rittmeyer
KNOW-HOW
FROM EXPERIENCE

RITOP®

The Process Control System for Water and Energy Management

OPENNESS • FLEXIBILITY • CONTINUITY •
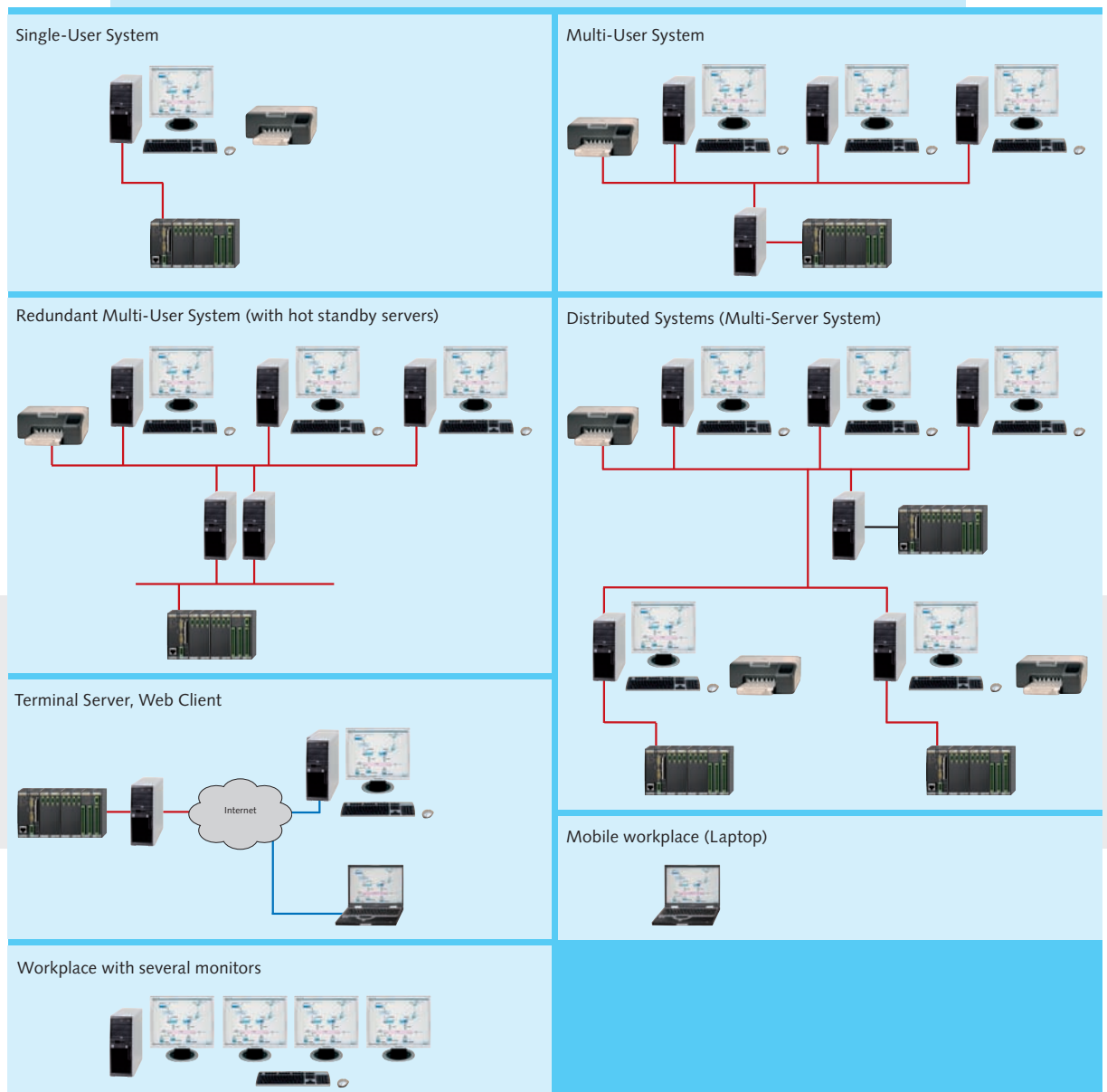INTERNET CONNECTION • INDUSTRY PACKAGES

Tailor-made solutions – for today and tomorrow

The RITOP process control system is part of the instrumentation and control technology from Rittmeyer. It exchanges process data with the automation level, for example with the RIFLEX M1 automation and remote control system. The process conditions are presented on the one hand in process images and, on the other hand in event lists, alarm lists and multiple trends. Operation of the objects is done via object panels that are called up from process images.

There is the possibility of Internet connection whereby the visualisation and operation can also be done remotely. The data is archived and can be presented in different reports – in tabular and graphical form. Engineering is supported by efficient tools whereby comprehensive industry packages are available.

System Configurations

Thanks to the modular construction, RITOP is the right choice for all plant sizes – whether single user, multi-user or mobile systems. The desired functionality as well as the requirements on availability are configured customer-specific. The spectrum of solutions ranges from turnkey systems up to software licences for existing hardware configurations. RITOP solutions can be adapted to new requirements at any time. This protects the investment today and in the future.

Single-User System

Multi-User System

Redundant Multi-User System (with hot standby servers)

Distributed Systems (Multi-Server System)

Terminal Server, Web Client

Internet

Mobile workplace (Laptop)

Workplace with several monitors

Keep the overview – faster intervention

With a clear, requirement orientated flow of information, RITOP guarantees simple and safe process guidance. Changes and faults are visualised automatically and object specifically and allow the operator simple and speedy intervention. The ability to immediately react to condition changes means the ability to intervene in the process according to the situation, therefore saving unnecessary costs.
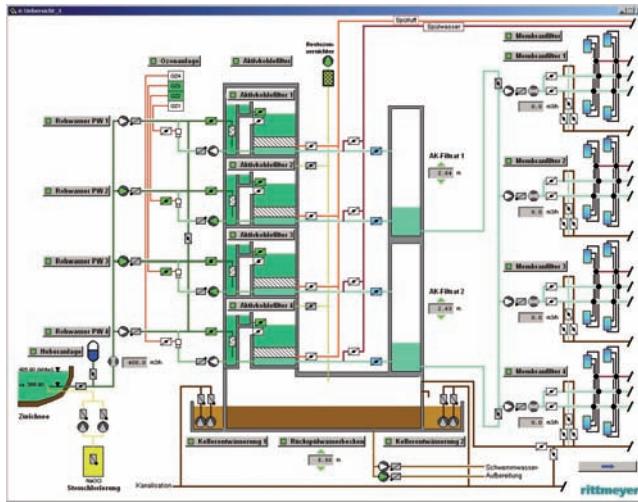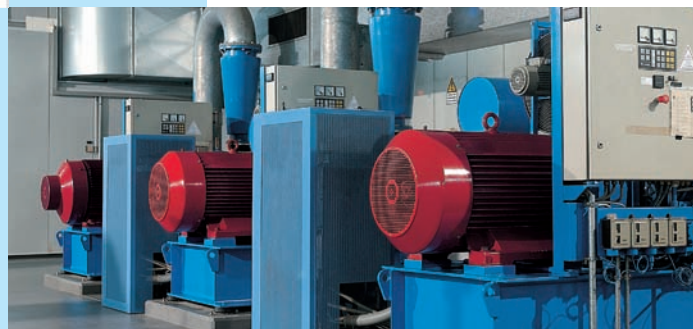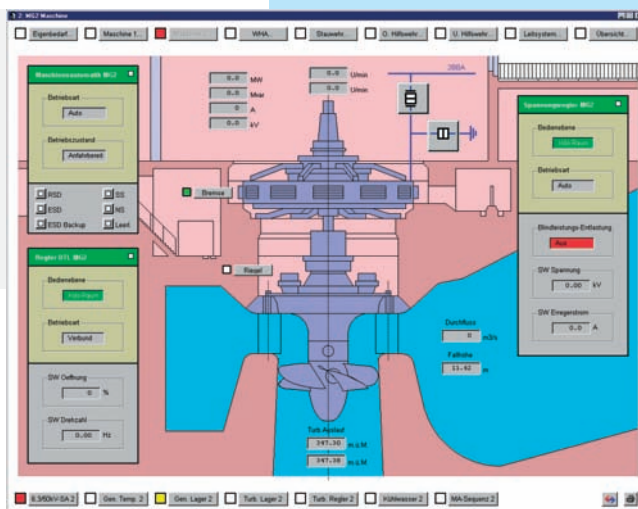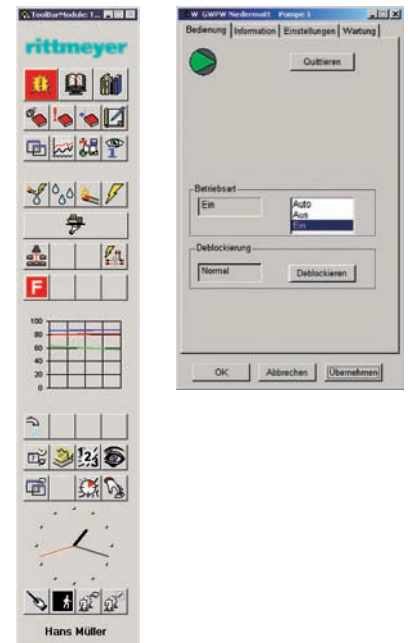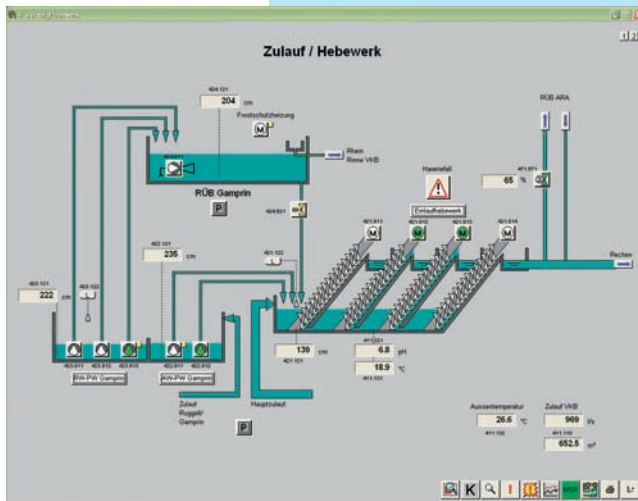
Visualisation
– Any process image hierarchy
– Flexible switchover possibilities between process images
– Zooming, panning, decluttering

Object Orientated Operation
– Individually configurable toolbar for general operation
– Operation of objects via object panels
– Various operator authorisations

Comprehensive archive – clearly presented

The continuously occurring process data are archived for later visualisation and evaluation. Indications, alarms, commands and set values can be presented in the form of lists whereby various selection possibilities are available.

Event List, Alarm List
– Flexible selection menus with
  predefined configurations
– Time selection (in the past)
– Comprehensive filtering
– Sorting
– Event appropriate call-up of
  process images

Multi-trending
– Several time ranges (hour .. year)
– Recording function
– Zoom, scrolling per curve
– Lasso zoom
– Excel export
– Simple parameterisation

Balancing, Compression
– Total, average
– Minimum, maximum
– Further functions

Archiving
Typical compression stages:
– 3-minute, 15-minute, hourly, daily,
  weekly, monthly values
– Further selectable compression stages

Manual correction in the archive
– Possible in every compression stage
– Billing to the higher compression stages

Data import to the archive
– Data produced offline can be imported
  into the archive
– Possible in every compression stage
– Billing to the higher compression stages

Reports with Microsoft Excel
Standard Reports:
– Daily report with 15-minute, hourly values
– Weekly, monthly, yearly reports with daily values
– Yearly report with monthly or weekly values
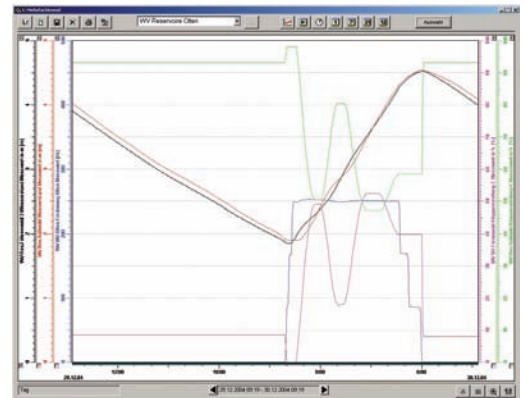
Industry specific reports such as:
– Normal daily, nightly consumption
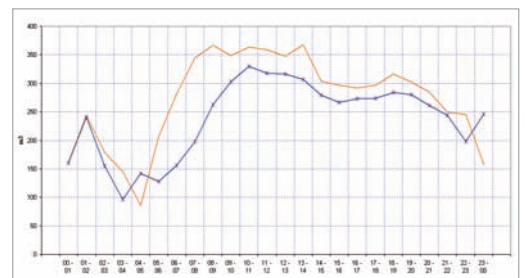– Water level observations

Further individual plant reports

Further processing of the reports
– Automatic printout
– Automatic sending of reports per email
– Saving as HTML for display in Intranet or Internet

Secure access – any time, anywhere

With RITOP, the remote monitoring of plants and systems is simplified considerably because, via on-line connections, alarm indications are immediately available per SMS, voice announcements, etc. Over the local network or Internet the system can be immediately accessed, the fault analysed and rectified. Where indicated or desired, running operation is reproduced for the public on a Website.

Internet Solutions

RITOP Operation via Terminal Server:
– Browser operation with the same
  operating comfort as at the control
  centre
– High performance
– VPN for high security
– Central software administration

RITOP content on public Website:
– Provision of information for the
  public such as process images, trends
  and graphics, protocols and reports
– Read only authorisation
– High security
– Unlimited number of users

RITOP Email:
Selected information sent to system partners,
bulk purchasers, public offices such as reports, etc.

Networking and Security

Continuous networking of systems brings numerous
advantages for operator, manager, technician and the public.
However networking also sets higher demands on security
in order to ensure the integrity and availability of the plant.
With the RITOP web security concept, secure operation is
possible despite networking via Internet.
Elements of the security concept:
– Firewall
– Virtual Private Network (VPN)
– Virus protection
– Access authorisation

Standard PC
with web browser

Internet

RITOP
Server

Terminal
Server

Laptop
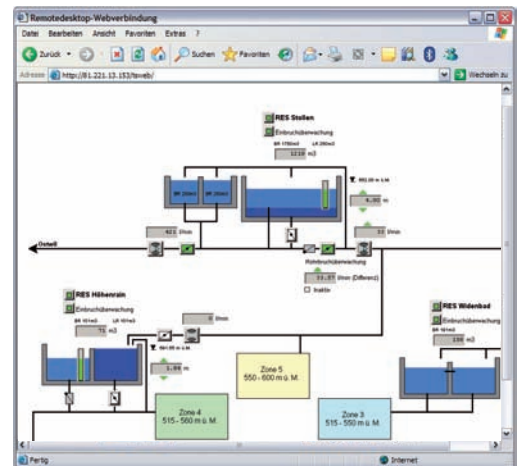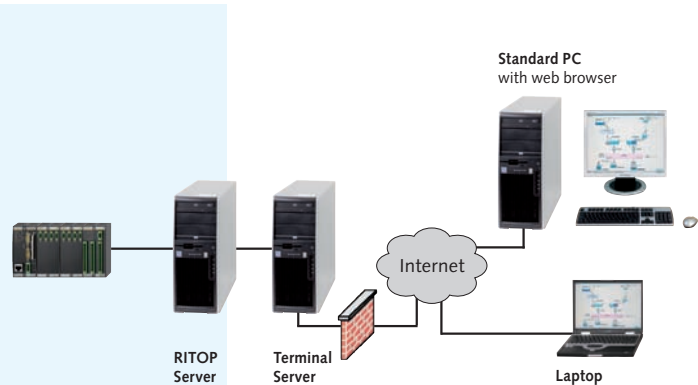
RITOP web server with full operation
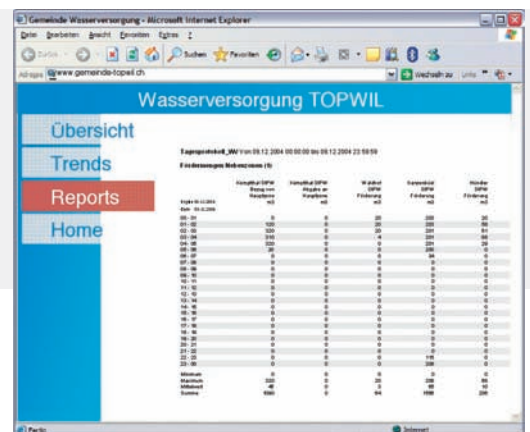
RITOP content on public site

Experience and expertise – utilised in practice

Rittmeyer has many years of specialised competence and experience in the processes for the various industries as well as in the planning, realisation and commissioning of the control systems. This know-how is included in the RITOP industry packages. These industry packages are based on the various basic functions. The solutions are flexibly adaptable to the respective tasks whereby standardisation guarantees optimum and error-free functionality.

Rittmeyer has fully developed industry packages that have been successfully used in practice for:

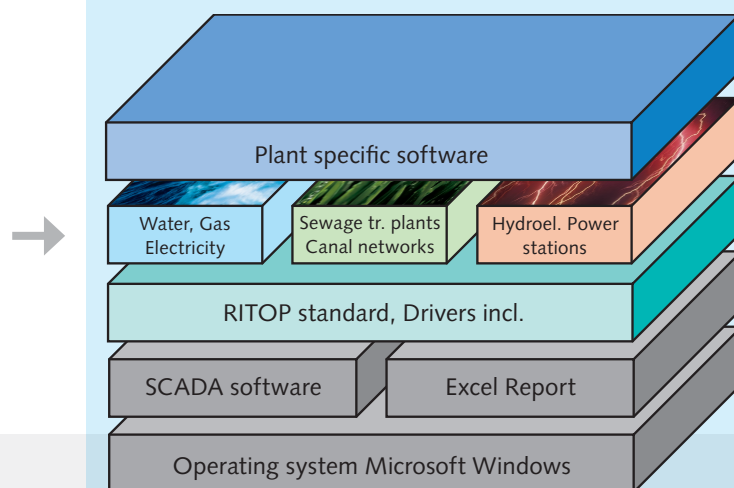|	
Water, Energy:	Water supply
	Gas supply
	Electricity supply
Process and Environmental Engineering:	Sewage treatment plants
	Canal networks
	Incineration plants
Hydraulic Power Stations:	Run-of-river power stations
	Storage power stations
	Substations
	Dams

Plant specific software

Water, Gas Electricity

Sewage tr. plants Canal networks

Hydroel. Power stations

RITOP standard, Drivers incl.

SCADA software

Excel Report

Operating system Microsoft Windows

Rittmeyer Industry Packages
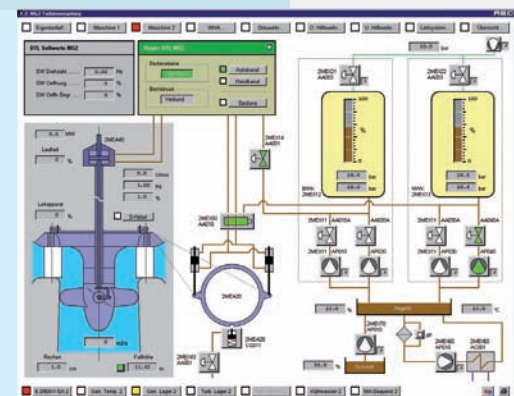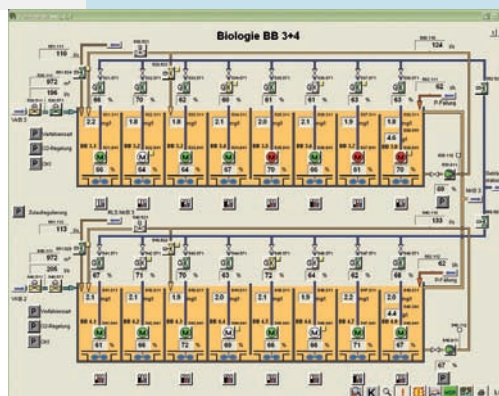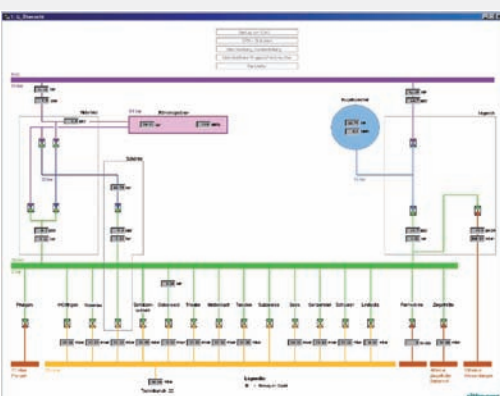
Engineering

Object orientated engineering – secure, fast, error-free

The existing RITOP industry toolboxes proven in practice enable easy object-orientated engineering and offer continuity to the automation level. Even complex systems can therefore be quickly parameterised without error – secure, simple and absolutely efficient!

Objects
Examples: Pumps, measuring points, valves, …
consisting of:
1. Object panel
2. Symbol in the process image
3. Datapoint structure
4. Macros at the automation level

Industry Packages
Object types are available at the levels:
– RITOP standard
– Industry packages
– Plant specific software

Generating the Objects
Automated production of objects
by means of signal lists and object types
(example parameterisation)
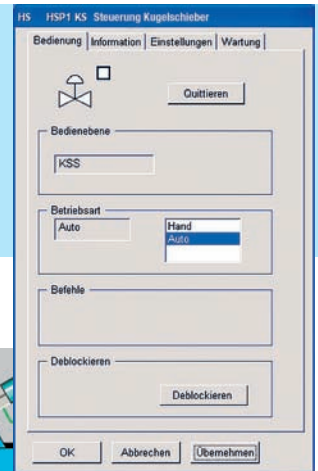Can be done on-line

Further Tools
Comprehensive toolbox for efficient
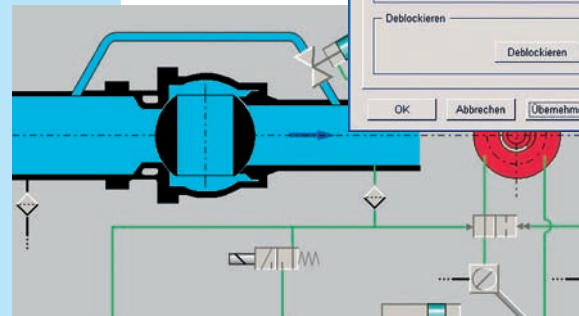engineering of RITOP projects

Signal List Tool
Database for definition of the information
exchange between the automation level
and RITOP based on Microsoft Excel.
Continuity with the automation level.

1.

2.

3.

4.

Supplementary Technical Information

System Software

Operating System	Microsoft Windows XP, Microsoft Windows Server 2003
Database	Process data: RAIMA
	Historical data: Flat File System
Time integration	Resolution 1 ms
	If time integration already in automation system: Take-over
Time Synch.	DCF 77, GPS, SNTP
Languages	Complete operation of the plant in:
	German, English, French, Italian, Spanish
	Further languages possible
	On-line switchover

Database Connections

Relational Databases	Access, Oracle, SQL Server

Open Interfaces

Standards	IEC 60870-5-101 (Master), IEC 60870-5-104
	Modbus/TCP, Profibus
	Siemens Simatic S5/S7, further programmable controller protocols
Rittmeyer Standards	RIFLEX M1 via Process LAN IEC 60870-5-104 and serial
	Siemens Simatic S7 via Rittmeyer Automation Protocol (RAP),
	based on Industrial Ethernet

Five convincing arguments in favour of RITOP:

Openness
Simple connection of different automation, measuring and information systems by use of communication and database standards

Flexibility
Perfect integration into modern IT infrastructures thanks to the distributed system architecture based on TCP/IP

Continuity
Comprehensive and object-orientated engineering from the automation level up to RITOP

Internet Connection
The most modern communication with the outside world via the local network or Internet with standard web browser, email functionality and reproduction on web sites

Industry Packages
Fully developed industry packages successfully used in practice for water and energy management

SCHWEIZ (Headquarters)
Rittmeyer AG
Inwilerriedstrasse 57
Postfach 464
CH-6341 Baar
Phone   +41 41 767 10 00
Fax   +41 41 767 10 70
Email info@rittmeyer.com

Subsidiary companies in
Stuttgart (Germany)
Vienna (Austria)
Bergamo (Italy)
Madrid (Spain)

Lyon (France)
Zagreb (Croatia)
Bratislava (Slovakia)
Rome (USA)

Your contact:

www.rittmeyer.com