



# CMM Qi

Quality measuring with  
Swiss precision



# Mechanical quality

The symmetrical gantry design is the basis for highest precision.





The high-precision mechanics, developed and built in Switzerland, meet the utmost demands. Therefore this high-precision gantry measuring machine is optimally integrated into the flexible EROWA manufacturing concept. With stable axes on air bearings and centrally positioned drives, the mechanical accuracy is striking even in case of temperature variations.

$$1,5 \mu\text{m} + L^*/500$$

\*L in mm



The latest technology of air bearings is incorporated into the design to sense the slightest movement.



The symmetry of the whole machine has a positive effect on accuracy.



The centrally positioned axis drives allow symmetrical movements on both sides.



EROWA workholding systems can be mounted directly on the granite slab thanks to their standard hole pattern.

#### PRECISION

Mechanical base accuracy

#### STABLE

Solid natural granite slab

#### COMPATIBLE

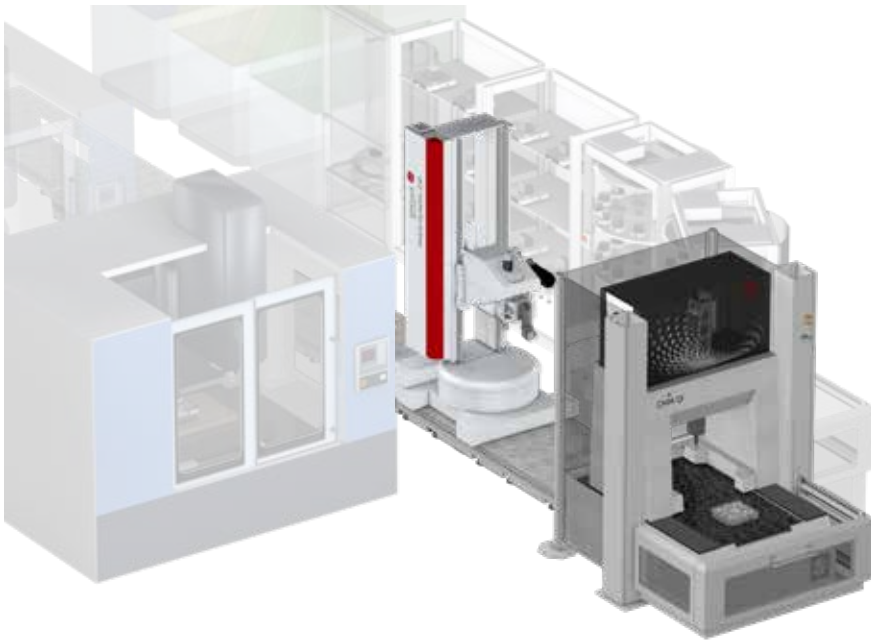
Prepared for EROWA workholding systems

# Automation with quality

This measuring machine includes everything that is necessary for successful automation.

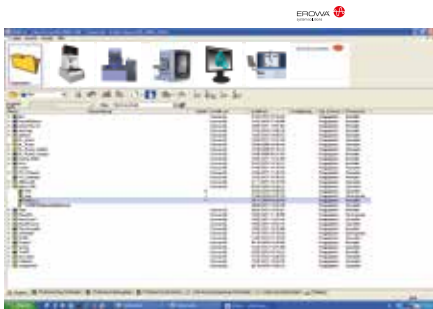




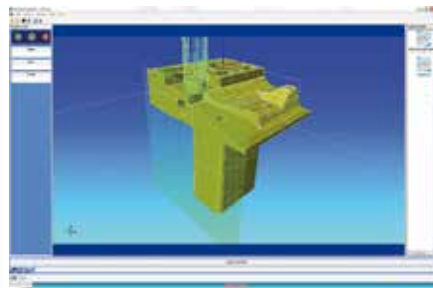


Automatic quality measurement is reasonably feasible. The key components are provided in the CMM Qi:

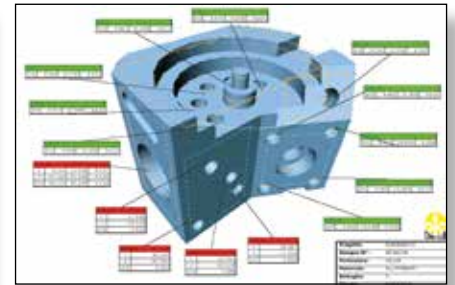
- shop-proven machine
- safety barriers
- automation interface
- integrated control system



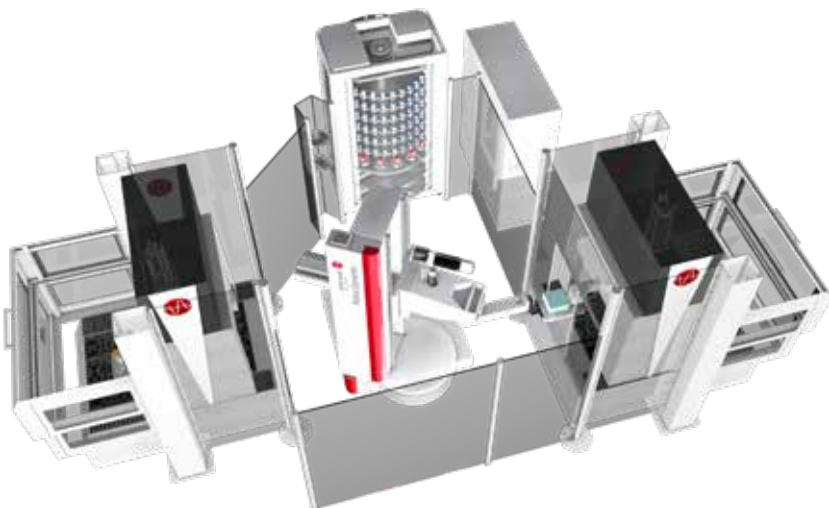
The control system manages the "Measure" step like any other processing.



The control system starts the prepared measuring programs.



The graphical data reports can be retrieved from the control system at any time.



#### **AUTOMATIC CHECKS**

Intermediate and final checks for high process reliability

#### **WORKHOLDING SYSTEM**

The integrated workholding system is the key to automation

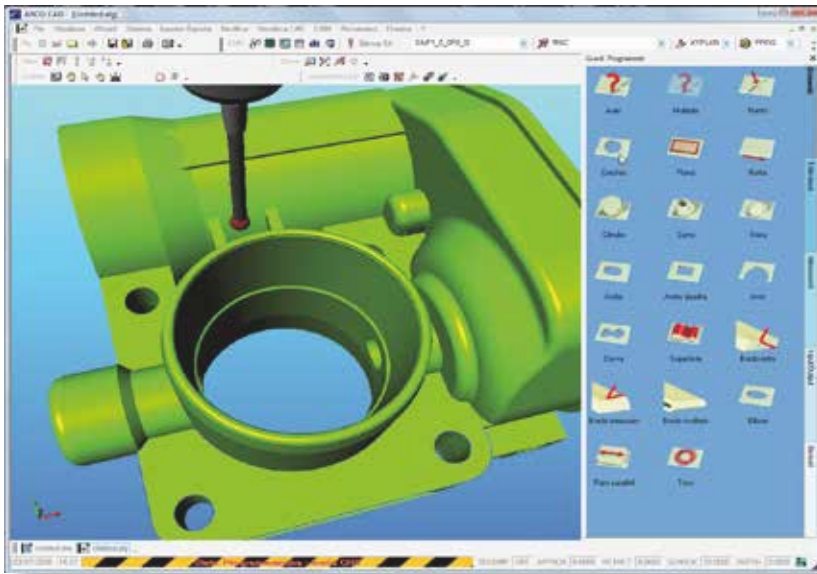
#### **AUTOMATION KIT**

Clearly defined interfaces for ultimate safety requirements

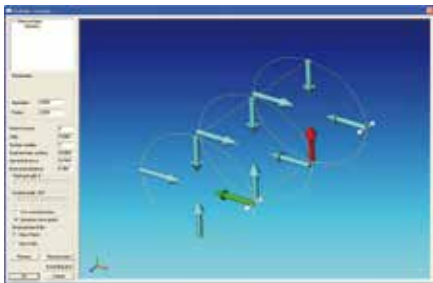
# Quality measurements

Importing - Measuring - Comparing - Logging.

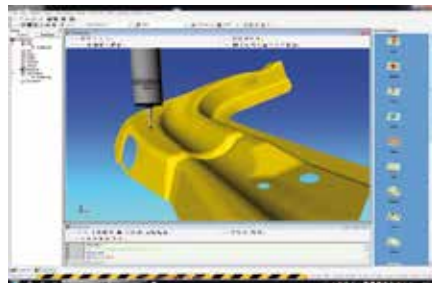




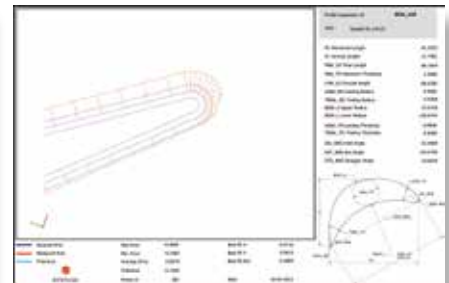
From importing data of various CAD systems to the output of graphically designed measurement reports – everything is included. The “tactile scanning” option opens up further possibilities.



The definition of the elements to be measured already presents a proposal for the measuring strategy.



Measuring for quality control runs automatically.



Any deviations from target settings are visible at a glance.

The results are recorded and stored as evidence.

#### ARCOCAD

Full-featured software for quality control

#### DATA IMPORT

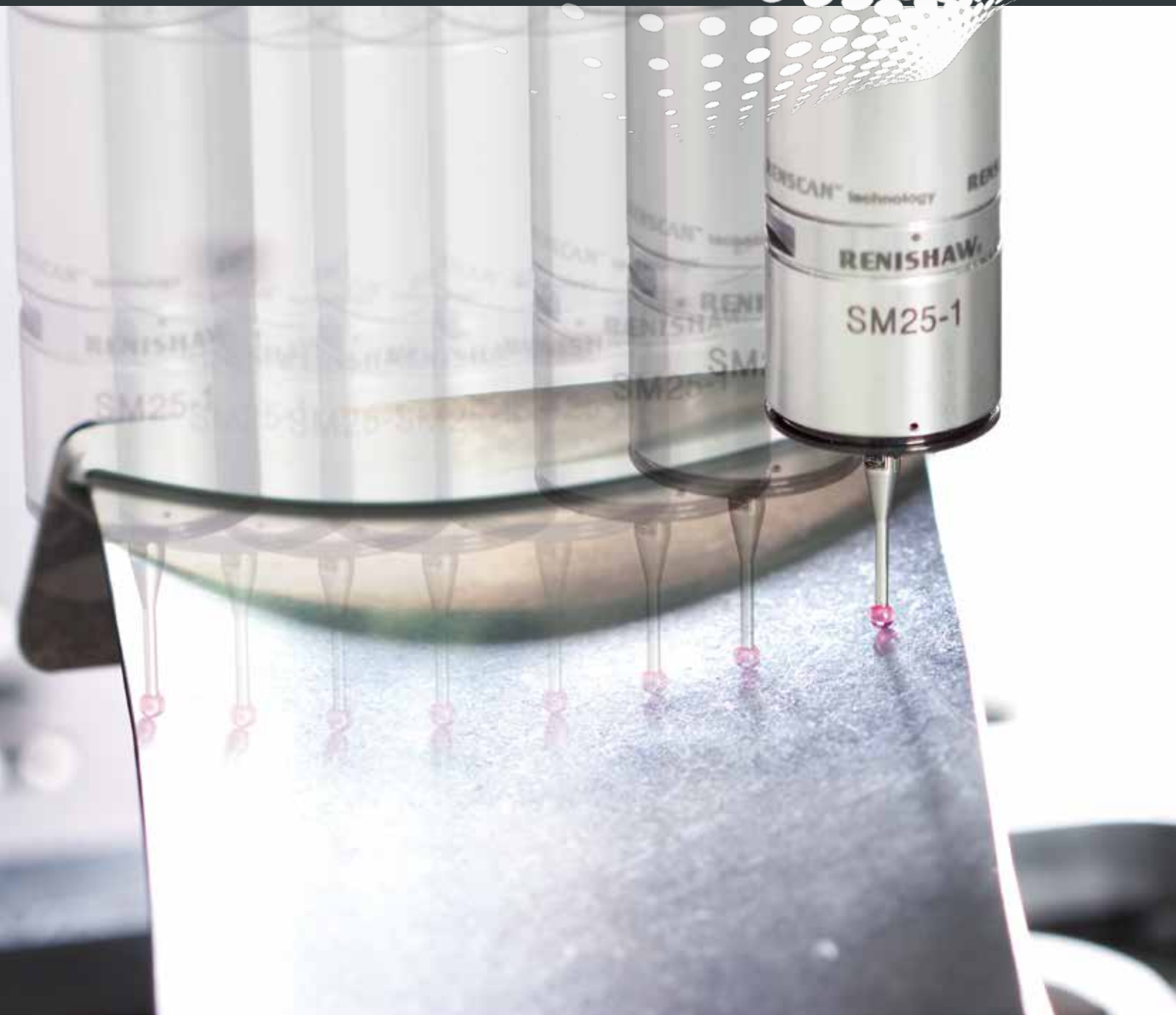
Catia, UG, Pro Eng,  
Solid Works, VDA, STEP

#### MEASURING POINTS

Direct definition in the CAD  
file with “Teach and Learn”

# Scanning with quality

High-precision shape and profile capturing.





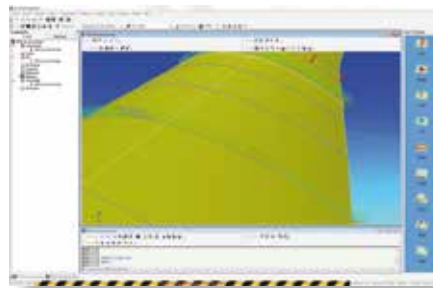


During “normal measuring”, only individual points are measured. With scanning, a large amount of data is recorded. This generates much more detailed information about the form and shape of the workpiece.

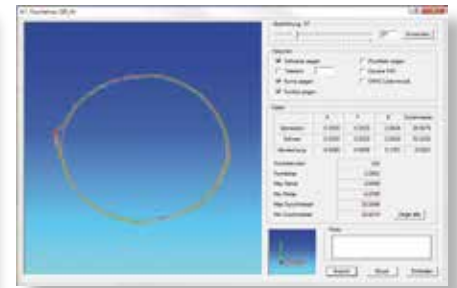
Scanning is used when free-form geometries are to be checked or when complex surfaces must be within certain tolerances.



Graphical representation of data points in tactile scanning. The large number of measured points is clearly visible.



The color-coded graphical representation provides an immediate assessment of the dimensional accuracy.



Both the number of measured points and the results of this roundness measurement using scanning are clearly displayed.

#### TACTILE SCANNING

Quick shape and profile capturing

Precise information on dimensional stability

#### PROBES

Automatic change devices

Probes from 20 mm to 400 mm

Optimized working area through the integration of the probe in the quill

Personal consulting

EROWA scanning solutions are configured individually to meet your needs. We are happy to advise you in order for you to find the optimal procedures.

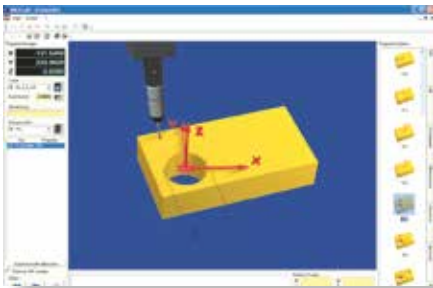
# Presetting with quality

With PreSoft, operators are efficient even without knowledge of 3D measurement technology.

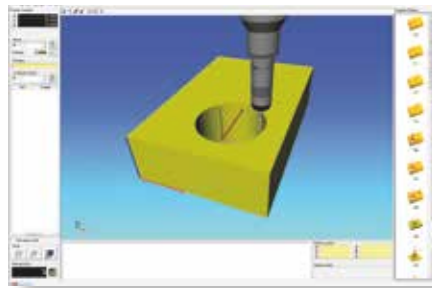




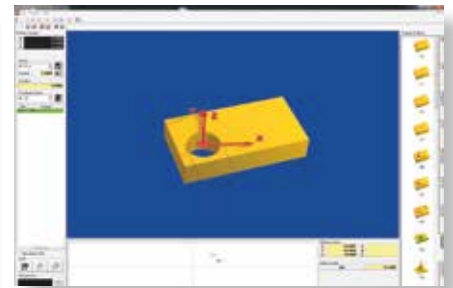
Presetting is one of the key process steps for the automation of individual parts and small series. The process should remain as simple as possible. The catalog of PreSet macros can be extended by custom programs.



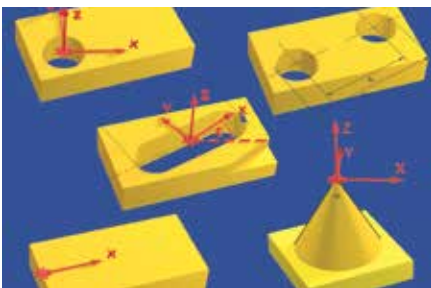
Select PreSet macro – start measurement.



The animated data points guide the operator during the execution of macros.



The determined preset data are transmitted directly to the control system.



More than 100 measuring macros are already included. Select, approach – done!

#### **CALIBRATION**

Quick and reliable via a graphical user interface

#### **DATA TRANSFER**

Automatic offset data transfer to the process control system

#### **MANY EXISTING MACROS**

Create your own PreSet macros in no time



# Everything from one single source

You benefit from 25 years of experience in process automation. Know-how which we also apply to quality assurance.







We are happy to advise you personally.  
Bring us your workpiece –  
together we will develop measuring strategies or special procedures.  
Tricky tasks are our specialty – try us.



We offer operator training for quality measurements on site or in one of the EROWA Training Centers.



Measuring equipment must be recalibrated at regular intervals. Our specialists will handle this wherever your machine may be located.



We ensure technical support and troubleshooting worldwide. Our service team is also available by phone.



#### CONSULTING

For optimal integration of the measuring machine into the manufacturing process

#### MAINTENANCE

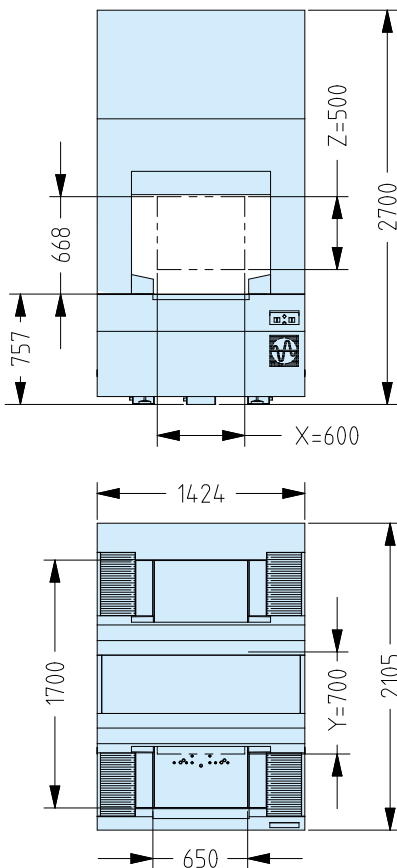
Regular calibration according to ISO 10360-2:2001 by our specialists

#### FLEXIBLE CUSTOMIZATION

We also develop special procedures and applications for you

# Detailed quality

The EROWA CMM Qi is a CNC measuring machine with 10 key benefits.



## TECHNICAL DETAILS

X-axis travel	600 mm
Y-axis travel	700 mm
Z-axis travel	500 mm
Maximum distance between table and probe holder (without probe)	668 mm
Maximum distance between the columns at table height	650 mm
Usable area of the granite slab (with EROWA hole pattern)	650 x 1700 mm
Resolution	0.0001 mm
Measurement uncertainty in the volume (according to ISO 10360/2)	1.5 $\mu\text{m}$ + L/500 (L in mm)

## MACHINE DIMENSIONS

Dimensions L x W x H	2100 x 1500 x 2700 mm
Maximum loadable workpiece weight	650 kg
Machine weight (no load)	2350 kg
Ambient conditions	19°-21°C Delta 0.5°C/h

## SOFTWARE

Presetting software	PreSoft XP by EROWA
Measuring software	ARCO CAD

**01 | Rails**

High-precision rails with optical read heads ensure excellent results.

**02 | Probe systems**

High-precision measuring probe systems for maximum flexibility.

**03 | Centric drives**

Centric drives for symmetric movements.

**04 | Symmetric machine layout**

Special aluminum casting for excellent shape and temperature stability as well as guide rails made from granite.

**05 | Software**

The EROWA PreSoft XP and the ARCO CAD software make it easy to capture presetting data and to carry out quality measurements with high precision and traceability.

**06 | Various workholding systems**

Depending on your requirements, one or more EROWA tooling systems can be mounted to the solid table. All necessary holes already exist. FrameSet, MTS, UPC or ITS – all variants are supported.

**07 | Integrated operation**

Already prepared for the control of different workholding systems.

**08 | Joystick control**

Optimal operation for accurate measurements. One control lever for all axes. An optional wireless joystick is available.

**09 | Natural granite**

The solid granite slab and the specially cast portal provide the basis for the precision.

**10 | Closed enclosure**

Controlled air circulation for best conditions around the X and Z axes.

# The next step

Important things need to be planned. And your next step is certainly among the important things. For it is your start into a new, efficient era. We are pleased to be with you on the way. As consultants, in practice. For you to know at all times what you're engaging in. The next EROWA branch office is not far – **take the step.**



## USA

EROWA Technology, Inc.  
North American Headquarters  
2535 South Clearbrook Drive  
Arlington Heights, IL 60005  
USA  
Tel. 847 290 0295  
Fax 847 290 0298  
e-mail: [info@erowa.com](mailto:info@erowa.com)  
[www.erowa.com](http://www.erowa.com)

## Italy

EROWA Tecnologie S.r.l.  
**Sede Legale e Amministrativa:**  
Via Alfieri Maserati 48  
IT-10095 Grugliasco (TO)  
Italy  
Tel. 011 9664873  
Fax 011 9664875  
[info@erowa.it](mailto:info@erowa.it)  
[www.erowa.com](http://www.erowa.com)

Unità di Treviso:  
Via Leonardo Da Vinci 8  
IT-31020 Villorba (TV)  
Italy  
Tel. 0422 1627132

## Singapore

EROWA South East Asia Pte. Ltd.  
56 Kallang Pudding Road  
#06-02, HH@Kallang  
Singapore 349328  
Singapore  
Tel. 65 6547 4339  
Fax 65 6547 4249  
[sales.singapore@erowa.com](mailto:sales.singapore@erowa.com)  
[www.erowa.com](http://www.erowa.com)

## Japan

EROWA Nippon Ltd.  
Sibadaimon Sasano Bldg.  
2-6-4, Sibadaimon, Minato-ku  
105-0012 Tokyo  
Japan  
Tel. 03 3437 0331  
Fax 03 3437 0353  
[info@erowa.co.jp](mailto:info@erowa.co.jp)  
[www.erowa.com](http://www.erowa.com)

## Switzerland

EROWA AG  
Knutwilerstrasse 3  
CH-6233 Büron  
Switzerland  
Tel. 041 935 11 11  
Fax 041 935 12 13  
[info@erowa.com](mailto:info@erowa.com)  
[www.erowa.com](http://www.erowa.com)

## France

EROWA Distribution France Sarl  
PAE Les Glaisins  
12, rue du Bulloz  
FR-74940 Annecy-le-Vieux  
France  
Tel. 4 50 64 03 96  
Fax 4 50 64 03 49  
[erowa.france@erowa.com](mailto:erowa.france@erowa.com)  
[www.erowa.fr](http://www.erowa.fr)

## Spain

EROWA Technology Ibérica S.L.  
c/Via Trajana 50-56, Nave 18  
E-08020 Barcelona  
Spain  
Tel. 093 265 51 77  
Fax 093 244 03 14  
[erowa.iberica.info@erowa.com](mailto:erowa.iberica.info@erowa.com)  
[www.erowa.com](http://www.erowa.com)

## China

EROWA Technology (Shanghai) Co., Ltd.  
G/F, No. 24 Factory Building House  
69 Gui Qing Road (Caohejing Hi-tech Park)  
Shanghai 200233, PRC  
China  
Tel. 021 6485 5028  
Fax 021 6485 0119  
[info@erowa.cn](mailto:info@erowa.cn)  
[www.erowa.com](http://www.erowa.com)

## Germany

EROWA System Technologien GmbH  
Gewerbegebiet Schwadernmühle  
Roßendorfer Straße 1  
DE-90556 Cadolzburg/Nbg  
Germany  
Tel. 09103 7900-0  
Fax 09103 7900-10  
[info@erowa.de](mailto:info@erowa.de)  
[www.erowa.de](http://www.erowa.de)

## Scandinavia

EROWA Technology Scandinavia A/S  
Fasanvej 2  
DK-5863 Ferritslev Fyn  
Denmark  
Tel. 65 98 26 00  
Fax 65 98 26 06  
[info.scandinavia@erowa.com](mailto:info.scandinavia@erowa.com)  
[www.erowa.com](http://www.erowa.com)

## Eastern Europe

EROWA Technology Sp. z o.o.  
Eastern Europe  
ul. Spółdzielcza 37-39  
55-080 Kąty Wrocławskie  
Poland  
Tel. 71 363 5650  
Fax 71 363 4970  
[info@erowa.com.pl](mailto:info@erowa.com.pl)  
[www.erowa.com](http://www.erowa.com)

## India

EROWA Technology (India) Private Limited  
No: 6-3-1191/6, Brij Tarang Building  
Unit No-3F, 3rd Floor, Greenlands, Begumpet,  
Hyderabad 500016 (Telangana)  
India  
Tel. 040 4013 3639  
Fax 040 4013 3630  
[sales.india@erowa.com](mailto:sales.india@erowa.com)  
[www.erowa.com](http://www.erowa.com)

