

THE CONCEPT

Roughness Measurement
quick.easy.flexible.



ROUGHNESS MEASUREMENT SYSTEM

Made in Switzerland

DIAVITE DH-8 & COMPACT II & DH-8/App

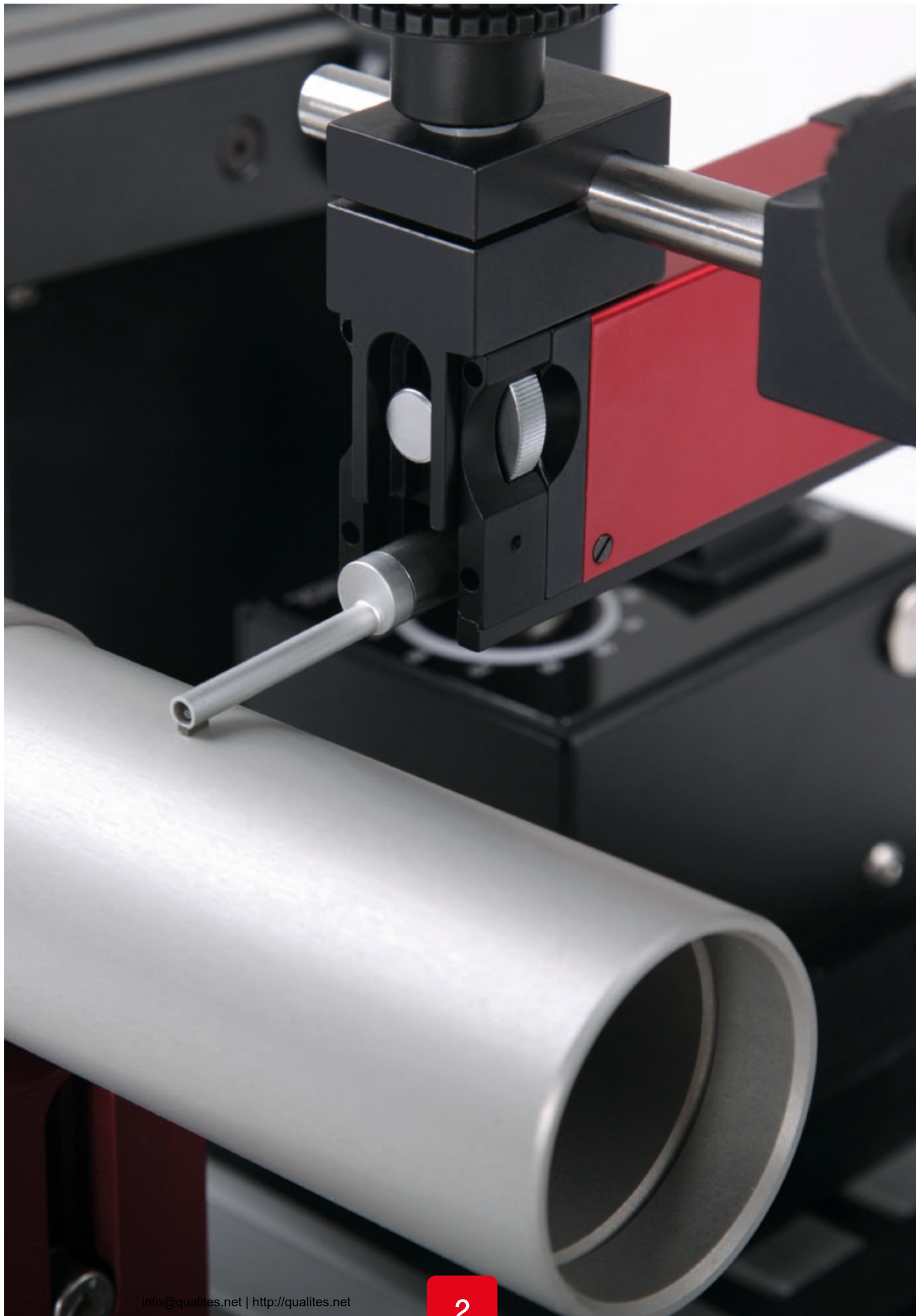


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DIAVITE AG

Your Partner

For over 64 years, DIAVITE AG have been producing tactile and optical roughness measuring instruments for their customers. Our business is located in Bülach, Switzerland, just outside Zurich Airport. Our team of 7 employees produces high quality, Swiss-made products to meet all of your workshop and measuring room needs. We are the experts when it comes to roughness measurement.

More than 800 business partners support the sale of DIAVITE products, and offer high-quality customer service to boot.

Our distribution network continues to grow all over the world. Some of our partners even have their own warehouses on site.

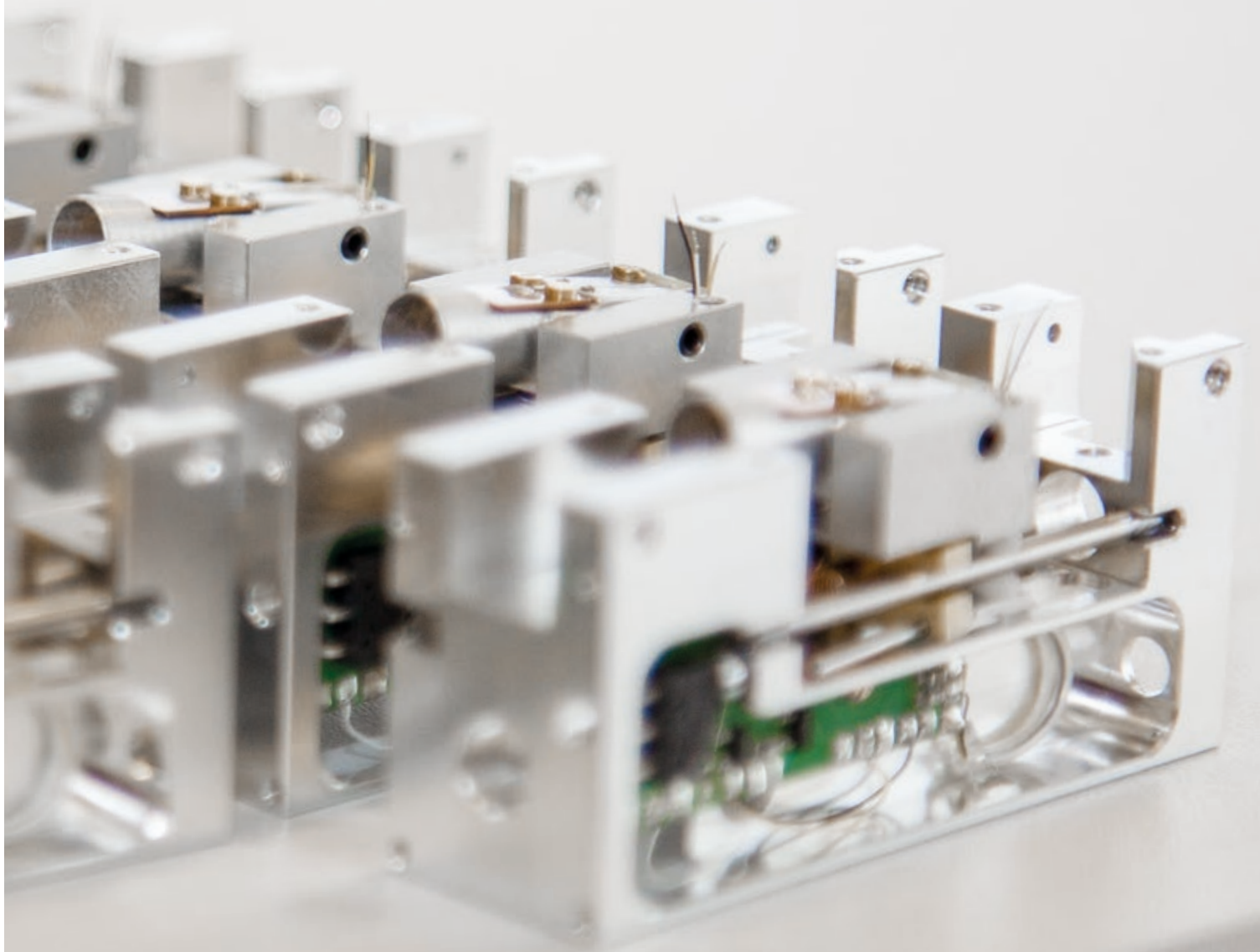
Our company philosophy includes the production of special instruments. We develop these customer-specific applications together with our customers.

Of course, we also offer professional customer service for all of our DIAVITE products. We also repair, inspect and test older roughness measuring instruments and tracers.

PEOPLE. EXPERIENCE. TRADITION.



CUSTOMISED DEVELOPMENT



Our knowledge is your advantage

DIAVITE engineering

Roughness measuring instruments made by DIAVITE AG have been THE STANDARD for the surface measurement needs of many companies for a long time. Each new measuring task is analysed for feasibility. What's more, we develop solutions together with the customer tailored to their specific needs. This includes designing customised tracers, equipment and software modifications.

Our motor unit and measuring tracers together are the centrepiece of all of DIAVITE's own measuring instruments. They determine how precise a measurement is. Our wide range of tracers that are made for various

tasks, some of which seemed impossible until now, is the result of decades of experience. The integrated reference plane in the motor unit makes precise measurements possible even with tracers without skid, thus expanding the potential applications of the instruments. Complicated applications, in particular, require simple and user-friendly tracers and analysis instruments.

Roughness measurements and their specific requirements are never too complicated for the experts at DIAVITE AG.

DH-8 takes on every challenge

Our versatile measuring instrument can handle any requirement in the workshop or measuring room. DH-8 tackles everything, from simple roughness measurements without accessories directly on the machine, to measurements in the measuring room, using stands, special tracers and other ac-

cessories, and this includes contour detection. Optional PC programmes help DH-8 to easily meet the most challenging requirements. The DIAVITE DH-8 offers the most flexibility when assessing surface finishes. What's more, it can be expanded to include contour and optical measurements.

MEASURING, DISPLAYING AND PRINTING

Measuring and display device with a graphic display and 7 function keys

ROUGHNESS MEASUREMENT

- › High-precision roughness measurement instrument for universal use in workshops and measuring rooms
- › VH motor unit for tracer with skid or VHF motor unit for tracers with and without skid
- › Automatic calibration
- › Memory for up to 50 measurements
- › 5 measuring lengths, adjustable between 0.5 and 15.0 mm
- › Adjustable measurement speed
- › Calibration of up to 8 tracers
- › 8 measurement programmes
- › Many different tracers for almost all measurement tasks, including customised solutions
- › Simple, multilingual menu guidance
- › Tolerance display for exceeded measurement values
- › Key lock for Lt, Lc and parameter selection R to protect against handling errors
- › USB port for further data processing (option: Bluetooth)
- › Accessories for many applications, crucial when working with tracers without skid
- › Integrated accumulator for portable applications

OPTICAL MEASUREMENTS

The DIAVITE DH-8 permits contactless surface measurements.

Features:

- › Measurement range X: from 0.5 to 15 mm
- › Measurement range Z: max. 400 µm



MEASURING CONTOURS

The DIAVITE DH-8 permits accurate contour measurement. This requires a special measuring tracer and software.

Features:

- › Measurement range X: from 0.5 to 15.0 mm
- › Measurement range Z: max. 3 mm
- › Scanning angle: downward flanks to 88°, upward to 77°

TECHNICAL DATA	DH-8
Measurement variables	<ul style="list-style-type: none"> › ISO/DIN: Ra, Rz (DIN), Rmax, R3z, Rt, Rq (RMS), Rk, Rp, Rv, Rpk, Rvk, MR1, MR2, Rpc, C1, C2, contact ratio Rmr, C0, Cz › JIS: Ra (JIS), Rz (JIS) › ISO 12085: R, AR, Rx › additional measurement values via PC software (option)
Measurement ranges	<ul style="list-style-type: none"> › Ra, Rq: 0 – 20.00 µm 0 – 800 µin › All other measurement values: 0 – 350.0 µm 0 – 1400 µin
Display	<ul style="list-style-type: none"> › Ra, Rq: 0.001 µm › All other measurement values: 0.01 µm
Output	USB port / Option: Bluetooth
Humidity	max. 80 %, non-condensing
Languages	German, English, French, Italian, Spanish, Polish
Tracing system	Analogue Hall effect technology with a high-linearity output signal
Tracer tip	Diamond tip: 5 µm, 90° (standard) or 2 µm, 60° (option)
Tracing skid radius	25 mm (standard tracer)
Static measuring force	Tip < 0.5 mN
Static tracking force	Skid < 0.15 N
Tracing speed	0.25, 0.5 and 1.0 mm/s
Reverse speed	1.0 mm/s
Motor unit	VH (tracer with skid) or VHF (tracers with and without skid)*
Device dimensions (L x W x H)	245 x 130 x 78 mm
Motor unit dimensions	approx. 20 x 33 x 136 mm (with supporting shoe)
SCOPE OF DELIVERY	<ul style="list-style-type: none"> › DIAVITE DH-8 display and printing instrument › VH or VHF motor unit › SH standard tracer › Calibration specimen metal Ra = 3.00 µm › Charger › Connecting cable › USB cable › Screwdriver › Instruction manual and quick guide › Test protocol › Carrying case › DIASOFT Basic software

* An overview of all compatible tracers can be found on pages 18-21

COMPACT II simple and flexible measurement

It's not just a roughness measuring instrument, but also ideal for use in workshops or measuring rooms to easily meet challenging

measuring requirements with optional PC programmes. Compatible accessories help manage anyone's daily measurement tasks.

ROUGHNESS MEASUREMENT

- › Measuring and display instrument with a graphic display and 4 function keys
- › VH motor unit for tracer with skid or VHF motor unit for tracers with and without skid
- › Motor unit can be integrated into the instrument, or connected to it with an adaptor and cable in order to work with measuring stands, or reach those hard-to-reach measuring points
- › Cut-off is permanently connected to the tracing length
- › One variable and three fixed 0.5 – 15 mm measurement lengths
- › Memory for up to 15 measurements
- › Automatic calibration
- › Data output via USB port
- › Data transfer to PC for further processing in optional DIASOFT software
- › Integrated accumulator for portable applications
- › Accuracy as DIAVITE DH-8 thanks to use of same motor unit and same roughness tracer



TECHNICAL DATA	DIAVITE COMPACT II
Measurement variables	<ul style="list-style-type: none"> › ISO/DIN: Ra, Rz (DIN), Rmax, R3z, Rt, Rq (RMS), Rk, Rp, Rv, Rpk, Rvk, MR1, MR2, Rpc, C1, C2, contact ratio Rmr, C0, Cz › JIS: Ra (JIS), Rz (JIS) › ISO 12085: R, AR, Rx › additional measurement values via PC software (option)
Measurement ranges	<ul style="list-style-type: none"> › Ra, Rq: 0 – 20.00 µm 0 – 800 µin › All other measurement values: 0 – 350.0 µm 0 – 1400 µin
Display	<ul style="list-style-type: none"> › Ra, Rq: 0.001 µm › All other measurement values: 0.01 µm
Output	USB port
Humidity	max. 80%, non-condensing
Languages	German, English, French, Italian, Spanish, Polish
Tracing system	Analogue Hall effect technology with a high-linearity output signal
Tracer tip	Diamond tip: 5 µm, 90° (standard) or 2 µm, 60° (optional)
Tracing skid radius	25 mm (standard tracer)
Static measuring force	Tip < 0.5 mN
Static tracking force	Skid < 0.15 N
Tracing speed	0.5 mm/s
Reverse speed	1.0 mm/s
Motor unit	VH (tracer with skid) or VHF (tracers with and without skid)*
Device dimensions (L x W x H)	140 x 75 x 60 mm
Motor unit dimensions	approx. 20 x 33 x 136 mm (with supporting shoe)
SCOPE OF DELIVERY	<ul style="list-style-type: none"> › DIAVITE COMPACT II display instrument › VH or VHF motor unit › SH standard tracer › Adaptor with connection cable › Calibration specimen metal Ra = 3.00 µm › Charger › USB cable › Screwdriver › Instruction manual and quick guide › Test protocol › Carrying case › DIASOFT Basic software

* An overview of all compatible tracers can be found on pages 18-21

DH-8/App and every Windows computer becomes a roughness measuring instrument

DIAVITE DH-8/App is best suited for permanent measuring stations.

Depending on the application, the DIAVITE DH-8/App can be connected to any tablet or PC. The software is easy to install. This way, you can transform any computer into a roughness measuring instrument. Take ad-

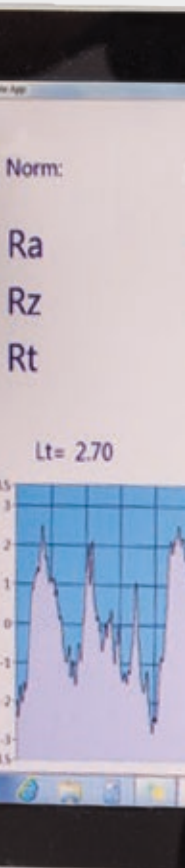
vantage of its new available options for data transfer, measurement storage and documentation, and so much more.

The App can be installed on several computers. Simply connect the analysis unit to the computer using a USB cable.

ROUGHNESS MEASUREMENT

- › High-precision roughness measurement instrument for universal use in workshops and measuring rooms
- › VH motor unit for tracer with skid, or VHF motor unit for tracers with and without skid
- › Automatic calibration
- › 5 measuring lengths, adjustable between 0.5 and 15.0 mm
- › Adjustable measurement speed
- › Calibration of up to 8 tracers
- › Measurement programmes
- › Saving of measurement conditions, including test report (format: pdf, csv, txt)
- › Many different tracers for almost every measurement task, including customised solutions
- › Simple and multilingual menu guidance
- › Tolerance display for exceeded measurement values
- › Accessories for many applications, crucial when working with tracers without skid





TECHNICAL DATA	DH-8/App
Measurement variables	<ul style="list-style-type: none"> › ISO/DIN: Ra, Rz (DIN), Rmax, R3z, Rt, Rq (RMS), Rk, Rp, Rv, Rpk, Rvk, MR1, MR2, Rpc, C1, C2, contact ratio Rmr, C0, Cz, V0, Rdg, RL0 › JIS: Ra (JIS), Rz (JIS) › ISO 12085: R, AR, Rx › additional measurement values via PC software Diasoft (optional)
Measurement ranges	<ul style="list-style-type: none"> › Ra, Rq: 0 – 20.00 µm 0 – 800 µin › All other measurement values: 0 – 350.0 µm 0 – 1400 µin
Display	<ul style="list-style-type: none"> › Ra, Rq: 0.001 µm › All other measurement values: 0.01 µm
Output	USB port
Humidity	max. 80%, non-condensing
Languages	German, English, French, Italian, Spanish, Polish
Tracing system	Analogue Hall-effect technology, with a high-linearity output signal
Tracer tip	Diamond tip: 5 µm, 90° (standard) or 2 µm, 60° (option)
Tracing skid radius	25 mm (standard tracer)
Static measuring force	Tip < 0.5 mN
Static tracking force	Skid < 0.15 N
Tracing speed	0.25, 0.5 and 1.0 mm/s
Reverse speed	1.0 mm/s
Motor unit	VH (tracer with skid) or VHF (tracers with and without skid)*
Device dimensions (L x W x H)	145 x 80 x 30 mm
Motor unit dimensions	approx. 20 x 33 x 136 mm (with supporting shoe)
SCOPE OF DELIVERY	<ul style="list-style-type: none"> › DIAVITE PC-8 › VH or VHF motor unit › SH standard tracer › Calibration specimen metal Ra = 3.00 µm › Charger › Connecting cable › USB cable › Screwdriver › Instruction manual › Test protocol › Carrying case › DIAVITE App

* An overview of all compatible tracers can be found on pages 18-21

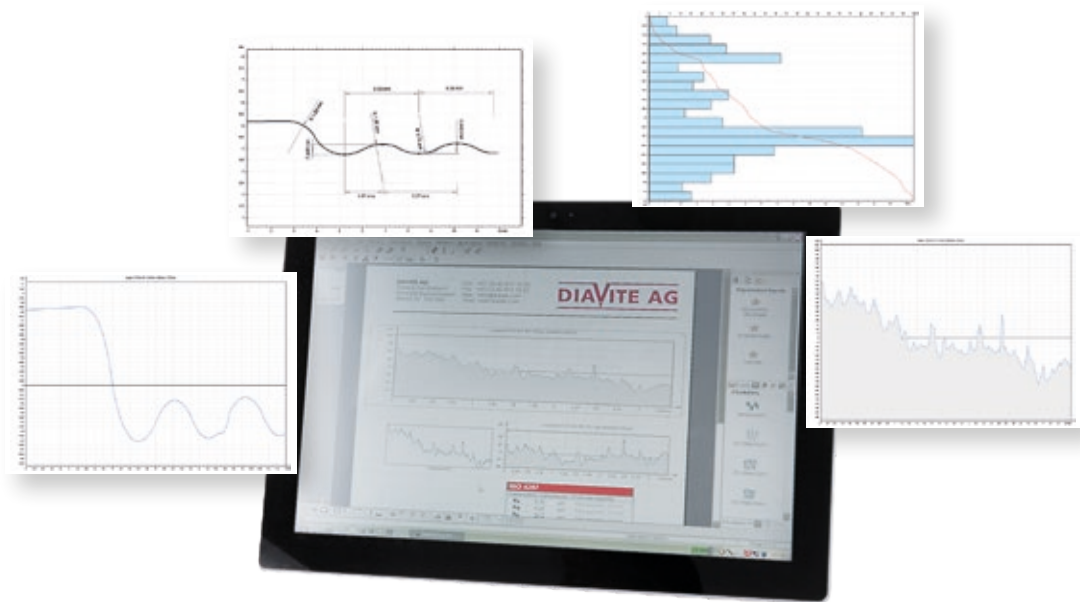


SOFTWARE DIASOFT

roughness measurement with unique attributes

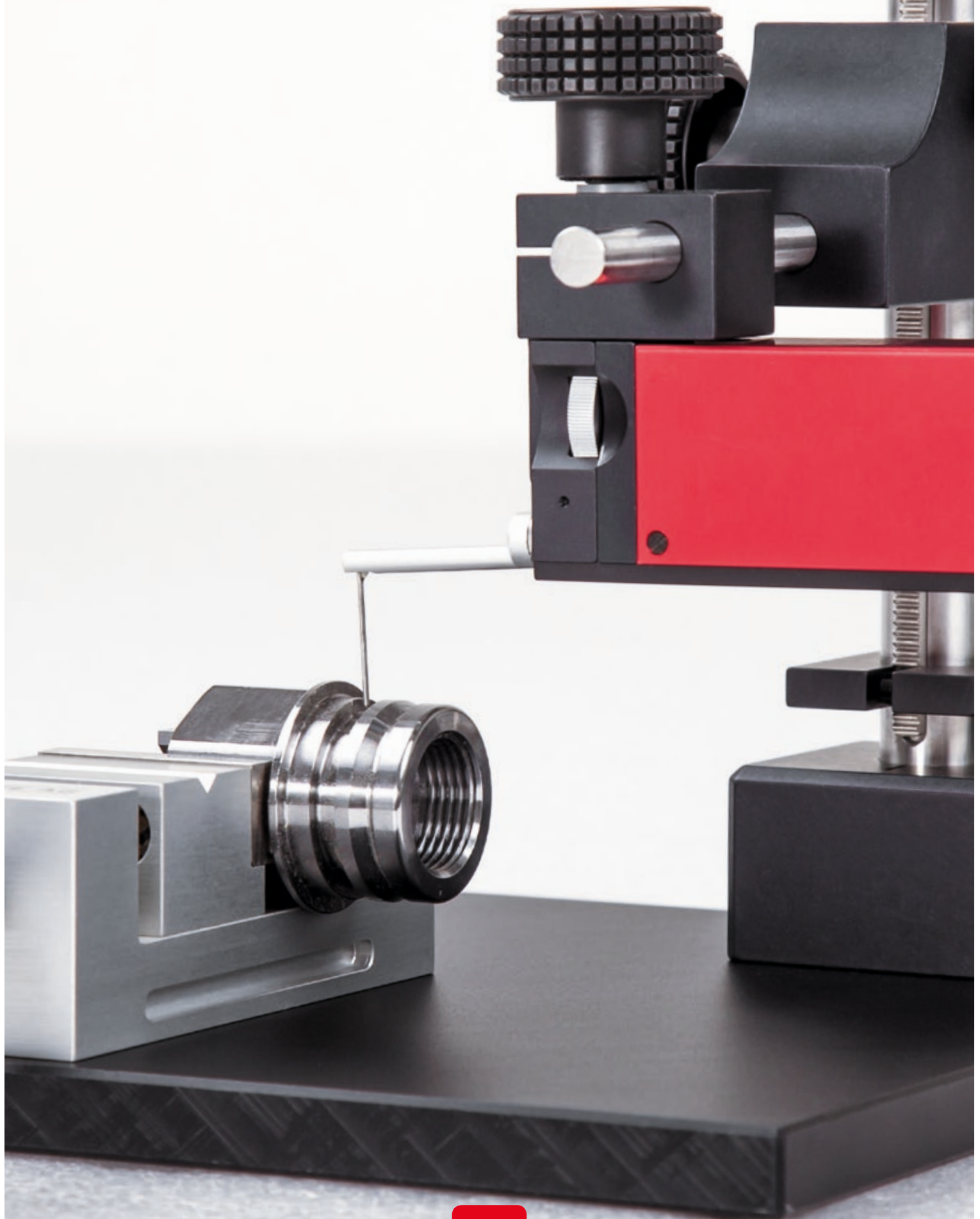
This software expands and enhances what our DIAVITE instruments can do. It can detect more roughness parameters, and save more measurement profiles. These can then be analysed and compared.

DIASOFT software is available in four application-oriented versions. It's easy to install and operate. What's more it's also available as a network-based solution.



SOFTWARE	INCLUDES EXTENSIONS				OPTIONS
	<ul style="list-style-type: none"> › Ra, Rq, Rv, Rp, Rt, Sm, Rsk, Rku, Rz, Rtp, RHTp, RDq, RPe › Roughness curve › Abbott curve 	<ul style="list-style-type: none"> › Waviness and roughness profiles on the same curve › Zoom functions › Symmetry › Profile comparisons 	<ul style="list-style-type: none"> › ISO 12085 (CNOMO) › ISO 13565 (Rk parameter) 	<ul style="list-style-type: none"> › Range of profiles › More functions for a more extensive measurement analysis 	<ul style="list-style-type: none"> › Module: Extended Contour › Module: Basic Contour › Module: Statistics
BASIC The Basic program is included with delivery	x	-	-	-	-
STANDARD	x	x	-	-	x
AUTOMOTIVE	x	x	x	-	x
EXPERT (OPTIC) The full range for professionals	x	x	x	x	x

USER-SPECIFIC



DH-8
VH MOTOR UNIT
VHF MOTOR UNIT

COMPACT II
VH MOTOR UNIT
VHF MOTOR UNIT

DH-8/App
VH MOTOR UNIT
VHF MOTOR UNIT



ONLY FOR
TRACERS WITH SKID
VH MOTOR UNIT



CUSTOMER-SPECIFIC SOLUTIONS ARE AVAILABLE.
ASK OUR SPECIALISTS.

ONE SYSTEM, MULTIPLE OPTIONS

Tracers with and without
skids can be combined
with any device!



The system features analogue Hall effect technology, with a high-linearity output signal, and has been in use by DIAVITE since 1995. This technology achieves above average linearities. The precisely defined green phase for optimal tracer tip positioning using arrows on the instrument makes measurements with tracers without skid for all DIAVITE instruments (DH-8, COMPACT II, DH-8/App)

even more precise. These are not just mere workshop instruments. Thanks to their new and varied capabilities, these instruments can also be used for significantly more advanced applications.

TOTALLY UNIQUE!

Only DIAVITE offers ONE instrument (in VHF version) for tracers both with and without skid!

FOR TRACERS WITH
AND WITHOUT SKID
VHF MOTOR UNIT



ONLY WITH VHF MOTOR UNIT

TRACER WITHOUT SKID

DH-8 / COMPACT II / DH-8/App



BORE TRACER WITHOUT SKID BZFH

Smallest bore: Ø 1.5 mm
Max. measuring depth: 15 mm
Gear tooth flanks: from module 0.75

BORE TRACER WITHOUT SKID BZFH-06

Smallest bore: Ø 0.8 mm
Max. measuring depth: 15 mm
Gear tooth flanks: from module 0.5

SLOT TRACER WITHOUT SKID NFH

Max. slot depth: 25 mm
Min. slot width: 1.5 mm

SLOT TRACER WITHOUT SKID NFH-06

Max. slot depth: 10 mm
Min. slot width: 1.0 mm

ANGLE TRACER WITHOUT SKID WFH

For measuring inner
slot flanks

WITH VH AND VHF MOTOR UNITS

TRACER WITH SKID

DH-8 / COMPACT II / DH-8/App



AXIS AND BLADE TRACER WITHOUT SKID AFH

For measuring tool blades,
edges, wires and thin axes



STANDARD TRACER SH (included in delivery)

Smallest bore: Ø 8 mm
Max. measuring depth: 27 mm



BORE TRACER BH

Smallest bore: Ø 2.5 mm
Max. measuring depth: 20 mm



SLOT TRACER NH

Max. slot depth: 15 mm + 20 mm
Min. slot width: 3 mm



AXIS AND BLADE TRACER AH

For measuring tool
blades, edges,
wires and thin axes

DO YOU NEED SPECIFIC TRACERS?
JUST ASK US!



**GEAR TOOTH
FLANKS TRACER
ZH**

Tracer with skid from module 2

**TRANSVERSAL TRACER
QBH**

For radial measurements
in bores and tubes

**CONCAVE CONVEX TRACER
KKH**

For concave and convex workpieces
with a minimum radius of 5 mm.
Irregular curves can also be
easily measured.

**TRANSVERSAL TRACER
QH**

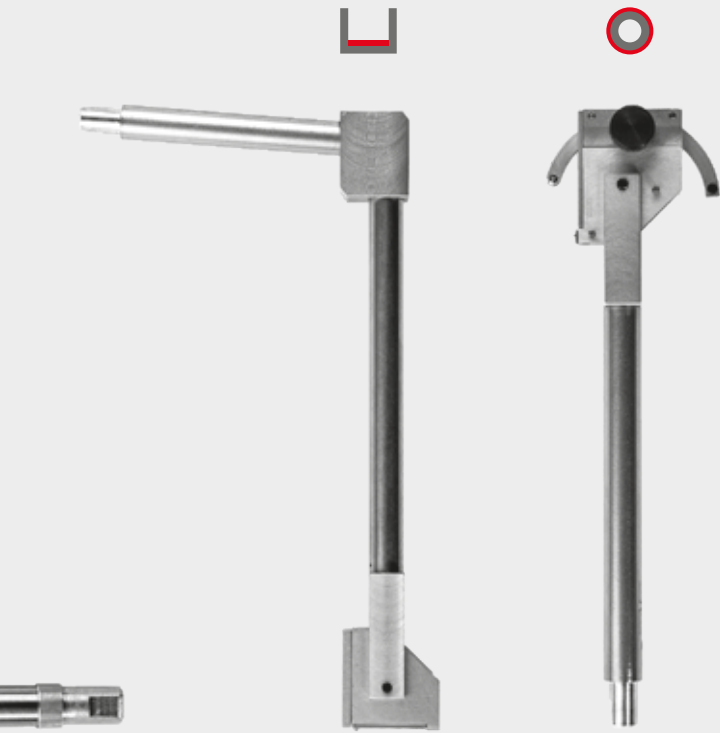
For measuring crank shafts

**TRANSVERSAL TRACER
QKKH**

For radial measurements of
slots in bores and tubes etc.



FOR MOTOR UNITS VH AND VHF EXTENSIONS



BASIS TRACER TH

For base measurements
to depths of 140 mm

BALL AND CIRCUMFERENCE TRACER UH

From a diameter of Ø 8 mm



LONG EXTENSION

To extend tracers
for deep bores
Mass: up to 700 mm

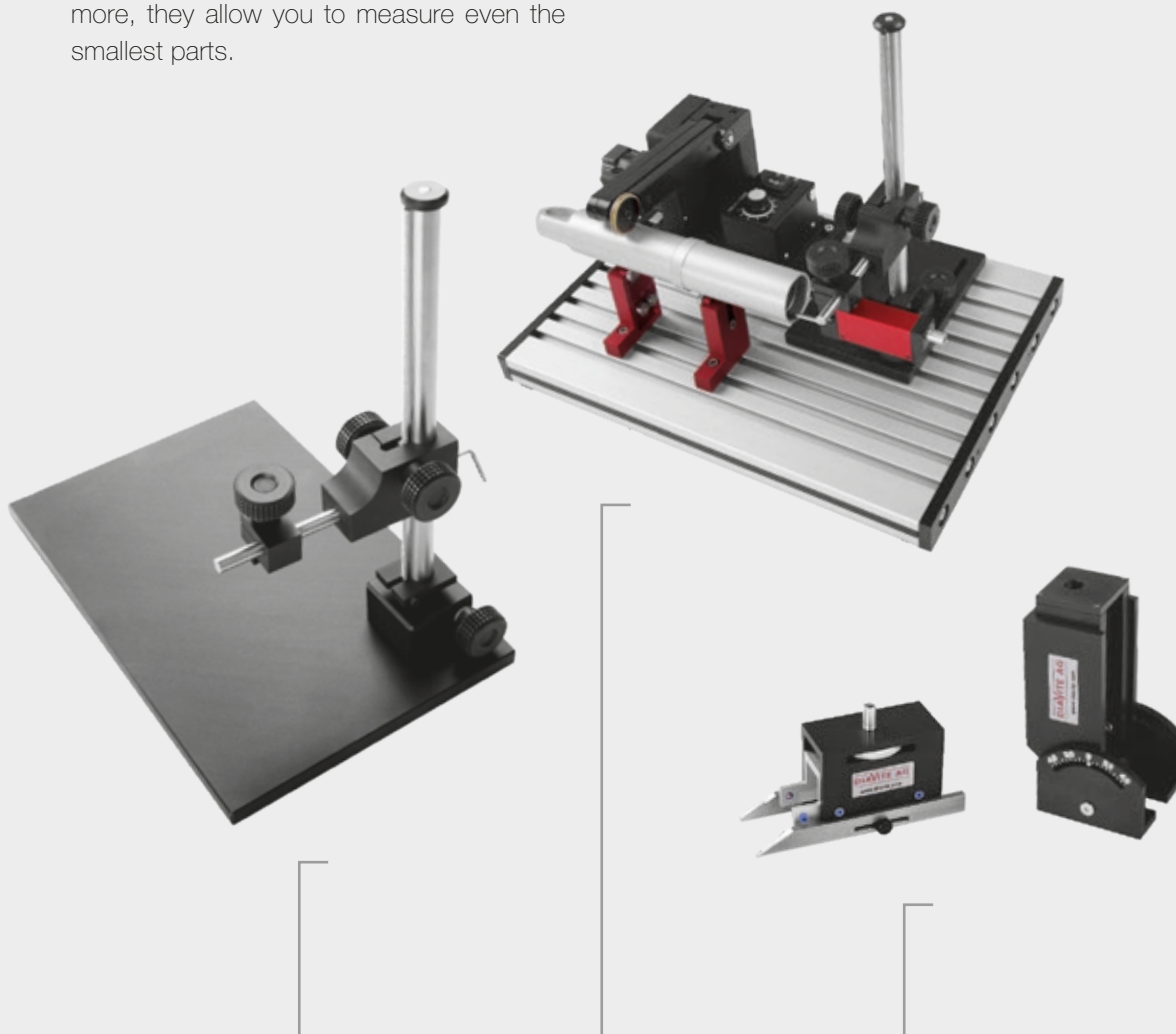
SHORT EXTENSION

To extend tracers
for deep bores
Mass: up to 400 mm

ACCESSORIES

Even more are available

Compatible accessories help manage anyone's daily measurement tasks. Our accessories are the ideal extension for DIAVITE DH-8, COMPACT II and DH-8/App. What's more, they allow you to measure even the smallest parts.



MEASURING STANDS

with a hard stone or aluminium base plate, and a 250 mm or 500 mm column

"TUBEMASTER"

for radial roughness measurements on the inner and outer circumference of cylindrical parts

ADAPTORS

for measuring large workpieces with tracers without skid

DO YOU NEED
SPECIFIC SOLUTIONS?
JUST ASK US!



CROSS TABLE

70 x 70 mm
For precise positioning of parts and for holding vices with an adaptor

VICES

with jaw widths of 15 mm, 25 mm and 35 mm

VARIOUS CALIBRATION SPECIMENS

made of metal or glass

APPARATUS

for measuring crank shafts manually (without tracer and motor unit)

DIAVITE AG

DIAVITE AG
Feldstrasse 62
8180 Bülach
Switzerland

Phone +41 43 411 10 20
Fax +41 43 411 10 21

Mail info@diavite.com
Website www.diavite.com

OUR SALES PARTNERS:



Qualites
metrología y calidad

Central y SAT:
Avda. Gran Vía, 806
E08013 Barcelona
Tel. 932319400 | info@qualites.net
<http://www.qualites.net>

Delegación Norte: Tel 843990012
Delegación Levante: Tel 960450188
Delegación Aragón: Tel 976597444
Delegación Centro: Tel 960450188