

- **Precise volume measurement**
- **Reliable process control**
- **High-grade materials**
- **Resistant to chemicals**
- **Not affected by changes in viscosity**
- **Direct connection to an EcoAdd or EMP E60<sup>PLUS</sup> is possible**
- **Pulse output**



The OGM<sup>PLUS</sup> is used for volumetric measurement of the rate of flow of pure and cleaned liquids (max. 1000 mPas, measuring method: Brookfield).

The fact that this is a volumetric meter means that surging and discontinuous ("intermittent") flows can also be measured.

This meter is therefore also extremely suitable for measurement of the volumetric flow of diaphragm pumps (e.g. EcoAdd or EMP-KKS, EMP II, EMP III, EMP IV) driven by means of electric motors.

The OGM<sup>PLUS</sup> features an automatic direction of flow detection system. Reverse volumetric flows are stored without transmission of pulses. Preceding reverse volumetric flows are subtracted from the next forward volumetric flow.

A further benefit of the OGM<sup>PLUS</sup> can be found in its calibration capability. This permits achievement of maximum possible accuracy, taking account of conditions of use.

The properties and characteristics of the OGM<sup>PLUS</sup> are optimally tailored to connection to an EcoAdd or EMP E60 series diaphragm metering pump.

**Attention: Appropriate only for unpolluted liquids (without suspended particles).**

**A non-return valve must be installed immediately upstream or downstream the meter in the metering line if correct measured data is to be obtained.**

**The meter should be installed in a rising metering line, in order to avoid inclusions of air.**

The advantages of this are:

- Direct connection to an EcoAdd or EMP E60<sup>PLUS</sup> (via dongle box or dongle-card).
- Operation with high-resolution measuring with 120 pulses per gear-wheel revolution.
- The rate of rotation of the oval gear wheels is proportional to flow.


Advantages in case of connection to a higher-level quantification or measuring system (PLC or similar):

- Adjustable pulse rate, either in pulses per revolution or pulses per liter / pulses per ml (default works setting: 2 pulses / revolution)\*
- The pulse output can be optionally switched between P-N-P or N-P-N. (default works settings of this output: P-N-P)\*

\* possible only with external hardware and software

## Technical Data:

Oval gear meter type:	00110	00500	01200	02100	04500	
Recommended for metering pumps up to [l/h]	11	50	120	210	450	
Flow rate with use of an EMP metering pump* [l/h]	min.	0.5**	4.8	18	40	60
	max.	13.5	65	144	250	540
Flow rate (continuous flow) [l/h]	min.	1.25	12	45	100	150
	max.	33.75	160	360	625	1200
Allowable system pressure [bar]	max. 10					
Ambient / fluid temperature [°C]	max. 40					
Viscosity [mPas]	max. 1000					
Connecting thread	G 1/8"		G 1/4"	G 3/4"	G 1 1/4"	

 **NOTE**

\* **Pulse evaluation via E60 metering pumps is only carried out in connection with a Dongle Box (248606) / Dongle Plate (249629). (Metering Pump E60 + Dongle Box / Dongle Plate = Metering Pump E60<sup>PLUS</sup>) Dongle Boxes / Dongle Plates are to be found in the respective pump chapters of "Metering".**

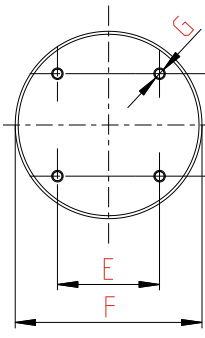
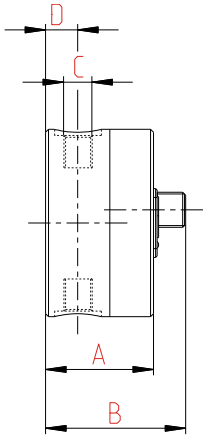
\*\* **A minimum flow of 1 l/h is necessary for controller operation with E60<sup>PLUS</sup> electronic.**

## Material:

Housing	PVC grey
Cover	PVC (transparent)
Oval wheels	PVDF (for type 00112)
	PVC (for type 00112)
	PEEK (for types 00540, 01200, 02100, 04500)
O-rings	FPM (Viton B)
	optional EPDM
Axes	Ceramics

**Dimensions:**

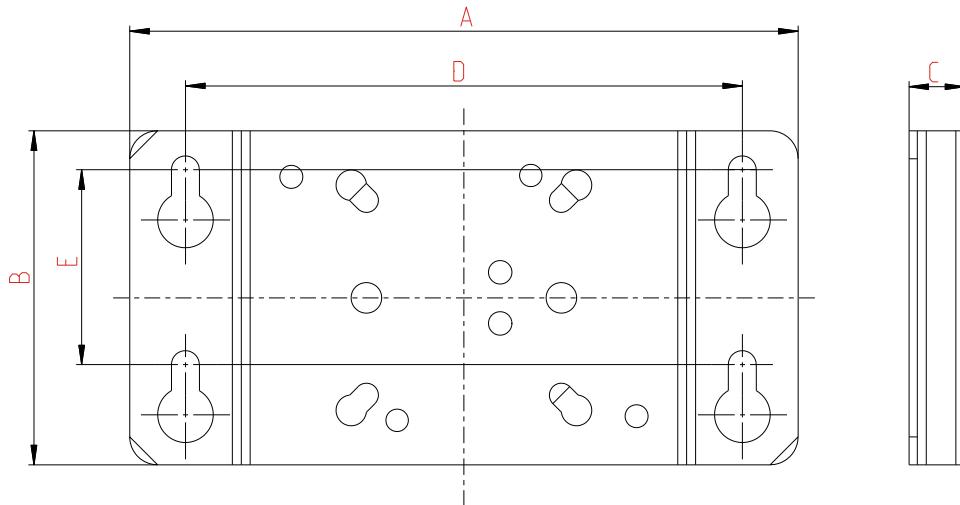
**OGM<sup>PLUS</sup>**



Type	A	B*	C	D	E	F	G
00112	41	52 / 66	G 1/8"	13	35	64	M4
00540	45	56 / 74	G 1/4"	17.8	40	73	M5
01200	53	64 / 82	G 3/4"	19	40	80	M5
02100	76	88.7 / 106.7	G 1 1/4"	30.5	60	108	M8
04500	76	88.7 / 106.7	G 1 1/4"	30.5	60	108	M8

\* with / without elbow-type connector for connecting cable

**Bracket dimensions**



Type	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]
00112	120	60	10	100	35
00540/01200	120	60	10	100	35
02100/04500	150	80	10	135	55



## Ordering Data:

Article	Code	Material No.
Oval gear meter	OGM PLUS 00110 VC FP PV KE-G1/8i-99-0001m-P	280141
	OGM PLUS 00110 VC EP VC KE-G1/8i-99-0001m-P	280151
	OGM PLUS 00500 VC FP PK KE-G1/4i-99-0005m-P	280043
	OGM PLUS 00500 VC EP PK KE-G1/4i-99-0005m-P	280073
	OGM PLUS 01200 VC FP PK KE-G3/4i-99-0010m-P	280044
	OGM PLUS 01200 VC EP PK KE-G3/4i-99-0010m-P	280074
	OGM PLUS 02100 VC FP PK KE-G5/4i-99-0020m-P	280045
	OGM PLUS 02100 VC EP PK KE-G5/4i-99-0020m-P	280077
	OGM PLUS 04500 VC FP PK KE-G5/4i-99-0050m-P	280046
	OGM PLUS 04500 VC EP PK KE-G5/4i-99-0050m-P	280078

**Extent of supply:** Oval gear meter, with integrated flow rate sensor  
operating instructions

**Required accessories:** Connection cable  
Wall-mounting bracket (excepting for panel fixing)  
Connecting adapter (for adaption)  
Connecting set



OGM code:

OGM PLUS	01200	VC	FP	PK	KE	G3/4	99	0010m	P
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1.	<b>Designation</b>	OGM PLUS
2.	<b>Type</b>	00110 = for pump 5/11 l/h 00500 = for pump 30/50 l/h 01200 = for pump 120 l/h 02100 = for pump 210 l/h 04500 = for pump 450 l/h
3.	<b>Housing Material</b>	VC = PVC
4.	<b>Sealing Material</b>	FP = Viton B EP = EPDM
5.	<b>Oval Wheel Material</b>	PV = PVDF (only for type 00112) VC = PVC (only for type 00112) PK = PEEK (type 00540 - 04500)
6.	<b>Axes Material</b>	KE = Ceramics
7.	<b>Connecting thread</b>	G1/8, G1/4, G3/4, G5/4
8.	<b>Connecting</b>	99 = without connection
9.	<b>Pulse rate</b>	0001m = 1 ml/pulse 0005m = 5 ml/pulse 0010m = 10 ml/pulse 0020m = 20 ml/pulse 0050m = 50 ml/pulse other possible pulse rates: 2600p = 2600 pulses/l 0820p = 820 pulses/l 0450p = 450 pulses/l 0300p = 300 pulses/l 0075p = 75 pulses/l
10.	<b>Halbleiterübergang</b>	P = PNP (N = NPN)

**Accessories**



**Article / designation**

**Material No.**

**Connection cable** OGM<sup>PLUS</sup> – EcoAdd  
length: 5 m

252084

**Connection cable** OGM<sup>PLUS</sup> – PLC  
(for pulse evaluation via PLC)  
length: 5 m

418439006

**Connection cable** OGM<sup>PLUS</sup> – Dongle Plate  
for EMP IV E60<sup>PLUS</sup> (for pulse evaluation via metering  
pump with Dongle Plate)  
length: 5 m

418439005



**Connecting adapter**  
(for one side)

including o-ring and hose connection material (except for  
280083)

OGM 00112 1/8-3/8-PV FP/EP-21

280080

OGM 00540 1/4-5/8-PV FP/EP-50

280081

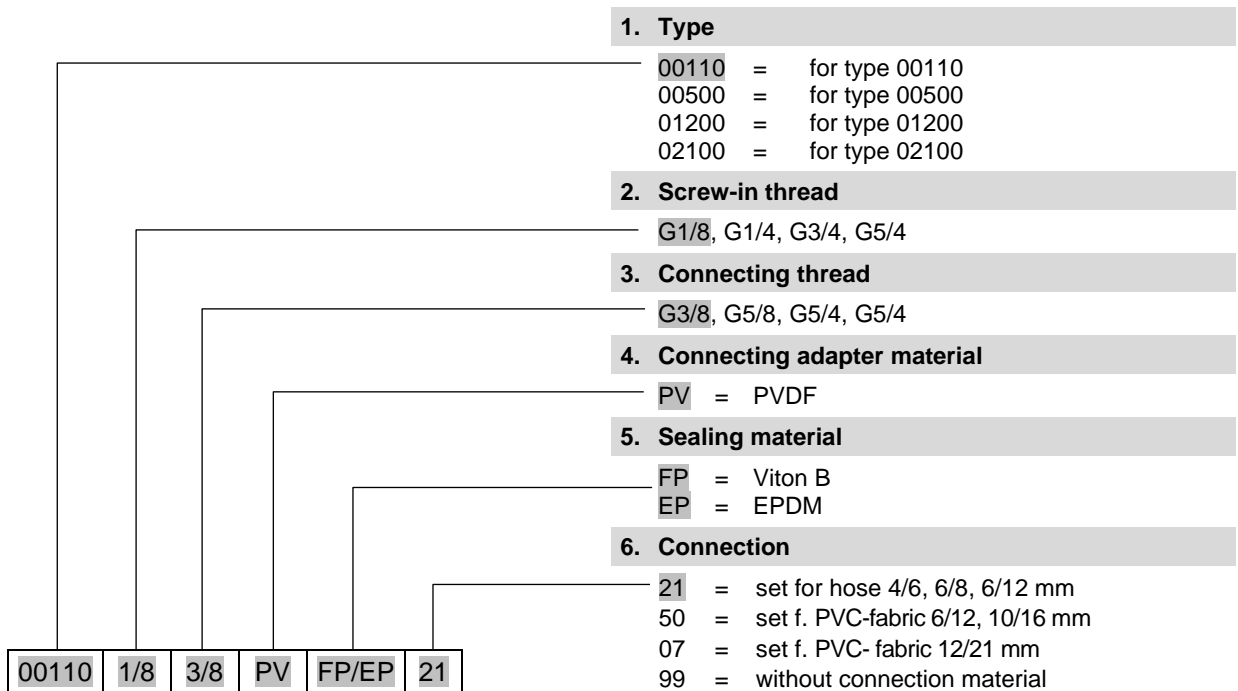
OGM 01200 3/4-5/4-PV FP/EP-07

280082

OGM 02100/04500 5/4-5/4-PV FP/EP-99

280083

(hose connection material has to be ordered separately)



<b>Article / designation</b>	<b>Material No.</b>
 <p><b>Wall-mounting bracket</b> (including fixing bolts) for OGM type 00112 / 00540 / 01200 for OGM type 02100 / 04500</p>	<p>280084 280085</p>
<p><b>Connecting sets</b></p>	
 <p>Connecting set Di/Da 5/8-G3/8-PVDF-NA Connecting set Di/Da 4/6-6/8-6/12-G3/8-PV-NA Connecting set Di/Da 5/8-G5/8-PVDF-NA Connecting set Di/Da 4/6-6/8-6/12-G5/8-PV-NA Connecting set PVDF for hose 1¼" – 12/21 mm</p>	<p>252103 252138 252111 252140 249258</p>
<p><b>Connecting set PVDF for hose 1¼" – 19/27 mm</b> consisting of:</p>	
 <p>Union nut PVDF G 1¼"</p>	<p>415099072</p>
 <p>Pressure hose nozzle PVDF for hose NW 20/22</p>	<p>34950199</p>
 <p>Hose clip for hose AD 20-32</p>	<p>415013305</p>
<p><b>Connecting set PVDF for hose 1¼" – 25/34 mm</b> consisting of:</p>	
 <p>Union nut PVDF G 1¼"</p>	<p>415099072</p>
 <p>Pressure hose nozzle PVDF for hose NW 25/27</p>	<p>34950201</p>
 <p>Hose clip for hose AD 25-40</p>	<p>415013306</p>
<p><b>Reinforcing Cover</b></p>	
 <p>for OGM<sup>PLUS</sup> 280045 and 280046 in case of pressure peaks &gt; 10 bar Hexagon head screw M8 x 40, V2A (4 pices required)</p>	<p>38006036 413000320</p>
<p>Washer 8.4 x 17 x 1.6, V2A (4 pices required)</p>	<p>413500363</p>



**Article / designation**

**Material No.**

**OGM Commander Interface**

280094

for calibration and parameterisation of OGM<sup>PLUS</sup> via PC  
incl. software and serial connection cable RS-232

**PC connection cable, USB / RS-232**







418832011

**Adjustment of number of pulses (customer request)**

on request



**Spare Parts:**

		Type 00110		Type 00500	Type 01200	Type 02100	Type 04500
		Spare parts are <b>not</b> compatible with previous versions.		Spare parts are compatible with previous version.			
PVC cover with electronics		280189		280091	280092	280093 (programmed to 210 l)	
The OGM <sup>PLUS</sup> contains 1 oval wheel and 1 oval wheel <b>with</b> magnet		<b>PVC</b>	<b>PVDF</b>	<b>PEEK</b>	<b>PEEK</b>	<b>PEEK</b>	<b>PEEK</b>
Oval wheel		38006046	38006043				
Oval wheel <b>with</b> magnet		38006044	38006041				
Oval wheel				38006018	38006023	38006029	38006033
Oval wheel <b>with</b> magnet				38006049	38006066	38006051	38006052
Cover seal <b>FPM</b> <b>EPDM</b>		O-ring 35 x 2,5 417003356 417001330		O-ring 40 x 2 417003411 417001365		O-ring 417003415 (65 x 2,5) 417001519 (64,77 x 2,62)	