

**GEMÜ**



**Measurement and display units**



### Various methods of measuring for different areas of application

In addition to process valves, GEMÜ provides an entire series of measurement and display units for valves. The current product range includes various flowmeters as well as a selection of technologies for temperature, pressure and level measurement systems. The portfolio is complimented by display units for sensor systems.

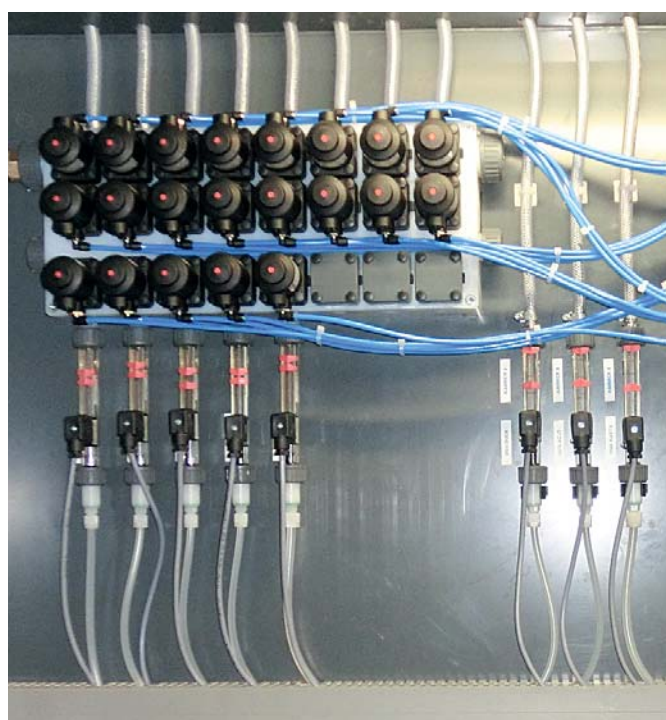
For flow measurement systems, GEMÜ offers a variety of designs: variable area flowmeters, flow transmitters, magnetically inductive flowmeters and ultrasonic flowmeters.

All measurement devices have in common that they are characterised with a robust construction and are simple to integrate into a system.



# Table of contents

Flow measurement systems . . . . .	4- 8
Pressure measurement systems . . . . .	9- 11
Worldwide Service . . . . .	12
Temperature measurement systems . . . . .	13



# Flow measurement systems

A measuring float is lifted by the volumetric flow in a conical metering tube until equilibrium is achieved between the weight of the measuring float and the force caused by the flow resistance. The measuring float is lifted higher or lower according to the volume flow rate.

## GEMÜ 800/850

### Features

- Variable area principle
- For corrosive, inert gaseous and liquid media
- Corrosion resistant, robust and high chemical resistance
- Optional electrical limit switches or instrument sensor

### Technical specifications:

<b>Tube material:</b>	Trogamid-TTM, polysulphone, PVC, PVDF
<b>Measuring range:</b>	From 2 l/h to 20,000 l/h for liquids and 0.2 Nm <sup>3</sup> /h to 450.0 Nm <sup>3</sup> /h for air
<b>Available sizes:</b>	DN 10 to 65
<b>Connection:</b>	By union ends with insert



## GEMÜ 840

### Features

- Part flow principle
- Consists of main flow unit, orifice plate, part flow unit, manual diaphragm valves
- For corrosive and inert liquid media
- Robust, high chemical resistance
- Optional electrical limit switches or instrument sensor

### Technical specifications:

<b>Housing material :</b>	PVC-U, grey, PP
<b>Measuring range:</b>	From 3,000 l/h to 50,000 l/h
<b>Available sizes:</b>	DN 65
<b>Connection:</b>	By solvent cement or welded spigots





## GEMÜ 1250/1251/1252/1256/1257

### Limit switches

#### Features

- Suitable for GEMÜ flowmeters with magnetic float
- Simple mounting and setting by clamping to flowmeter
- Reed contacts are actuated by the magnet in the float

#### Technical specifications:

GEMÜ 1250: With bistable reed contact with SPDT (Single Pole Double Throw) contact

GEMÜ 1251 - 1257: With bistable reed contact for Min or Max limit value

Option: ATEX 



## GEMÜ 1270-1273

### Instrument sensors

#### Features

- Suitable for GEMÜ flowmeters with magnetic float
- For continuous flow monitoring
- Simple mounting and setting by clamping to flowmeter
- Reed contacts in a chain of resistors are actuated by the magnet in the float

#### Technical specifications:

GEMÜ 1270/1271: The signal reading is effected via voltage divider (0-10kOhm)

GEMÜ 1272/1273: The signal reading is effected via integrated 2-wire measuring transducer (4-20mA)

GEMÜ 1270/1271: ATEX optional 



# Flow measurement systems

## Turbine flow transmitters

These can be used either as pure measuring turbines or as totalizers or batch controllers for measuring ranges from 120 to 25,000 l/h. The measuring turbines provide various electrical output signals for further processing.

### GEMÜ 3020

#### Flow transmitter (Turbine)

##### Features

- For inert and corrosive aqueous liquids
- Connection by metric or imperial union ends with insert

##### Technical specifications:

Turbine material :	PVDF
Turbine body material:	PVDF / PVC-U, grey
Available sizes:	DN 25 / DN 50
Measuring range:	DN 25: 120 to 3600 l/h DN 50: 500 to 25000 l/h
Power supply:	24 V DC
Frequency output:	24 V PNP
Current output:	4 to 20 mA

### GEMÜ 3021

#### Flow transmitter, totalizer or batch controller

##### Features

- Measuring transducer with totalizer or batch controller
- For inert and corrosive aqueous liquids
- Electronic system enables adjustment to operating conditions
- Signal inputs for PLC or switching signals
- Connection by metric or imperial union ends with insert

##### Technical specifications:

Turbine material :	PVDF
Turbine body material:	PVDF / PVC-U, grey
Available sizes:	DN 25 / DN 50
Measuring range:	DN 25: 120 to 7200 l/h DN 50: 500 to 25000 l/h
Power supply:	24 V DC
Outputs depending on type:	Frequency 24 V PNP; current 0/4 to 20 mA; 2 x relay



## Magnetically inductive flowmeter

The GEMÜ 3030 mFlow flowmeter operates according to the magnetically inductive measurement principle. It is suitable for electrically conductive media and enables exact measurement of flow velocities and flow rates of inert and corrosive liquids. The simple mechanical construction of the GEMÜ 3030 mFlow magnetically inductive immersion-type flowmeter offers quick and easy installation. The device has a backlit display and is operated via a membrane key-pad at the front of the housing. Electrical connections are at the rear.

### GEMÜ 3030 mFlow

#### Features

- Same measurement device can be used for different nominal sizes
- No moving parts in the medium
- Access rights via different user levels
- Integrated Web browser capability
- Simple commissioning and versatile operating facilities
  - Fascia keys
  - PC connection with Internet browser
  - Fieldbus interfaces e.g. Profibus-DP

#### Technical specifications:

Available sizes:	DN 25 to 300
Temperature range:	0 to 135 °C
Connection:	By various fittings
Temperature sensor:	optional
Power supply:	24 V DC
Measuring range:	0 to 4 m/s, 0 to 10 m/s
Output signals:	0 / 4 to 20 mA; pulse; relay
Fieldbus interface:	Profibus DP
Conductivity of medium:	≥ 20 µS/cm



# Flow measurement systems

## Ultrasonic flowmeter

The GEMÜ C38 SonicLine is an ultrasonic flowmeter operating according to the phase difference method. The metering tube is made of PFA and can be directly integrated into the piping system by standard flare unions. The medium only contacts the metering tube. The electronic housing is made of PP. The connection cables are PTFE encapsulated.

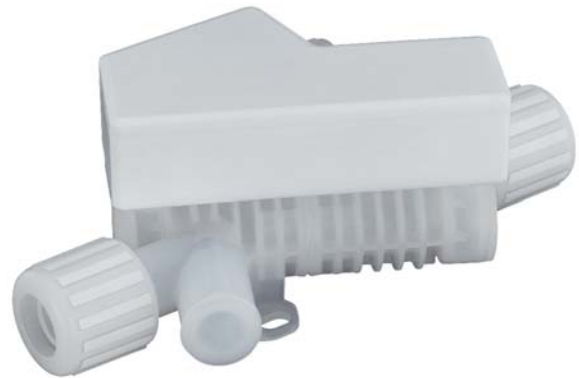
### GEMÜ C38 SonicLine

#### Features

- High accuracy and repeatability
- Suitable for very dynamic processes (dosing time < 1s)
- Integrated dosing function
- No moving parts in the metering tube and thus subject to low wear
- All media wetted parts are made of PFA (HP quality)
- Excellent chemical resistance
- Minimal deadleg
- Empty pipe signal
- Compact design

#### Technical specifications:

Nominal size :	3/8" to 1"
Measuring range:	0.03 to 120 l/min
Connection:	Flare connection
Tube material:	PFA-HP
Power supply:	24 V DC
Media temperature:	0 to 80 °C
Accuracy:	± 1 % of measuring range
Output signals:	4 to 20 mA; pulse





# Pressure measurement systems

The GEMÜ 3140 pressure transducer or pressure switch is available in various different designs for the pressure measurement systems area. The HydraLine® series (GEMÜ C30, C31, C32) comprises pressure transmitters and pressure measurement devices for high purity media applications.

## GEMÜ 3140

### Pressure transducer/switch

#### Features

- Rotatable LED display and IO-Link interface, depending on version
- Suitable for highly viscous, contaminated and corrosive media
- Appropriate in-line housing optionally available
- ATEX and SIL2 design optionally available
- Accuracy: 0.5% FSO (in accordance with IEC 60770)
- Optional installation position
- Ceramic sensor

#### Technical specifications:

Operating pressure*:	0 to 40 bar
Media temperature*:	-40 to 125 °C
Housing materials:	Housing made from 1.4404 stainless steel or plastic (PVDF)
Mechanical connection:	G¼" or G½" male thread
Output signals:	0–20 mA, 4–20 mA, 0–10 V
Switching outputs:	PNP or NPN

\* Depending on version and/or operating parameters



# Pressure measurement systems

## GEMÜ C30 Hydra-Gauge

### Pressure gauge

#### Features

- Especially suitable for pressure measurement of ultra high purity chemicals
- All media wetted parts are made of PFA/PTFE (HP quality)
- Pressure transmission by double diaphragm technology
- Pressure gauge can be rotated through 360°
- Optionally with electrical switching contacts
- REACH / ROHS compliant
- Other certificates on request (e.g. FDA compliance)

#### Technical specifications:

Nominal size :	¼" to 1¼" (In-Line, Dead-End)
Operating pressure:	0 to 6 bar
Connection:	Flare connection, NPT
Valve body material:	PFA-HP, PTFE
Diaphragm material	PFA
Media temperature:	5 to 60 °C
Accuracy:	± 1,6 % of measuring range or scale end value



## GEMÜ C31 Hydra-Sensor Pressure transmitter

### Features

- Especially suitable for pressure measurement of ultra high purity chemicals
- All media wetted parts are made of PFA/PTFE (HP quality)
- Pressure transmission by double diaphragm technology
- Pressure transmitter can be rotated through 360°
- Protection class IP 65 or IP 67 (depending on version)
- REACH / ROHS compliant
- Other certificates on request (e.g. FDA compliance)

### Technical specifications:

Nominal size :	¼" to 1¼" (In-Line, Dead-End)
Operating pressure:	0 to 6 bar
Connection:	Flare connection, NPT
Valve body material:	PFA-HP, PTFE
Diaphragm material	PFA
Power supply:	10 to 30 V DC
Media temperature:	5 to 60 °C
Accuracy:	≤0.5 % of measuring span
Output signals:	4 to 20 mA
Option:	Digital display



## GEMÜ C32 Hydra-Dry Measuring transducer with ceramic sensor

### Features

- Especially suitable for pressure measurement of ultra high purity chemicals
- All media wetted parts are made of PFA/PTFE (HP quality)
- The pressure is transmitted by a ceramic sensor
- The sensor is isolated from the process by a double diaphragm system
- Protection class IP 67
- REACH / ROHS compliant
- Other certificates on request (e.g. FDA compliance)

### Technical specifications:

Nominal size:	¼" to 1¼" (In-Line, Dead-End)
Operating pressure:	0 to 6 bar
Connection:	Flare connection, NPT
Valve body material:	PFA-HP, PTFE
Diaphragm material	PFA
Power supply:	12 to 30 V DC
Media temperature:	0 to 60 °C
Accuracy:	≤0.5 % of measuring span
Output signals:	4 to 20 mA
Option:	Digital display with switch points



# Worldwide presence

## AUSTRALIA

GEMÜ Australia Pty. Ltd  
Unit 4 - 8/10 Yandina Road  
West Gosford, NSW 2250  
Phone: +61-2-43 23 44 93  
Fax: +61-2-43 23 44 96  
mail@gemu.com.au

## AUSTRIA

GEMÜ GmbH  
Europaring F15 401  
2345 Brunn am Gebirge  
Phone: +43 22-36 30 43 45-0  
Fax: +43 22-36 30 43 45-31  
info@gemue.at

## BELGIUM

GEMÜ Valves bvba/sprl  
Koning Albert 1 laan, 64  
1780 Wemmel  
Phone: +32 2 702 09 00  
Fax: +32 2 705 55 03  
info@gemue.be

## BRAZIL / SOUTH AMERICA

GEMÜ Indústria de Produtos  
Plásticos e Metalúrgicos Ltda.  
Rue Marechal Hermes, 1141  
83.065-000 São José dos  
Pinhais, Paraná  
Phone: +55-41-33 82 24 25  
Fax: +55-41-33 82 35 31  
gemu@gemue.com.br

## CANADA

GEMÜ Valves Canada Inc.  
2572 Daniel-Johnson Boulevard  
Laval, Quebec  
H7T 2R8  
Phone: +1-450-902-2690  
Fax: +1-404-3 44 4003  
info@gemu.com

## CHINA

GEMÜ Valves (China) Co., Ltd  
No.518, North Hengshahe Road  
Minhang District, 201108  
Shanghai  
Phone: +86-21-2409 9878  
info@gemue.com.cn

## DENMARK

GEMÜ ApS  
Industriparken 16-18  
2750 Ballerup  
Phone: +45 70 222 516  
Fax: +45 70 222 518  
info@gemue.dk

## FRANCE

GEMÜ S.A.S  
1 Rue Jean Bugatti  
CS 99308 Duppigheim  
67129 Molsheim Cedex  
Phone: +33-3 88 48 21 00  
Fax: +33-3 88 49 12 49  
info@gemu.fr

## INTERCARAT

1 Rue Jean Bugatti  
CS 99308 Duppigheim  
67129 Molsheim Cedex  
Phone: +33-3 88 48 21 00  
Fax: +33-3 88 49 14 82  
sales@intercarat.com

## GERMANY

GEMÜ Gebr. Müller GmbH & Co. KG  
Fritz-Müller-Straße 6 - 8  
74653 Ingelfingen-Criesbach  
Postfach 30  
74665 Ingelfingen-Criesbach

Phone: +49 (0)7940-12 30  
Fax: +49 (0)7940-12 31 92  
(Domestic)  
Fax: +49 (0)7940-12 32 24  
(Export)  
info@gemue.de

## GREAT BRITAIN / UK

GEMÜ Valves Ltd.  
10 Olympic Way  
Birchwood, Warrington  
WA2 0YL  
Phone: +44-19 25-82 40 44  
Fax: +44-19 25-82 80 02  
info@gemu.co.uk

## HONG KONG

GEMÜ (Hong Kong) Co., Ltd.  
Room 2015, Tower B,  
Regent Centre,  
70 TA Chuen Ping Street  
Kwai Chung, N.T., Hong Kong  
P.R. China  
Phone: +852 6873 8280  
Fax: +852 6873 8280  
info@gemue.com.cn

## INDIA

GEMÜ India  
Representative Office  
301, K.B. Complex, Rambaug,  
L.G.Hospital Road, Maninagar,  
Ahmedabad-380 008  
Phone: +91-79-25450438  
+91-79-25450440  
Fax: +91-79-25450439  
sales@gemu.in

## INDONESIA

GEMÜ Valves Pte Ltd  
(Indonesia Representative  
Office)  
Rukan Mangga Dua Square  
Block F17, 2nd Floor  
Jl. Gunung Sahari Raya No. 1  
Jakarta Utara 14420  
Indonesia  
Phone: +62 (21) - 6231 0035  
Fax +62 (21) - 2907 4643  
info@gemu.co.id

## IRELAND

GEMÜ Ireland Ltd  
15 Eastgate Drive  
Eastgate Business Park  
Little Island  
Co. Cork  
Phone: +353 (0)21 4232023  
Fax: +353 (0)21 4232024  
info@gemu.ie

## ITALY

GEMÜ S.r.l.  
Via Giovanni Gentile, 3  
20157 Milano  
Phone: +39-02-40044080  
Fax: +39-02-40044081  
info@gemue.it

## JAPAN

GEMÜ Japan Co., Ltd.  
2-5-6, Aoi, Higashi-ku,  
Nagoya, Aichi, 461-0004  
Phone: +81-52-936-2311  
Fax: +81-52-936-2312  
info@gemu.jp

## MALAYSIA

GEMÜ VALVES PTE LTD  
(Malaysia Representative Office)  
D-8-09, Block D, No. 2A  
Jalan PJU 1A/7A  
Oasis Square, Oasis Damansara  
47301 Petaling Jaya  
Selangor Darul Ehsan  
Phone: +(603)- 7832 7640  
Fax: +(603)- 7832 7649  
info@gemu.com.sg

## MEXICO

GEMÜ Valvulas S.A. de C.V.  
German Centre,  
Av. Santa Fe No. 170 – OF. 5-1-  
05  
Col. Lomas de Santa Fe,  
Del. Alvaro Obregon  
01210 Mexico, D.F.  
Phone: +52 55 7090 4161  
+52 55 7090 4179

## RUSSIA

OOO „GEMÜ GmbH“  
Uliza Shipilovskaya, 28A  
115563, Moskau  
Phone: +7(495) 662-58-35  
Fax: +7(495) 662-58-35  
info@gemue.ru

## SINGAPORE

GEMÜ Valves PTE. LTD.  
25 International Business Park  
German Centre #03-73/75  
Singapore 609916  
Phone: +65-65 62 76 40  
Fax: +65-65 62 76 49  
info@gemu.com.sg

## SOUTH AFRICA

GEMÜ Valves Africa Pty. Ltd  
Stand 379  
Northlands Business Park,  
Hoogland Ext 45  
Northriding, Randburg  
Phone: +27(0)11 462 7795  
Fax: +27(0)11 462 4226  
office@gemue.co.za

## SWEDEN

GEMÜ Armatur AB  
Box 5  
437 21 Lindome  
Phone: +46-31-99 65 00  
Fax: +46-31-99 65 20  
order@gemu.se

## SWITZERLAND

GEMÜ GmbH  
Seetalstr. 210  
6032 Emmen  
Phone: +41-41-7 99 05 05  
Fax: +41-41-7 99 05 85  
info@gemue.ch

GEMÜ Vertriebs AG  
Lettenstrasse 3  
6343 Rotkreuz  
Phone: +41-41-7 99 05 55  
Fax: +41-41-7 99 05 85  
vertriebsag@gemue.ch

## TAIWAN

GEMÜ Taiwan Ltd.  
9F.-5, No.8, Ziqiang S. Rd.  
Zhubei City  
Hsinchu County 302,  
Taiwan (R.O.C.)  
Phone: +886-3-550-7265  
Fax: +886-3-550-7201  
office@gemue.tw

## UNITED STATES

GEMÜ Valves Inc.  
3800 Camp Creek Parkway  
Suite 120, Building 2600  
Atlanta, Georgia 30331  
Phone: +1-678-5 53 34 00  
Fax: +1-404-3 44 93 50  
info@gemu.com

In addition to these  
subsidiaries, GEMÜ has a  
global partner network.

Contact details:

[https://www.gemu-group.com/en\\_GB/kontakte/](https://www.gemu-group.com/en_GB/kontakte/)



 GEMÜ manufacturing site

 GEMÜ subsidiary

# Temperature measurement systems

## Temperature transducer and temperature measurement device with integrated display

The GEMÜ 3220 temperature transducer converts the physical variable temperature proportionally into an electrical signal. The process connection is configured as standard with male threads to DIN 3852 in sizes G 1/2 and G 3/4. The electrical connection is via a plug complying with DIN EN 175301-803 form A. The installation position is optional. After screwing in the connecting element, the upper part of the housing can be rotated up to  $\pm 180^\circ$  to the required position by loosening the fastening screws. Media wetted components are made of PVDF or ceramics, the housing is made of ABS and the seal of FPM.

### GEMÜ 3220

#### Features

- High accuracy and repeatability
- No moving parts and thus subject to low wear

#### Technical specifications:

Measuring range:	0 to 100 °C
Sensor material:	Ceramics (option encapsulated in PVDF)
Connecting element:	PVDF
Version:	2-wire transducer or 4-wire temperature measurement device with display
Current output:	0/4 to 20 mA
Power supply:	24 V DC
Process connection:	Dependent on the version: G 1/2" or G 3/4" thread





**GEMÜ Gebr. Müller Apparatebau GmbH & Co. KG**  
Fritz-Müller-Straße 6-8 · D-74653 Ingelfingen-Criesbach  
Phone +49 (0)7940 123-0 · info@gemue.de

[www.gemu-group.com](http://www.gemu-group.com)