



**HANDYSURF+**  
35 | 40 | 45

New HANDYSURF+, reborn with sophisticated design  
 Portable surface texture measuring instrument for global use responding  
 to diverse everyday needs

# HANDYSURF+ NEW

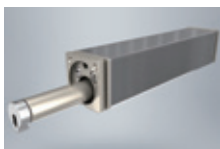


## High resolution with wide measuring range No need to set up measuring range

The previous HANDYSURF required setting of a narrow measuring range when measuring with a high resolution, but HANDYSURF+ has evolved! The instrument has the Z direction measuring range of 370  $\mu\text{m}$ , which is the widest in class, and achieved a resolution as high as 0.0007  $\mu\text{m}$  over the entire range.



## Select from 3 HANDYSURF+ driver units, according to workpiece and measurement location



### 35 (Standard type)

The standard-type measurable with different attitudes including horizontal, inclined, vertical and ceiling surfaces.



### 40 (Retract type)

Retract-type that reduces damage to the stylus and pickup by raising the pickup while waiting for measurement or at ending. It can be used as a detector incorporated into an automatic machine.



### 45 (transverse trace-type)

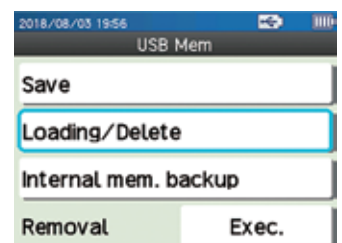
The transverse trace-type where the pickup moves sideways. Narrow areas, such as crankshaft pins and journals, that were difficult to measure before can now be measured.

## Connectable to the compact printer, USB memory stick and PC with built-in USB connector

With the USB connector, it is possible to print measurement results to the optional compact printer, save measurement conditions and results on USB memory sticks and recharge the instrument from the USB port of a PC or with a USB battery.



Compact Printer (Option)



By connecting to the USB memory stick (option), it is possible to save and read measurement conditions and results.

## Superior Operability

2.4 inch color LCD has significantly improved the visibility.  
 Moreover, 6 buttons and newly developed UI have achieved simple and intuitive operations.



Home screen



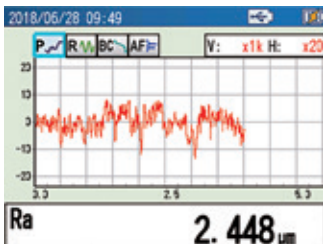
Menu screen



Measurement condition setting display

## Multiple analysis capabilities

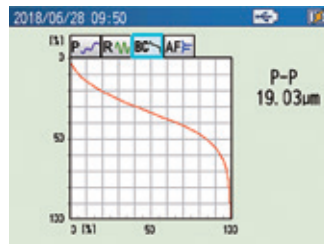
Graphic representation of measurement results enables their on-site verification with parameter and waveform. Moreover, despite being a portable instrument, it is capable of a variety of analyses including analyses of BAC, ADC, peak count and motifs. By setting the conditions in advance, OK/NG judgment can be performed automatically.



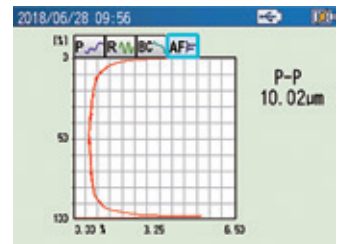
Example of surface roughness (Ra) measurement



Example of OK/NG judgment of measurement result



Example of BAC analysis



Example of ADC analysis

## Display available in 20 languages Multi-language support available worldwide

20 European and Asian languages including English, German and French are provided as standard. Display language can be easily and quickly changed by menu options.



English



German



French



Italy



Spanish



Portuguese



Czech



Polish



Hungarian



Turkish



Swedish



Dutch



Japanese



Chinese  
 Traditional Chinese  
 Simplified Chinese



Korean



Thai



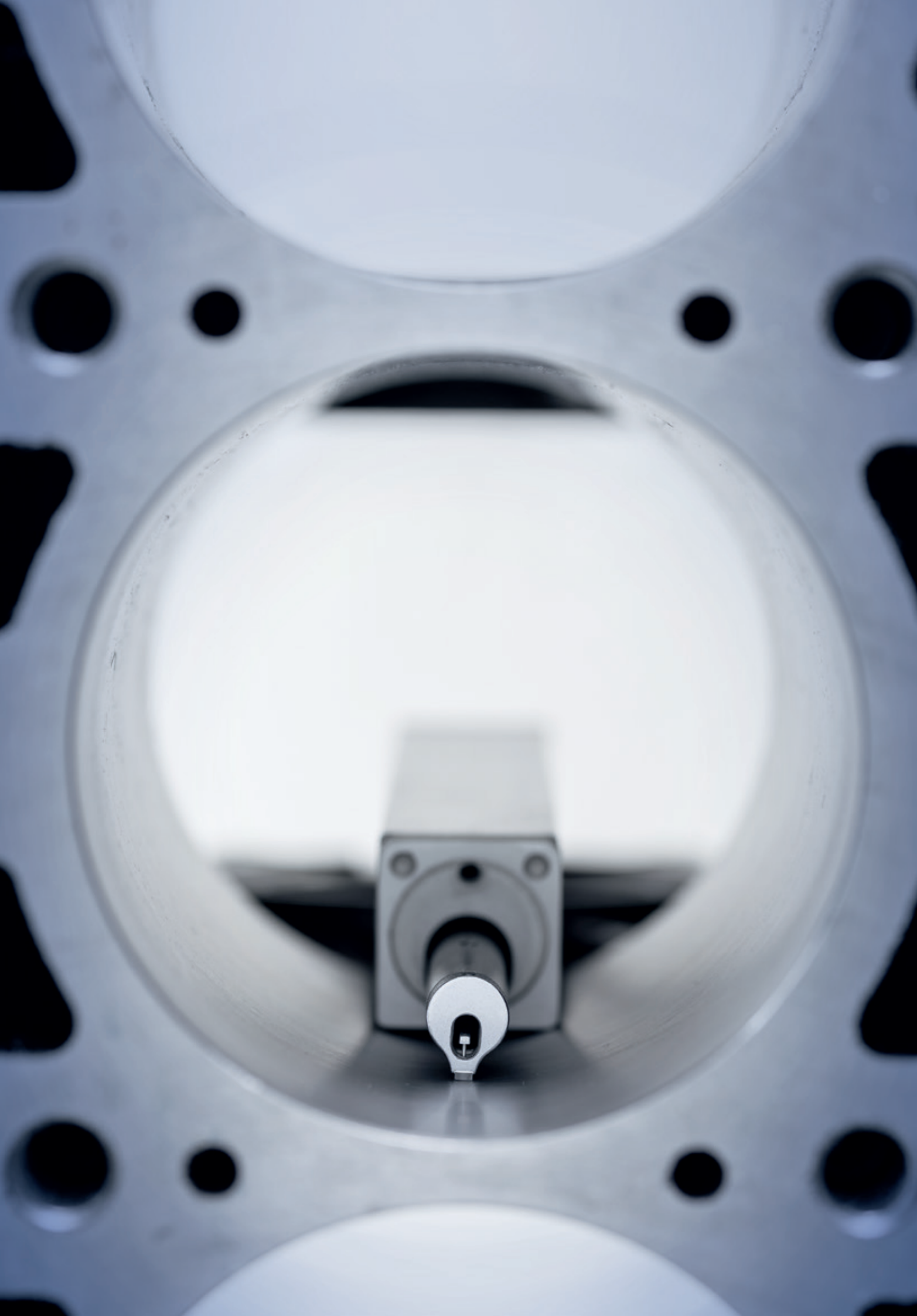
Malay



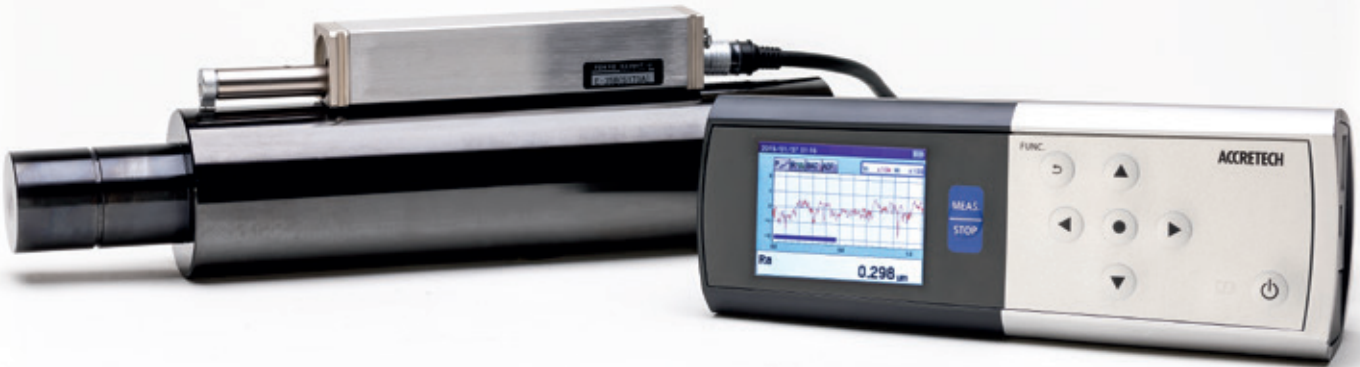
Vietnamese



Indonesian







## Specifications

Model		HANDYSURF+					
		35		40		45	
Measurement range		Tip radius 5 μm	Tip radius 2 μm	Tip radius 5 μm	Tip radius 2 μm	Tip radius 5 μm	
Z direction	Drive axis	X direction 16 mm				Y direction 4 mm	
	Movement type	Standard type			Retraction type		
Tracing Driver	Evaluation Length	0.2 to 16 mm			Horizontal tracing type		
	Measurement speed	0.5, 0.6, 0.75, 1.0 mm/s				0.2 mm to 4.0 mm	
Pickup	Sensing type	Differential inductance					
	Measurement Method	Skid					
	Z direction resolution	0.0007 μm/-210 to +160 μm					
	Model	E-DT-SM10A	E-DT-SM49A	E-DT-SM10A	E-DT-SM49A	E-DT-SM39A	
	Stylus	Measurement force	4 mN	0.75 mN	4 mN	0.75 mN	4 mN
		Tip radius	r <sub>tip</sub> = 5 μm	r <sub>tip</sub> = 2 μm	r <sub>tip</sub> = 5 μm	r <sub>tip</sub> = 2 μm	r <sub>tip</sub> = 5 μm
Tip angle		90° cone	60° cone	90° cone	60° cone	90° cone	
tip material		Diamond					
Analysis item	Calculation Standards	Comply with JIS2013/2001, JIS1994, JIS1982, ISO1997/2009, ISO13565, DIN1990, ASME2002/2009, ASME1995, CNOMO					
	Parameter	Profile Curve	Pt, Rmax, Rz, Rk, Rpk, Rvk, Mr1, Mr2, Vo, K, tp				
		Roughness Curve	Ra, Rq, Rz, Rv, Rc, Rt, RSm, RΔq, Rsk, Rku, Rmr(c), Rmr, Rδc, Rz94, R3z, RΔa, Ry, Sm, S, tp, PC, RPc JIS, RPc ISO, RPc EN, Pc, PPI, Rp, Rmax, Mr1, Mr2, Rpk, Rvk, Rk, Vo, K, A1, A2, Rpm, Δa, Δq, Htp				
		Motif	R, Rx, AR, W, Wx, AW, Rke, Rpk, Rvk, NCRX, NR, CPM, SR, SAR, Wte, NW, SAW, SW, Mr1e, Mr2e, Vo, K				
Evaluation Curve	Profile Curve, Roughness Curve, ISO13565 Special Roughness Curve, Roughness motif curve, Waviness motif curve, Upper envelope waviness curve						
Characteristics graph	Bearing area curve, Amplitude distribution curve						
Filter	Filter type	Gaussian, 2RC (phase compensation), 2RC (non-phase compensation)					
	Cutoff value	λc	0.08, 0.25, 0.8, 2.5 mm				
		λs	None, 2.5, 8 μm				
Amplification indicator	Display	2.4-inch color liquid crystal panel					
	Data output	USB connectors for USB memory/printer connection x 1, Micro USB connector for USB communication x 1					
	Print output	Optional (external printer unit) / Thermal recording paper width: 58 mm (recording width: 48 mm)					
	Language	English, German, French, Italian, Spanish, Portuguese, Czech, Polish, Hungarian, Turkish, Swedish, Dutch, Japanese, Chinese (Traditional Chinese/Simplified Chinese), Korean, Thai, Malay, Vietnamese, Indonesian,					
Specifications	Power Supply	Charging	Built-in battery (to be charged using AC adaptor, PC USB port, USB battery), charging period: 4 hours (about 1000 measurements can be taken when fully charged)				
		Voltage, frequency	AC100 to 240 V ±10%, 50/60 Hz, Single phase (Included AC adapter)				
		Power consumption	Maximum 10 W				
	External dimensions (W x D x H) / Weight	Amplification indicator: 184.5 x 68 x 57.4 mm/about 500 g for the entire system					



Together with our partners, we are able to offer you a Europe-wide sales and service network. Through the regional proximity, a service technician can reach your premises without any prolonged wait and travel times. If you have any questions, please contact us directly from all European countries through our centralized metrology phone number or email address:



**+49(0)89 54 6788 - 0**

Mon – Fri from 8:30 a.m. to 5:00 p.m.



**info@accretech.eu**

#### Germany

Carl Zeiss IQS Deutschland GmbH  
73446 Oberkochen  
www.zeiss.de/imt  
E-Mail info.metrology.de@zeiss.com  
Phone +49 7364 20 - 6337

#### Austria

ACCRETECH (Europe) GmbH  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +49 (0)89 54 6788 - 0

#### Switzerland

Osterwalder Messtechnik AG  
Sumpfstraße 13  
6312 Steinhausen  
www.osterwalder-messtechnik.ch  
E-Mail info@osterwalder-zug.ch  
Phone +41 (0)41 748 19 19

#### Italy

ACCRETECH (Europe) GmbH  
Via Giotto, 7  
20032 Cormano  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +39 02 2316 3291

#### France

ACCRETECH (Europe) GmbH  
14 Chemin des Clos  
38240 Meylan  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +33 (0)476 0440 80

#### United Kingdom

ACCRETECH SBS UK Ltd.  
Unit 2, Leofric Court  
Progress Way, Coventry CV3 2NT  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +44 (0) 2476 651 774

#### Ireland

JED Metrology Ltd.  
21 Tolka Valley Business Park  
Glasnevin, Dublin 11  
E-Mail sales@jed.ie  
Phone +353 1 830 7744

#### Denmark

ACCRETECH (Europe) GmbH  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +49 (0)89 54 6788 - 0

#### Sweden

KMK Instrument AB  
Regattagatan 8A  
723 48 Västerås  
www.kmk-instrument.se  
E-Mail info@kmk-instrument.se  
Phone +46 (0)21-150 160

#### Norway

ACCRETECH (Europe) GmbH  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +49 (0)89 54 6788 - 0

#### Finland

ACCRETECH (Europe) GmbH  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +49 (0)89 54 6788 - 0

#### Netherlands

ACCRETECH (Europe) GmbH  
www.accretech.eu  
E-Mail info@accretech.eu  
Phone +49 (0)89 54 6788 - 0

#### Spain

Izasa Scientific S.L.U.  
Plaza Europa 21-23  
08908 L'Hospitalet de Llobregat  
Barcelona  
www.izasascientific.com  
E-Mail marketing@izasascientific.com  
Phone +34 902 20 30 80

#### Portugal

Izasa Scientific, LDA  
Avenida do Forte nº 6.  
Edifício Ramazzotti - 3º piso 2.24  
2790-072 Carnaxide, Lisboa  
www.izasascientific.com  
E-Mail marketing@izasascientific.com  
Phone +351 21 424 73 22

#### Poland

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +48 603 53 08 55

#### Hungary

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +36 (0)23 232 224

#### Bulgaria

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +36 (0)23 232 224

#### Romania

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +36 (0)23 232 224

#### Slovakia

PRIMA BILAVČÍK, s.r.o.  
9. května 1182  
688 01 Uherský Brod, Czech Republic  
www.merici-pristroje.cz  
E-Mail bilavcik@pirimab.cz  
Phone +420 572 632 561

#### Slovenia

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +36 (0)23 232 224

#### Czech Republic

PRIMA BILAVČÍK, s.r.o.  
9. května 1182  
688 01 Uherský Brod, Czech Republic  
www.merici-pristroje.cz  
E-Mail bilavcik@pirimab.cz  
Phone +420 572 632 561

#### Turkey

Yamer Endüstriyel Ürünler Ticaret Ltd. Sti  
Karacaoğlan, 6172. Sk. No:8  
35070 Bornova/Izmir  
www.yamerend.com.tr  
E-Mail info@yamer.com.tr  
Phone +90 232 342 0693

#### Serbia

ACCRETECH – Tosei Hungary Kft.  
Liget u. 3/2 3rd floor  
2040 Budaörs, Hungary  
E-Mail info@accretech.eu  
Phone +36 (0)23 232 224

We reserve the right to change the contents of this catalog, including product specifications, without notice when products are updated. Some of our products shall be controlled by the Foreign Exchange and Foreign Trade Act, and required an export license by the Japanese Government. Regarding exporting the products and/or providing a non-resident with technologies, please consult ACCRETECH (Tokyo Seimitsu).



EUROPE

ACCRETECH (Europe) GmbH  
Landsberger Str. 396, 81241 Munich, Germany  
Phone +49 (0)89 54 67 88 - 0, Fax +49 (0)89 54 67 88 - 10  
info@accretech.eu  
www.accretech.eu