

# RQ-30d

## Contact-free Discharge Measurement System



The exact and real time knowledge of water discharge is of central importance in the fields of hydrography, water storage management, irrigation and for the early detection of floods. It is essential in hydraulic engineering and water resource management and is the basis for hydrological modelling and simulation.

The RQ-30d is a continuous measurement system for the contact-free determination of the water discharge of large rivers and channels. It is based on the principle of dividing the river into multiple cross-sections with individual velocity measurements in each section. By combining these velocity measurements with a single water level monitor, the discharge of each section and the total discharge of the river can be determined. In practice, the RQ-30d systems combines a primary RQ-30 flow velocity and water level sensor with several secondary RG-30 velocity sensors.

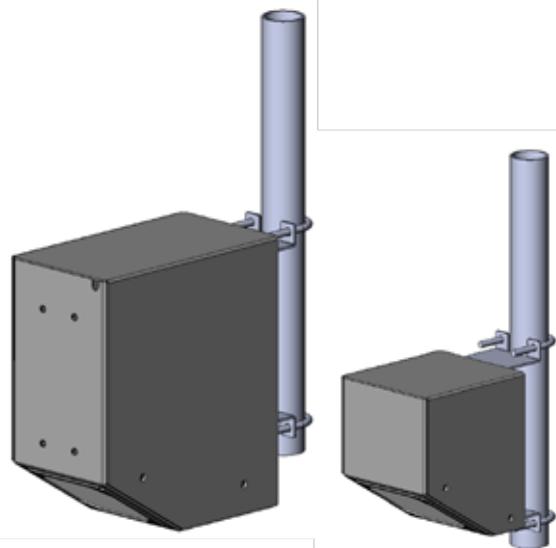
Compared to a single-sensor setup the RQ-30d can detect different flow velocities that often occur in wide rivers or under difficult flow conditions and thus provide accurate discharge values.

Due to the contact-free measurement method the RQ-30d can be installed on extension arms or cable ways without costly structural measures under or inside the water. This also has the advantage that the sensor is located outside the danger area of flood events and that it requires no maintenance over many years.



### FEATURES

- Contact-free radar method prevents soiling and damage, no sensor maintenance
- Automatic discharge calculation based on hydraulic model with multiple dyn. k-factors.
- Sensor self check with status and error output.
- AI-based machine learning for compensation of environmental influences and early detection of errors.
- 3-point velocity calibration certificate.



- Advanced velocity diagnostics with spectrum display
- Discharge calculation inside the RQ-30d.
- Water level and velocity sensor combined in one weather and vandalism proof housing.
- Sommer Messtechnik ANR: advanced noise reduction system

### Versions

#### Housing with complete powder coated aluminum

Art	Version
17195	RQ-30d System for contact-free discharge measurement 0.08...16 m/s, 0...15 m, analog output
19425	RQ-30d System for contact-free discharge measurement 0.08...16 m/s, 0...35 m, analog output
17276	RG-30d System for contact-free flow velocity measurement 0.08...16 m/s

#### Powder coated aluminum housing with plastic cover

Art	Version
22082	RQ-30d System for contact-free discharge measurement 0.08...16 m/s, 0...15 m, analog output
22083	RQ-30d System for contact-free discharge measurement 0.08...16 m/s, 0...30 m, analog output
22084	RG-30d System for contact-free flow velocity measurement 0.08...16 m/s, analog output

## Scope of delivery

Qty	Art	Item
1	-	RQ-30d in the required version
1	-	Manual and Q-Commander Software on USB stick

## Accessories

Art	Accessory
15543	Data cable for configuration and testing of RQ-30 / RG-30 / SQ
15833	Data cable for RQ-30 / RG-30 / SQ, 12x0,25 mm <sup>2</sup> , up to 60m
18711	Data cable for RQ-30 / RG-30, LiYCY 12x0,25mm <sup>2</sup> , 10 m
18712	Data cable for RQ-30 / RG-30, LiYCY 12x0,25mm <sup>2</sup> , 20 m
20074	RG / RQ standart mounting set, 2x U-bolt max. Ø60 mm
20572	RQ-30 lightning protection for cable length >50 m
22524	Universal extension box for cable extension
-	Radar velocity verifier

## Specifications

Please refer to datasheets of RQ-30, RG-30 and RQ-30+.