



## DWM 1000-2000 SERIES

Technical Datasheet

### Electromagnetic Flow Switch and Flow Meter

- For measuring electrically-conductive liquids, pastes and slurries
- Optional digital display
- No moving parts, maintenance-free

## The electromagnetic flow controller

The **DWM 1000** electromagnetic flow switch and the **DWM 2000** electromagnetic flow meter monitor the flow of electrically-conductive liquids, pastes and slurries.

The **DWM 1000** uses an induced voltage converted into a switching signal.

The **DWM 2000** uses an induced voltage converted into a 4...20 mA current output that is proportional to the flow velocity.



- ❶ Optional digital display or flashing LED
- ❷ Mounting sleeve graduated with nominal diameter markings so that the sensor can be inserted correctly into the process pipe
- ❸ Screw-on or hygienic process fitting (with or without optional spool piece)
- ❹ Adjustable switching point (DWM 1000) or 4...20 mA output (DWM 2000)
- ❺ Housing options: IP66 Aluminium or IP68 Stainless Steel

## Highlights

- DIP switch for setting full-scale value
- Zero calibration button removes zero drift
- Long version available for pipes larger than 400 mm / 16" in diameter
- Optional ball valve for long version
- Rugged design, IP66 (NEMA 4/4X) protection
- IP 68 version available for immersed applications
- Suitable for process temperatures up to 150°C / 300°F and process pressures up to 25 bar / 360 psig
- Optional digital display for DWM 2000 meters
- Suitable for AC and DC electrical circuits (relays available for the DWM 1000)
- Optional spool pieces for pipe diameters DN25...50 or 1"...2"
- Optional fitting for Tuchenhagen VARIVENT® housings
- Housing is removable or rotatable under process conditions

## Industries

- Petrochemical
- Oil & Gas
- Chemical
- Food & beverage
- Water
- Air conditioning (HVAC)

## Applications

- Flow detection
- Cooling systems
- Pump protection

## Variants



### DWM 1000

The DWM 1000 flow switch is an insertion-type, two wire system. The switching point is adjustable over a full-scale range of 0.1...9.9 m/s or 0.3...32.5 ft/s. Amplifier relays are also available for a selection of AC and DC voltages.

A welding socket is supplied as standard for welding the DWM 1000 directly onto process pipes. It is suitable for pipe diameters DN50...400. An optional spool piece can be used to install the instrument without a welding operation.



### DWM 2000

The DWM 2000 flow meter is an insertion-type instrument. Full scale range is adjustable from 1...8 m/s or 3.3...26.2 ft/s.

The DWM 2000 has an optional liquid crystal display. Other remote display options are available (C95 CI).

A welding socket is supplied as standard for welding the DWM 2000 directly onto process pipes. It is suitable for pipe diameters DN50...400. An optional spool piece can be used to install the instrument without a welding operation.

## Options



### LCD Indicator

The DWM 2000 D flow meter is equipped with a two-line, 16-character LCD. It indicates flow velocity on the first line and flow rate on the second. It can also be used to calibrate the DWM 2000 onsite.

This can be retrofitted to all DWM 2000 variants, except those with the IP68 stainless steel housing option.



### IP68 stainless steel housing

The IP68 stainless steel housing has been designed for immersed applications. It is a sealed unit and all calibration is carried out before delivery.

DWM 1000 and 2000 instruments with the IP68 stainless steel housing option can also be ordered with a long sensor.



### Long sensor

The DWM 1000 L and 2000 L are ideal for flow control in large diameter pipes or open channels. They are a suitable alternative to insertion turbines. The sensor is either 500 mm / 20" or 1000 mm / 40" long; it can be supplied up to 3 m / 120" long on request. It has these additional features:

- Security chain
- Optional welding socket
- Optional isolation valve



### Spooling piece

Spooling pieces are available for pipe diameters DN25...50 or 1...2". These have a standard length of 200 mm / 7.9".



### FT Tuchenhagen connection

An option developed for hygienic applications. Tuchenhagen VARIVENT® housings are supplied on demand with DWM 1000 FT and 2000 FT instruments.

## Technical data

	DWM 1000	DWM 2000
--	----------	----------

## Functions

Description	2-wire flow switch	Flow meter with 4...20 mA output
Function	For monitoring flow velocity in pipes or open channels	
User interface		
Options	Flashing LED	None; 2-line LCD indicator with 4-button keypad
Interface languages	-	English, French or German
Display units, 1st line	-	m/s
Display units, 2nd line (optional)	-	m <sup>3</sup> /h

## Measurement accuracy

Repeatability	±1% of the switching point	±1% of the measured value
Accuracy		
when $v > 1$ m/s or 3.3 ft/s	±5% of the switching point	±5% of the measured value (± 2% if calibrated onsite)
when $v < 1$ m/s or 3.3 ft/s	±3 cm/s / ±1.2 in./s ±2% of the switching point	±3 cm/s / ±1.2 in./s ±2% of the measured value
Reference temperature	+20°C ±5°C / +70°F ±10°F	
Reference pressure	1013 mbar abs. ±20 mbar / 14.69 psig ±0.29 psig	
Reference relative humidity	60% ±15%	
Full-scale range	0.1...9.9 m/s / 0.3...32.5 ft/s, adjustable threshold	1, 2, 3, 4, 5, 6, 7, or 8 m/s / 3.3, 6.6, 9.9, 13.1, 16.4, 19.6, 22.9, or 26.2 ft/s, programmable
Hysteresis	8%, when flow velocity decreases	-

	DWM 1000	DWM 2000
--	----------	----------

### Operating conditions

Ambient temperature	-25...+60°C / -13...+140°F
Process temperature	
without stainless steel housing (IP68) option	-25...+150°C / -13...+300°F
with stainless steel housing (IP68) option	-25...+60°C / -13...+140°F
Max. allowable operating pressure	25 bar / 360 psig
Electrical conductivity	≥20 µS/cm
Protection category acc. to EN 60529 / NEMA 250,	
standard variant	IP 66 / NEMA 4 - 4X
with FT option	IP 66 / NEMA 4 - 4X
with long sensor option	IP 66 / NEMA 4 - 4X
with stainless steel housing (IP68) option	IP 68 / NEMA 6P
Electromagnetic compatibility (EMC),	
to CE	EN 50081-1; EN 50082-2
	89/336/EEC (EMC)
	72/73/EEC (Low Voltage Directive)

### Installation conditions

Minimum inlet run	10 x nominal diameter, depending on the flow profile
Minimum outlet run	5 x nominal diameter, depending on the flow profile
Pipe material	Electrically conductive materials, refer to the handbook for other materials

	DWM 1000	DWM 2000
--	----------	----------

## Materials

Housing	
without stainless steel housing (IP68) option	Aluminium with epoxy finish
with stainless steel housing (IP68) option	316 L (1.4404) stainless steel
Sensor casing	316 L (1.4404) stainless steel
Sensor insulation	Ceramic (Zirconium oxide)
Welding sleeve for T-mounting	316 L (1.4404) stainless steel
Spool piece (option)	316 L (1.4404) stainless steel
Safety chain, for long sensor option	Zinc-plated steel
Isolation valve (option)	Nickel-plated brass
Tuchenhagen connection (option)	316 L (1.4404) stainless steel
Cable entry	Nickel-plated brass
Gasket, sensor	FKM / FPM
Gasket, connection	Klingerit (without asbestos)
Gasket, housing cover	Perbunan
Gasket, Tuchenhagen connection (option)	EPDM
Electrode	Platinum

## Process connections

with standard fitting	G 1A; Screw-on welding socket (Ø39 mm / 1.5") for process pipes DN50...400 / 2...16"
with long sensor (option)	G 1½; NPT 1½ Screw-on welding socket (Ø60 mm / 2.4")
with isolation valve (option)	G 1½, can be fitted with an optional welding socket (Ø60 mm / 2.4") or an NPT 1½ adaptor
with spool piece (option)	
flange, DIN 2526 - PN40 - Form C	DN25...50; DN32 on request
flange, ANSI B16.5 - 150 lbs RF	1...2"; 1¼" on request
flange, ANSI B16.5 - 300 lbs RF	1...2"; 1¼" on request

	DWM 1000	DWM 2000
--	----------	----------

### Power supply

Instrument terminal	48...250 VAC or VDC	12 / 24 VDC
Relay options for instrument terminal	230 / 110 / 48 VAC; 110 / 48 VDC	-
Power consumption	200 mA max.	50 mA max.
Protective earthing load ❶	<10 Ohms	
Cable entry	PG 13.5	
Cable tightening capacity	1.5 mm <sup>2</sup> or 16 AWG	
Length of cable for stainless steel housing (IP68) option	10 m / 32½ ft ❷	
Time constant	5 / 8 / 10 s	5 s ❸

### Input and output

Output signal	Adjustable threshold ❹	4...20 mA, passive
---------------	------------------------	--------------------

### Options

Options	Spooling piece, see also "Process connections"	
	IP 68 stainless steel housing;	
	Long sensor, 500 mm / 20" length;	
	Long sensor, 1000 mm / 40" length (up to 3 m / 10 ft on request)	
	Welding socket	
	G 1½ isolation valve, for long sensor option	
	NPT 1½ process connection adapter, for G 1½ isolation valve	
	Relay	LCD indicator
	-	Digital indicator C 95 CI with integrated counter
	-	HHC 2000 handheld display

❶ for Functional Earth (FE). Earthing is obligatory in the connection chamber

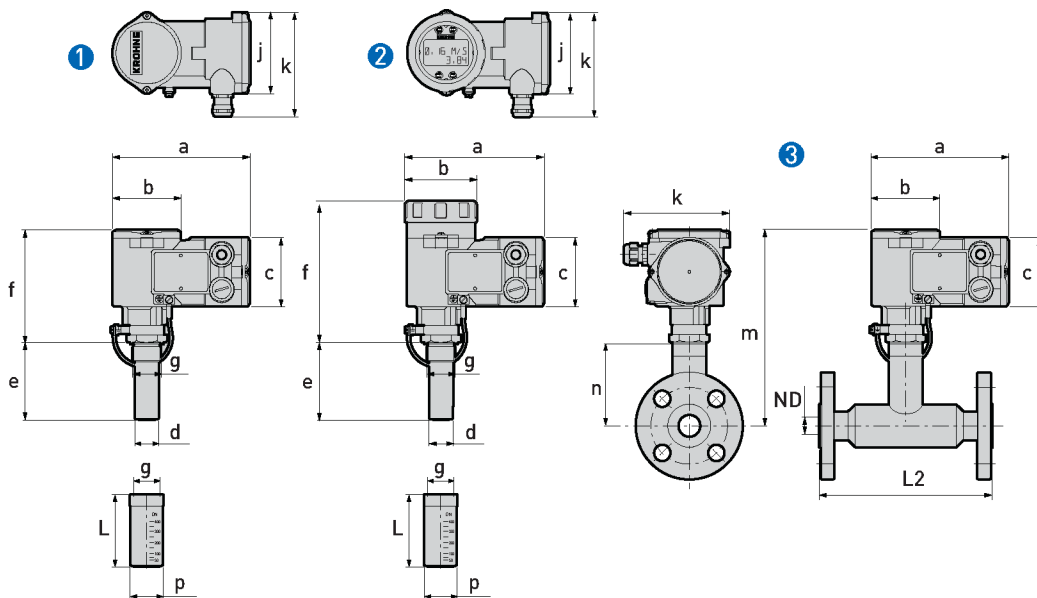
❷ other lengths on request

❸ sub-variant D or with HHC 2000 handheld display: 5 / 10 / 15 / 20 / 25 / 30 / 50 s

❹ selectable: normally open or normally closed

## Dimensions and Weight

### Standard sub-variants



- ① DWM 1000 or DWM 2000 with optional welding socket
- ② DWM 2000 D (with LCD indicator) with optional welding socket
- ③ DWM 1000 or DWM 2000 with spool piece for inline connection

### Note:

- PG13.5 cable glands are supplied as standard
- LCD indicators can be retrofitted to all DWM 2000s with aluminium housings

Standard sub-variants without spool piece: Dimensions and Weight in mm and kg

	Dimensions [mm]											Weight [kg]
	a	b	c	d	e	f	g	j	k	L	p	
Without LCD indicator	160	80	80	Ø28	90	132	G1	95	122	86	Ø39 ①	1.9
With LCD indicator	163	86	80	Ø28	90	164	G1	95	122	86	Ø39 ①	2.4

① the tolerance is +0/-0.2 mm

Standard sub-variants without spool piece: Dimensions and Weight in inches and lbs

	Dimensions [inches]											Weight [lbs]
	a	b	c	d	e	f	g	j	k	L	p	
Without LCD indicator	6.3	3.1	3.1	Ø1.1	3.5	5.2	G1	3.7	4.8	3.4	Ø1.5 ①	4.2
With LCD indicator	6.4	3.4	3.1	Ø1.1	3.5	6.5	G1	3.7	4.8	3.4	Ø1.5 ①	5.3

① the tolerance is +0/-0.008"

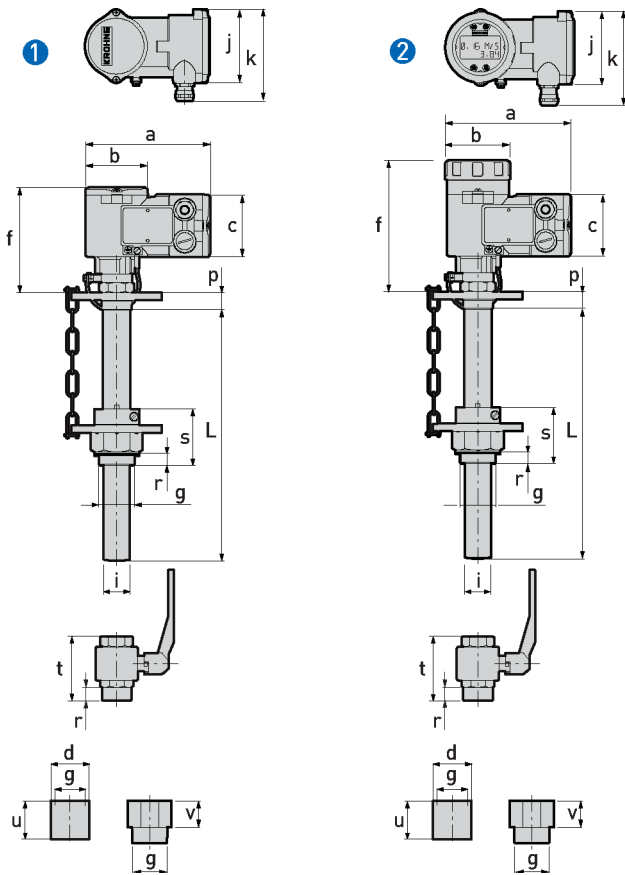
Standard sub-variants with spool piece: Dimensions and Weight in mm and kg

	Dimensions [mm]								Weight [kg]
	ND	a	b	c	k	L2	m	n	
With spool piece, PN40	DN25...50	160	80	80	122	200	226	92	8.9
With spool piece, ANSI 150 lbs	1...2"	160	80	80	122	200	226	92	8.9
With spool piece, ANSI 300 lbs	1...2"	160	80	80	122	200	226	92	8.9

Standard sub-variants with spool piece: Dimensions and Weight in inches and lbs

	Dimensions [inches]								Weight [lbs]
	ND	a	b	c	k	L2	m	n	
With spool piece, PN40	DN25...50	6.3	3.1	3.1	4.8	7.9	8.9	3.6	29.2
With spool piece, ANSI 150 lbs	1...2"	6.3	3.1	3.1	4.8	7.9	8.9	3.6	29.2
With spool piece, ANSI 300 lbs	1...2"	6.3	3.1	3.1	4.8	7.9	8.9	3.6	29.2

## Long sub-variants



- ❶ DWM 1000 L or DWM 2000 L with safety chain, optional G 1½ isolation valve and optional welding socket or NPT 1½ adaptor
- ❷ DWM 2000 L with LCD indicator, safety chain, optional G 1½ isolation valve and optional welding socket or NPT 1½ adaptor

### Note:

- PG13.5 cable glands are supplied as standard
- A safety chain is supplied as standard with DWM 1000 L and DWM 2000 L instruments
- LCD indicators can be retrofitted to all DWM 2000s with aluminium housings

## Dimensions and Weight in mm and kg

	Dimensions [mm]																Weight [kg]
	a	b	c	d	f	g	i	j	k	L	p	r	s	t	u	v	
Without indicator	160	80	80	Ø60 ①	132	②	Ø28	95	122	③	28	16	75	95	60	-	3.6
With LCD indicator	163	86	80	Ø60 ①	164	④	Ø28	95	122	③	28	16	75	95	60	36	4.1

① Tolerance: +0/-0.2 mm

② G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

③ Standard lengths are 500 or 1000 mm. Up to 3000 mm on request.

④ G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

## Dimensions and Weight in inches and lbs

	Dimensions [inches]																Weight [lbs]
	a	b	c	d	f	g	i	j	k	L	p	r	s	t	u	v	
Without indicator	6.3	3.1	3.1	Ø2.4 ①	5.2	②	Ø1.1	3.7	4.8	③	1.1	0.6	3.0	3.7	2.4	-	7.9
With LCD indicator	6.4	3.4	3.1	Ø2.4 ①	6.5	④	Ø1.1	3.7	4.8	③	1.1	0.6	3.0	3.7	2.4	1.4	9.0

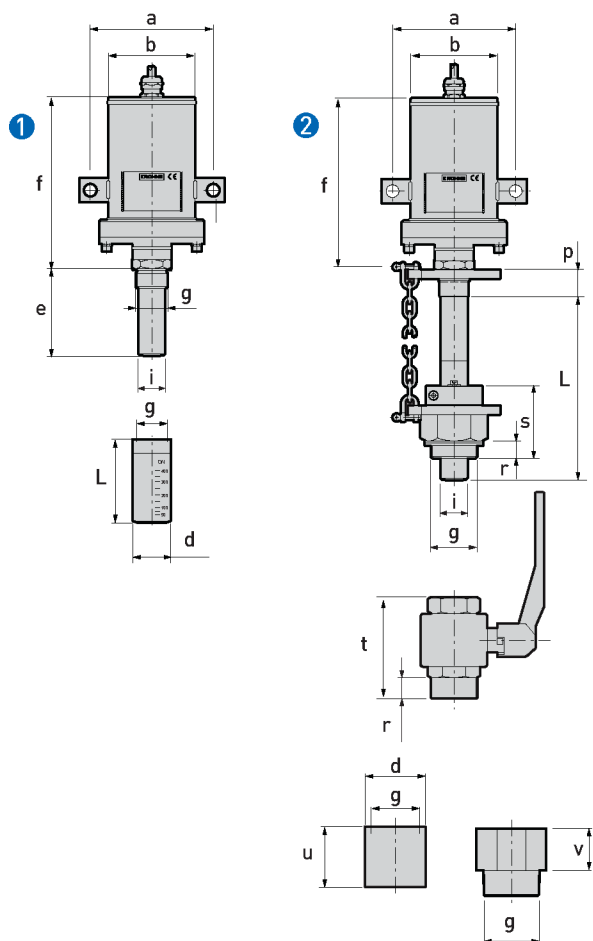
① Tolerance: +0/-0.008"

② G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

③ Standard lengths are 20 or 40". Up to 120" on request.

④ G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

## IP68 housing sub-variants



① DWM 1000 IP68 or DWM 2000 IP68 with optional welding socket

② DWM 1000 IP68 L or DWM 2000 IP68 L with optional G 1½ isolation valve and optional welding socket or NPT 1½ adaptor

### Note:

- For immersed applications
- PG13.5 cable glands are supplied as standard
- A safety chain is supplied as standard with DWM 1000 L and DWM 2000 L instruments

## Dimensions and Weight in mm and kg

	Dimensions [mm]														Weight [kg]
	a	b	d	e	f	g	i	L	p	r	s	t	u	v	
Standard variant	126	Ø89	Ø39 <sup>①</sup>	90	195	G 1	Ø28	86	-	-	-	-	-	-	5.7
Long variant	126	Ø89	Ø60 <sup>②</sup>	-	195	<sup>③</sup>	Ø28	<sup>④</sup>	28	16	75	95	60	36	8.4

① Tolerance: +0/-0.2 mm

② Tolerance: +0/-0.2 mm

③ G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

④ Standard lengths are 500 or 1000 mm. Up to 3000 mm on request.

## Dimensions and Weight in inches and lbs

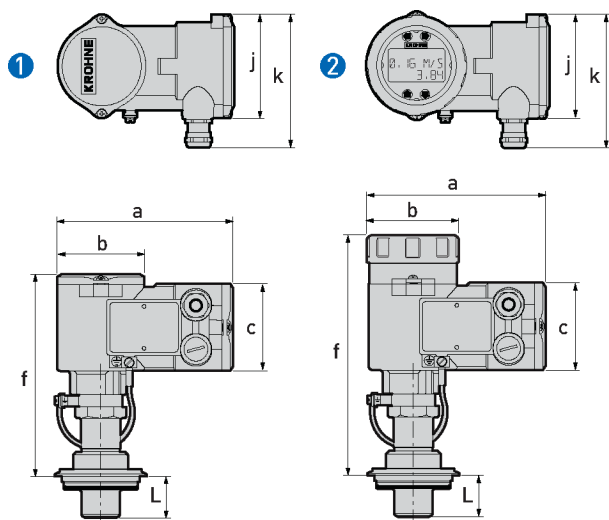
	Dimensions [inches]														Weight [lbs]
	a	b	d	e	f	g	i	L	p	r	s	t	u	v	
Standard variant	5.0	Ø3.5	Ø1.5 <sup>①</sup>	3.5	7.7	G 1	Ø1.1	3.4	-	-	-	-	-	-	12.6
Long variant	5.0	Ø3.5	Ø2.4 <sup>①</sup>	-	7.7	<sup>②</sup>	Ø1.1	<sup>③</sup>	1.1	0.6	3.0	3.7	2.4	1.4	18.5

① Tolerance: +0/-0.008"

② G 1½ or NPT 1½. A screw-on NPT 1½ adaptor is also available for the optional G 1½ isolation valve.

③ Standard lengths are 20 or 40". Up to 120" on request.

## FT sub-variants



① DWM 1000 FT or DWM 2000 FT with a Tuchenhausen VARIVENT® process connection

② DWM 2000 FT with an LCD indicator and a Tuchenhausen VARIVENT® process connection

### Note:

- PG13.5 cable glands are supplied as standard
- LCD indicators can be retrofitted to all DWM 2000s with aluminium housings

### Dimensions and Weight in mm and kg

	Dimensions [mm]							Weight [kg]
	a	b	c	f	j	k	L	
Without LCD indicator	160	80	80	185	95	122	38	2.3
With LCD indicator	163	86	80	185	95	122	38	2.8

### Dimensions and Weight in inches and lbs

	Dimensions [inches]							Weight [lbs]
	a	b	c	f	j	k	L	
Without LCD indicator	6.3	3.1	3.1	7.3	3.7	4.8	1.5	5.1
With LCD indicator	6.4	3.4	3.1	7.3	3.7	4.8	1.5	6.2





## KROHNE Product Overview

- Electromagnetic flowmeters
- Variable area flowmeters
- Mass flowmeters
- Ultrasonic flowmeters
- Vortex flowmeters
- Flow controllers
- Level measuring instruments
- Pressure gauges
- Temperature measuring instruments
- Water solutions & analysis
- Oil and gas turnkey solutions

## Addresses:

### Germany

#### Northern sales office

KROHNE Messtechnik GmbH & Co. KG  
Bremer Str. 133  
D-21073 Hamburg  
Phone: +49 (0)40 767 3340  
Phone: +49 (0)40 767 33412  
nord@krohne.de  
ZIP code: 10000 - 29999, 49000 - 49999

#### Western and middle sales office

KROHNE Messtechnik GmbH & Co. KG  
Ludwig-Krohne-Straße  
D-47058 Duisburg  
Phone: +49 (0)203 301 416  
Fax: +49 (0)203 301 10416  
west@krohne.de  
ZIP code: 30000 - 34999, 37000 -  
48000, 50000 - 53999, 57000 - 59999,  
98000 - 99999

#### Southern sales office

KROHNE Messtechnik GmbH & Co. KG  
Landsberger Str. 392  
D-81241 Munich  
Phone: +49 (0)89 121 5620  
Fax: +49 (0)89 129 6190  
sued@krohne.de  
ZIP code: 0 - 9999, 80000 - 89999,  
90000 - 97999

#### Southwestern sales office

KROHNE Messtechnik GmbH & Co. KG  
Rüdesheimer Str. 40  
D-65239 Hochheim/Main  
Phone: +49(0)6146) 827 30  
Fax: +49 (0)6146 827 312  
rhein-main@krohne.de  
ZIP code: 35000 - 36999, 54000 -  
56999, 60000 - 79999

#### Instrumentation and control equipment catalog

TABLAR Messtechnik GmbH  
Ludwig-Krohne-Straße 5  
D-47058 Duisburg  
Phone: +49 (0)2 03 305 880  
Fax: +49 (0)2 03 305 8888  
kontakt@tablar.de www.tablar.de

### KROHNE sales companies

#### International

##### Australia

KROHNE Australia Pty Ltd  
Quantum Business Park 10/287  
Victoria Rd Rydalmere NSW 2116  
Phone: +61 2 8846 1700  
Fax: +61 2 8846 1755  
krohne@krohne.com.au

##### Austria

KROHNE Gesellschaft m.b.H.  
Modecertraße 14  
A-1030 Vienna  
Phone: +43 (0)1/203 45 32  
Fax: +43 (0)1/203 45 32 99  
info@krohne.at

##### Belgium

KROHNE Belgium N.V.  
Brusselstraat 320  
B-1702 Groot Bijgaarden  
Phone: +32 (0)2 4 66 00 10  
Fax: +32 (0)2 4 66 08 00  
krohne@krohne.be

##### Brazil

KROHNE Conaut Controles  
Automaticos Ltda.  
Estrada Das Águas Espraiadas, 230  
C.P. 56 06835 - 080 EMBU - SP  
Phone: +55 (0)11-4785-2700  
Fax: +55 (0)11 4785-2768  
conaut@conaut.com.br

##### China

KROHNE Measurement Instruments  
(Shanghai) Co. Ltd., (KMIC)  
Room 1501  
1033 Zhaojiang Road  
Shanghai 200030  
Phone: +86 21 6487 9611  
Fax: +86 21 6438 7110  
info@krohne-asia.com

##### Czech Republic

Krohne CZ, spol. s r.o.  
Sobiesická 156  
63800 Brno  
Phone: +420 (0)545.242 627  
Fax: +420 (0)545 220 093  
brno@krohne.cz

##### France

KROHNE S.A.S.  
Les Ors BP 98  
F-26103 ROMANS Cedex  
Phone: +33 (0)4 75 05 44 00  
Fax: +33 (0)4 75 05 00 48  
info@krohne.fr

##### Great Britain

KROHNE Ltd.  
Rutherford Drive  
Park Farm Industrial Estate  
Wellingborough  
Northants NN8 6AE  
Phone: +44 (0)19 33 408 500  
Fax: +44 (0)19 33 408 501  
info@krohne.co.uk

##### CIS

Kanex KROHNE Engineering AG  
Business-Centre Planeta  
Office 404 ul.  
Marxistskaja 3  
109147 Moscow/Russia  
Phone: +7 (0)095 911 7165  
Fax: +7 (0)095 742 8873  
krohne@dol.ru

##### India

Krohne Marshall Ltd.  
A-34/35, M.I.D.C. Industrial Area,  
H-Block  
Pimpri Poona 411018  
Phone: +91 (0)202 744 2020  
Fax: +91 (0)202 744 2020  
pcu@vsnl.net

##### Iran

KROHNE Liaison Office  
North Sohrvardi Ave. 26,  
Sarmad St., Apt. #9  
Tehran 15539  
Phone: +9821 8874 5973  
Fax: +9821 8850 1268  
krohne@krohneiran.com

##### Italy

KROHNE Italia Srl.  
Via V. Monti 75  
I-20145 Milan  
Phone: +39 02 4300 661  
Fax: +39 02 4300 6666  
info@krohne.it

##### Korea

KROHNE Korea  
Room 508 Miwon Bldg 43  
Yoido-Dong Youngdeungpo-Ku  
Seoul, Korea  
Phone: 00-82-2-782-1900  
Fax: 00-82-2-780-1749  
mail@krohne.co.kr

##### Netherlands

KROHNE Nederland B.V.  
Kerkeplaat 14  
NL-3313 LC Dordrecht  
Phone: +31 (0)78 630 6200  
Fax: +31 (0)78 630 6405  
Service Direct: +31 (0)78 630 6222  
info@krohne.nl

##### Norway

KROHNE Norway A.S.  
Ekholtveien 114  
NO-1521 Moss  
Phone: +47 (0)69 264 860  
Fax: +47 (0)69 267 333  
postmaster@krohne.no

##### Poland

KROHNE Polska Sp.z.o.o.  
ul. Stary Rynek Oliwski 8a  
80-324 Gdansk  
Phone: +48 (0)58 520 9211  
Fax: +48 (0)58 520 9212  
info@krohne.pl

##### Switzerland

KROHNE AG  
Uferstr. 90  
CH-4019 Basel  
Phone: +41 (0)61 638 30 30  
Fax: +41 (0)61 638 30 40  
info@krohne.ch

##### Singapore

Tokyo Keiso - KROHNE (Singapore)  
Pte. Ltd.  
14, International Business Park,  
Jurong East  
Chiyoda Building, #01-01/02  
Singapore 609922  
Phone: (65) 6567 4548  
Fax : (65) 6567 9874  
tksi@tokyokeiso-krohne.com.sg

##### Republic of South Africa

KROHNE Pty. Ltd.  
Bushbock Close  
Corporate Park South  
Midrand, Gauteng  
P.O. Box 2069  
Midrand, 1685  
Phone: +27 (0)11 314 1391  
Fax: +27 (0)11 314 1681  
midrand@krohne.co.za

##### Spain

I.I. KROHNE IBERIA, S.r.l.  
Poligono Industrial Nilo  
Calle Brasil, nº. 5  
28806 Alcalá de Henares Madrid  
Phone: +34 (0)91 883 2152  
Fax: +34 (0)91 883 4854  
krohne@krohne.es

##### USA

KROHNE, Inc.  
7 Dearborn Road  
Peabody, MA 01960  
Phone: +1 (800) FLOWING  
Phone: +1 (978) 535 6060 (in MA)  
info@krohne.com

### Representatives

Algeria  
Argentina  
Cameroun  
Canada  
Chile  
Columbia  
Croatia  
Denmark  
Ecuador  
Egypt  
Finland  
Gabon  
Ghana  
Greece  
Hong Kong  
Hungary  
Indonesia  
Iran  
Ireland  
Israel  
Ivory Coast  
Japan  
Jordan  
Kuwait  
Libya  
Lithuania  
Malaysia  
Mauritius  
Mexico  
Morocco  
New Zealand  
Peru  
Portugal  
Romania  
Saudi Arabia  
Senegal  
Slovakia  
Slovenia  
Sweden  
Taiwan  
Thailand  
Tunisia  
Turkey  
Venezuela  
Yugoslavia

### Other countries

KROHNE Messtechnik GmbH & Co. KG  
Ludwig-Krohne-Str. 5  
D-47058 Duisburg  
Phone: +49 (0)203 301 0  
Fax: +49 (0)203 301 389  
export@krohne.de