2015 13.31.01	29	24	1190	58393	58717	521
Brunnen 1	m3	Max Muster	Waldinsel	06.07.2015 05.55.07	07.07.2015 00.58.08	27	19	955	58717	59041	448
Brunnen 1	m3	Max Muster	Waldinsel	06.07.2015 14.46.02	07.07.2015 14.13.54	30	24	1175	59041	59365	507
Brunnen 1	m3	Max Muster	Waldinsel	07.07.2015 05.08.48	08.07.2015 00.19.36	27	19	960	59365	59689	453
Brunnen 4	m3	Max Muster	Talrand	07.07.2015 16.07.12	08.07.2015 06.32.52	28	14	720	59689	60013	315
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 05.08.11	17.06.2015 21.05.43	21	16	880	60013	60337	522
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 05.08.30	17.06.2015 19.23.54	25	14	786	60337	60661	397
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 05.08.50	17.06.2015 22.12.01	22	17	941	60661	60985	545
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 19.24.16	18.06.2015 18.35.20	25	23	1276	60985	61309	668
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 22.36.25	18.06.2015 16.30.26	22	18	984	61309	61633	584
Brunnen 4	m3	Max Muster	Talrand	17.06.2015 22.37.09	18.06.2015 13.33.31	22	15	820	61633	61957	482
Brunnen 4	m3	Max Muster	Talrand	18.06.2015 13.46.03	19.06.2015 00.04.42	21	10	566	61957	62281	333

- Start, Stop and Change Speed

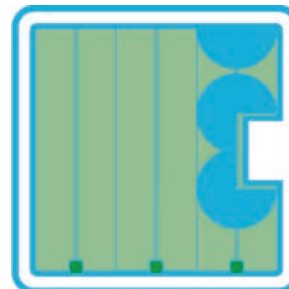
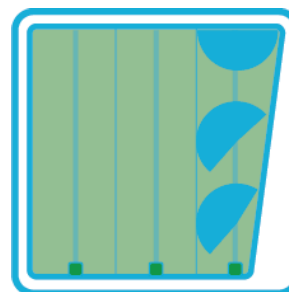


+ Partial area-specific irrigation VRI

- If the irrigator enters / leaves the partial area, the preset speed is automatically changed.



- Specify desired irrigation amount in mm.
- The system calculates the speed on the basis of the nozzle, the pressure and the working width.
- If a parameter changes due to narrows, headland or pressure drop, the speed is adjusted automatically.
- The application of Water remains constant over the entire irrigation run.



Remote Control of Pumps



- Can be Retrofitted to Most Electric Pumps
- Communication via Internet
(3G/LTE cellular or existing LAN)
- Monitor Status in Real-Time:
(Flow Rate, Meter Reading, Power, Pressure)
- Remote Control
(Start, Stop, Query Status and Reset)
- Notification in Case
of Malfunction
- Working in Shared Networks

Optional: automatic regulation
according to pressure demand at the
irrigator



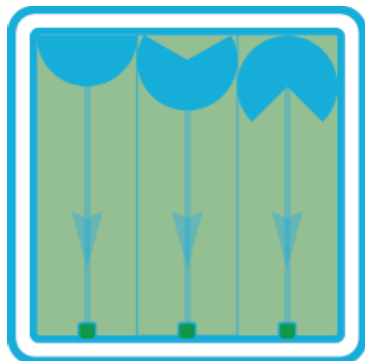
Pump Networks



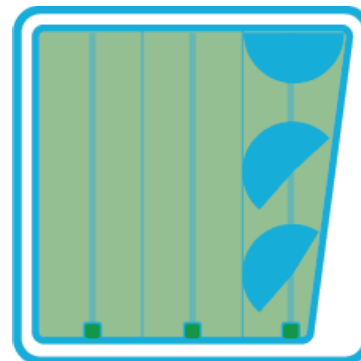
- Pump sharing
- Better control of workloads
- Centralized control of pumps in the network
- Detect pump malfunction in the network faster



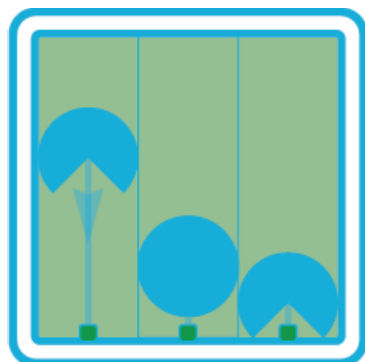
The raindancer beacon should be connected by a professional. The actual functionality depends on the conditions at the pumping station. Existing GSM/SMS based controls can in most cases also be integrated into the raindancer software.



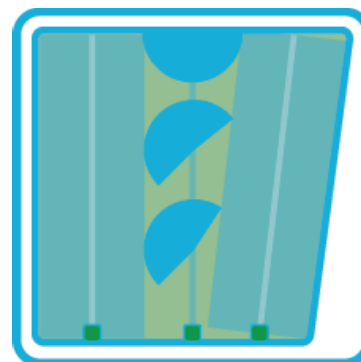
- Reach Into Every Corner
- No Pre-Irrigation required
- Irrigate Evenly



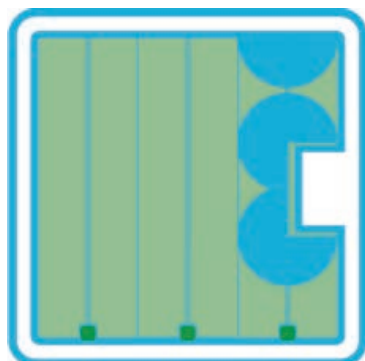
- Adapt to Curved And Angled Shapes
- Gradual Adjustments



- Get More Water In Front Of Machine



- Prevent Double Irrigation
- Take Previous Runs into Account



- Irrigate Around Obstacles

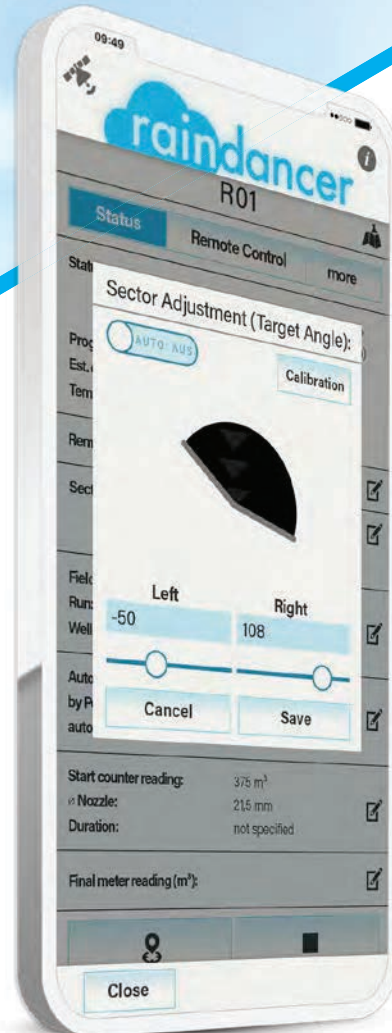


Self-Driving Machines in Curves:

- Limit Irrigation Sector
- Increase Speed



- Irrigation Starts Towards the Hosereel
- No Pre-Irrigation Required
- Automatically Set Angles According to Fields Shape and Obstacles
- Adjustable Default Angles for the Sector-Stops (e.g. 360° or 270°)
- The Speed Will Be Changed Automatically According to The Irrigated Area
- Manually Alter the Sector Angles via Smartphone Remote Control (e.g. according to changed Wind Situations)



Enjoy your new freedom and
Save time and reduce wasted journeys.

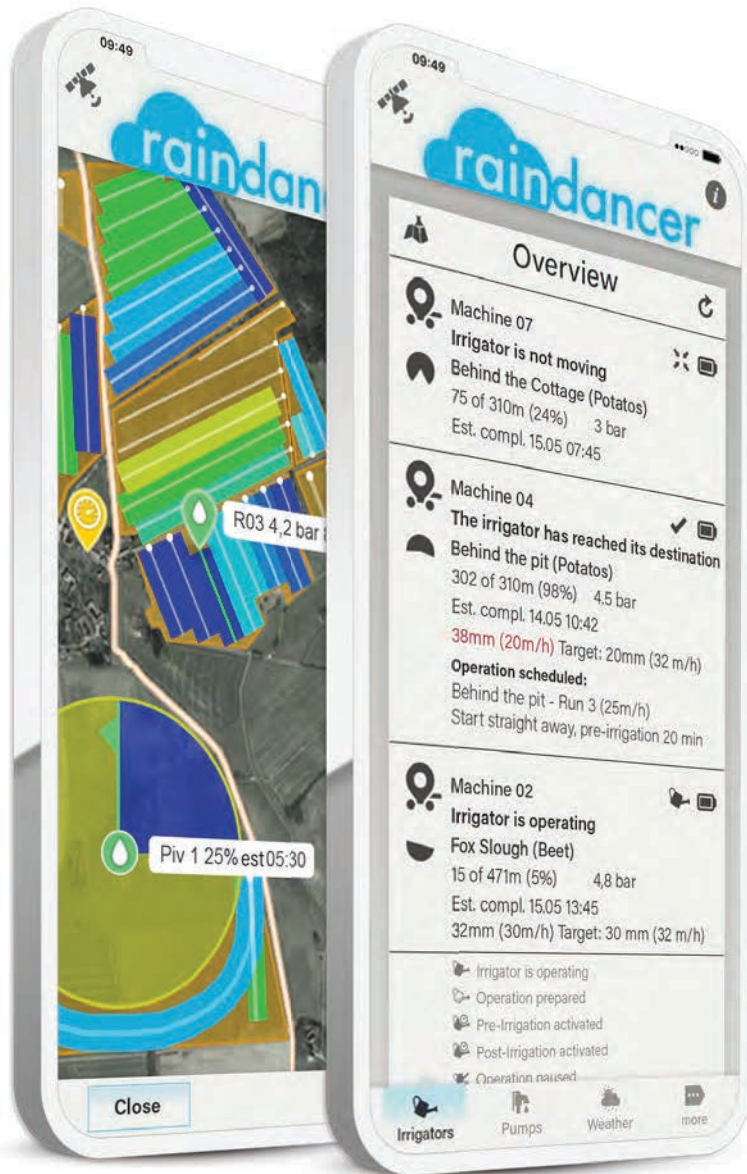
Simply put, it is a pleasure to work with [raindancer](#).

Quote of a customer:

**„The first and the last what I did every day
in summer:
I’ve thought of you.“**

If you like, we would be happy to get you in contact
with customers, to talk about their experiences using
[raindancer](#).

Arrange a non-obligation consultation today!



raindancer **GPS Modul**



- Pressure Sensor
 - Tilt Sensor
- PRO Version**
- + raindancer Sector Control
 - + Interface for Additional Sensors

Pressure Sensors

- Compact and Robust
Stainless Steel Housing
- Optional : **Ceramic Measuring Cell**
 - » Better Frost Resistance
 - » Pressure Resistant up to 75 Bar



raindancer **Beacon**



- Pump Control
- Remote Control via Internet
- Monitoring
- If Applicable, Automatic Control

Water Meter

for connection to the PRO module



Mounting Kit

for simple mounting on the irrigator



raindancer **Sector Control**



- The angles are determined on their field boundaries.
- Stop points will be adjusted automatically.
- Manual adjustments are possible via App.

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