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having established that the Measuring instrument meets the applicable
requirements of Directive 2004/22/EC, to:

Manufacturer GFO Europe B.V.
Magnesiumstraat 14
6031 RV Nederweert
The Netherlands

Measuring instrument **A Rotary Displacement Gas Meter**

Type : GFO-RM
Destined for the measurement of : Gas volume
Accuracy class : Class 1,0
Environment classes : M2 / E1
Temperature range : -25 °C / +55 °C
Maximum pressure : 20 bar(g)

Further properties are described in the annexes:
- Description T10620 revision 0;
- Documentation folder T10620-1.

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1 General information about the gas meter

All properties of the gas meter, whether mentioned or not, shall not be in conflict with the legislation.

1.1. Essential parts

1.1.1 Measuring part

The dimensions of the rotors are presented in the table below, while also the appertaining volumes are indicated.

Cyclic volume (V) [dm ³]	Rotor height [mm]	Rotor thickness [mm]	Rotor length [mm]
0,26	67	30	65
0,69	89	41	100
1,11	89	41	160
2,31	131	60	155
2,98	131	60	200
3,88	131	60	130 (Sync)
5,97	131	60	200 (Sync)

Remarks:

- The versions with the indication "Sync" concern twin versions, which are identified on the type plate with an additional "S" in the G-value (for example G400S).
- See the drawings in document no. 10620/0-05 for all the essential dimensions.

1.1.2 Bearings of the rotors

The bearings of the rotors are presented in the exploded view of document no. 10620/0-04 and have the following characteristics:

Cyclic volume V [dm ³]	Front bearing		Rear bearing	
	inner diameter d [mm]	outer diameter D [mm]	inner diameter d [mm]	outer diameter D [mm]
0,26	5	13	4	12
0,69	10	22	6	16
1,11	10	22	6	19
2,31	15	35	12	24
2,98	15	35	12	28
3,88	15	35	12	24
5,97	15	35	12	24

1.2. Essential characteristics

The meter has the characteristics as given in the next table.

volume V [dm ³]	G-value	Q _{max} [m ³ /h]	Q _t [m ³ /h]	minimum Q _{min} [m ³ /h]	DN-size
0,26	G10	16	1,25	0,5	40
	G16	25	1,25	0,5	40
	G25	40	2	0,5	40
0,69	G16	25	1,25	0,65	40 / 50
	G25	40	2	0,65	40 / 50
	G40	65	3,25	0,65	40 / 50
	G65	100	5	0,65	40 / 50
1,11	G40	65	3,25	1	50 / 80
	G65	100	5	1	50 / 80
	G100	160	8	1	50 / 80
2,31	G65	100	12,5	1,6	80 / 100
	G100	160	12,5	1,6	80 / 100
	G160	250	12,5	1,6	80 / 100
2,98	G100	160	8	2,5	80 / 100
	G160	250	12,5	2,5	80 / 100
	G250	400	20	2,5	80 / 100
3,88*	G250S	400	20	4	100 / 150
	G400S	650	32,5	4	100 / 150
5,97*	G400S	400	32,5	6,5	150
	G650S	650	50	6,5	150

* Twin rotor version named "G...S".

The flow rate range shall fulfill the following conditions:

Class	Q _{max} / Q _{min}	Q _{max} / Q _t
1,0	≥ 20	≥ 5

1.3. Essential shapes

1.3.1 Name plate

The name plate is bearing at least, good legible, the information as stated below:

- a) CE marking according MID article 17.
- b) The EC type-examination certificate number **T10620**;
- c) The manufacturer's trade mark or his trade name;
- d) The serial number of the meter and its year of manufacture;
- e) Accuracy class;
- f) Q_{max} , Q_{min} and Q_t in m^3/h ;
- g) $p_{max} = \dots$ MPa (or kPa, or Pa, or bar);
- h) The nominal value of the cyclic volume: $V = \dots$ dm^3 ;
- i) The meter temperature class (minimum and maximum working temperature);
- j) The volume per pulse output;

An example of the markings is shown in document no. 10620/0-03.

1.3.2 Seals

See chapter 2.

1.4. Conditional parts

1.4.1 Construction

In addition to the essential parts as mentioned at 1.1, the meter contains at least the following conditional parts:

- housing;
- transmission;
- register;
- front and back cover;
- synchronization wheels;
- pressure measuring points.

The meter can also be provided with low frequency impulse outputs.

1.4.2 Housing

The gas meter has a housing, which has sufficient tensile strength. The meter housing is made of aluminium with an eloxised exterior. There are two possible flange types: semi circle and a square shape. The essential characteristics of the housing are given in document no. 10620/2-05.

1.4.3 Transmission

The transmission between the measuring part and the register is executed by means of a magnet coupling. Between measuring part and magnetic coupling a set of adjustment wheels is present. A drawing of the gear transmission is presented in document no. 10620/0-06. A table of possible adjusting wheels is given in document no. 10620/0-07.

1.4.4 Register

The measured volume is presented by means of a mechanical register.

See document no. 10620/0-06. The register is built up as given in the table below:

Size	Number of drums		Control-element [m3]
	before the comma	behind the comma	
G10 – G65	6	2	0,002
G100 – G650	7	1	0,02

1.4.5 Front and rear cover

The entrance to the transmission from the measuring part to the register is shielded by means of a front and a rear cover (see document no. 1062/0-05).

1.4.6 Synchronization wheel

The rotors are coupled together mechanically by means of a synchronization wheel.

1.4.7 Pressure tapping's

The housing contains a pressure tapping to determine the inlet pressure. This pressure tapping is provided with the indication " $p_{m/r}$ ". A second pressure tapping at the outlet is provided with the indication "p".

1.4.8 Low frequency impulse outputs (optional)

The meter can be provided with low frequency impulse outputs (reed contacts).
The impulse value is stated on the meter.

1.5. Non-essential parts

1.5.1 Oil filling plug, drain plug and sight glass for lubrication and checking oil level in the meter.

1.5.2 Temperature points.

2 Seals

The following items of the meter are sealed:

- The nameplate of the meter.
- The entrance to the measuring part and adjustment wheels is sealed with one or more seals.
- The back and front cover of the meter. The back cover contains an extra centre cover plate which is also sealed.
- The entrance to the register is sealed with one or more seals.
- The register is sealed to the measuring part.
- If a separate nameplate is used to show the pulse value this nameplate has to be sealed.

See document no. 10620/0-02 for an example of the seals.