

# Dosing pump series G<sup>TM</sup> M

- Flow rate up to 500 l/h • Pressure up to 12 bar • Mechanically actuated diaphragm
- Variable eccentric drive mechanism • Homogeneous or heterogeneous multiplexing capabilities



## Main technical characteristics

- Flow rate up to 500 l/h
- Pressure up to 12 bar
- Mechanically actuated PTFE diaphragm
- Stroke adjustment by variable eccentric minimising pulsation and shock
- Maximum temperature of pumped liquid: 40 °C
- Adjustment of flow rate while running or stopped: from 0 to 100%
- Stroke adjustment lock
- Accuracy:  $\pm 2\%$  of rated flow from 10 to 100% stroke
- Suction lift: up to 4 m water
- High vacuum suction lift option: 9 m water (consult us)
- Maximum suction pressure: 2 bar
- Aluminium alloy housing
- Life lubrication
- Options: double diaphragm, VARIPULSE<sup>®</sup> controller for automatic adjustment and control of flow rate, stroke counter, electronic servomotor
- Homogeneous or heterogeneous multiplexing capabilities
- Integrable into an EH&S protection enclosure



Dosing pump series G<sup>TM</sup> M

## Electrical characteristics of motors

### General characteristics:

- Power supply:
  - 230/400 V - 50/60 Hz - three-phase
  - 230 V - 50 or 60 Hz - single-phase
  - 115 V - 50 or 60 Hz - single-phase
- Degree of protection: IP55, tropicalized, insulation: class F
- In compliance with European and international standards
- **Vertical** motor mounting, F130 flange, shaft end 14x30:
  - Standard on GM 400 three-phase and GM 500
  - Option on GM 90 to GM 330
- **Horizontal** motor mounting, F130 flange, shaft end 14x30:
  - Standard on all multiplex models
  - Option on GM 2 to GM 500 simplex

## Accessories

- The Serie G<sup>TM</sup> M pumps are supplied with the accessories described in the opposite chart (except for 316L S.S. version)
- Available on request: pulsation dampeners, safety or back pressure valves, consult us.

## Construction of liquid ends

| Liquid end components / Versions | Polypropylene (PP) | PVDF      | S. Steel (316L) |
|----------------------------------|--------------------|-----------|-----------------|
| <b>GM 2 to GM 50 versions</b>    |                    |           |                 |
| Liquid end body                  | PP                 | PVDF      | 316L            |
| Valve body                       | PVDF               | PVDF      | 316L            |
| Seats                            | Aflas              | PTFE      | 316L            |
| Balls                            | Ceramic            | Ceramic   | 316L            |
| Connections                      | PVDF               | PVDF      | 316L            |
| Diaphragm                        | PTFE/PVDF*         | PTFE/PVDF | PTFE/316L       |
| Seals                            | Viton              | Viton     | Viton           |
| <b>GM 90 to GM 500 versions</b>  |                    |           |                 |
| Liquid end body                  | PP                 | PVDF      | 316L            |
| Valve body                       | PVDF               | PVDF      | 316L            |
| Seats                            | PE                 | PVDF      | 316L            |
| Balls                            | Glass              | Ceramic   | 316L            |
| Connections                      | PVC                | PVDF      | 316L            |
| Diaphragm                        | PTFE/PP            | PTFE/PVDF | PTFE/316L       |
| Seals                            | Viton              | FEP       | Viton           |

\* except on GM 2 to GM 10 = PTFE/PVC

## ACCESSORIES

For PP, PVDF versions:

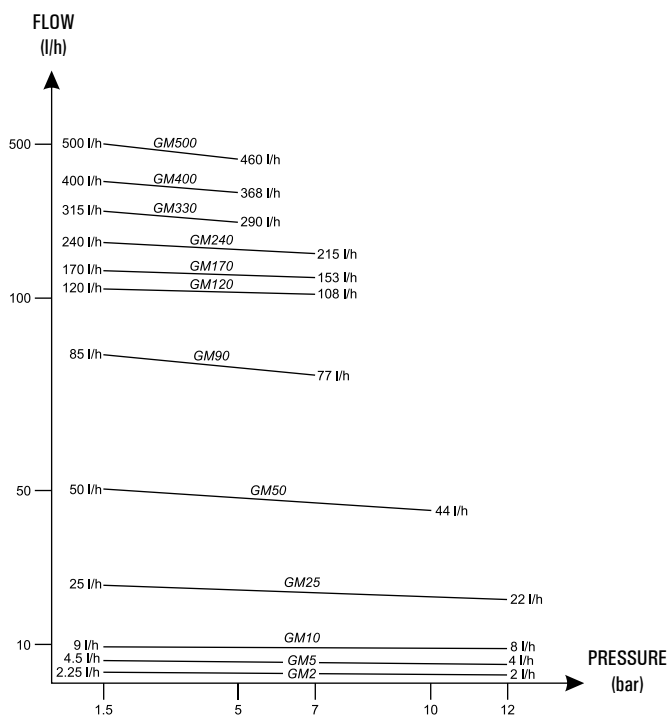
- GM 2 to GM 50 versions: pump supplied with 1 injection nozzle, 1 foot valve + 1 weight, 1 flexible polyethylene hose (6 m) and 1 reinforced PVC hose (6 m),
- GM 90 to GM 500 versions: accessories available on request.

## Performances

| Type   | Flow max.<br>(l/h) <sup>(1)</sup><br>at 1.5 bar | Pressure<br>max.<br>(bar) | Stroke<br>length<br>(mm) | Stroke<br>speed<br>(spm) <sup>(1)</sup> | Motor<br>speed<br>(rpm) <sup>(1)</sup> | Motor power (W) |       |
|--------|-------------------------------------------------|---------------------------|--------------------------|-----------------------------------------|----------------------------------------|-----------------|-------|
|        |                                                 |                           |                          |                                         |                                        | 1 ph.           | 3 ph. |
| GM 2   | 2.25                                            | 12                        | 4                        | 36                                      | 1500                                   | 180             | 90    |
| GM 5   | 4.5                                             | 12                        | 4                        | 72                                      | 1500                                   | 180             | 90    |
| GM 10  | 9                                               | 12                        | 4                        | 144                                     | 1500                                   | 180             | 90    |
| GM 25  | 25                                              | 12                        | 6                        | 72                                      | 1500                                   | 180             | 90    |
| GM 50  | 50                                              | 10                        | 6                        | 144                                     | 1500                                   | 180             | 90    |
| GM 90  | 85                                              | 7                         | 6                        | 72                                      | 1500                                   | 180             | 90    |
| GM 120 | 120                                             | 7                         | 8                        | 72                                      | 1500                                   | 180             | 90    |
| GM 170 | 170                                             | 7                         | 6                        | 144                                     | 1500                                   | 180             | 90    |
| GM 240 | 240                                             | 7                         | 8                        | 144                                     | 1500                                   | 180             | 120   |
| GM 330 | 315                                             | 5                         | 8                        | 144                                     | 1500                                   | 180             | 120   |
| GM 400 | 400                                             | 5                         | 10                       | 144                                     | 1500                                   | 180             | 250   |
| GM 500 | 500                                             | 5                         | 10                       | 180 <sup>(2)</sup>                      | 1500                                   | 250             | 250   |

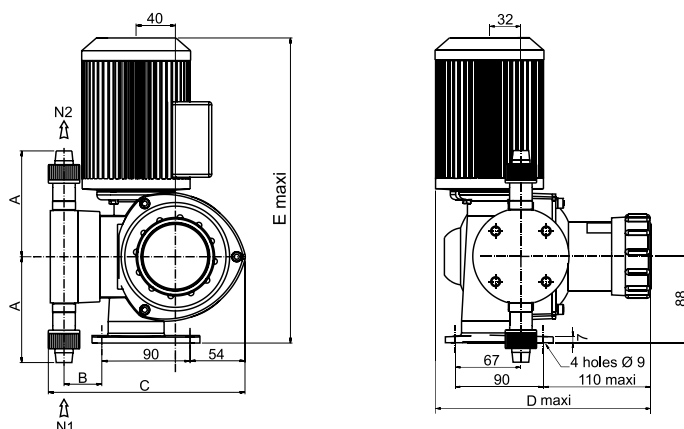
<sup>(1)</sup> Values with motor at 50 Hz (multiply by 1.2 for 60 Hz)

<sup>(2)</sup> Do not use with 60 Hz motor



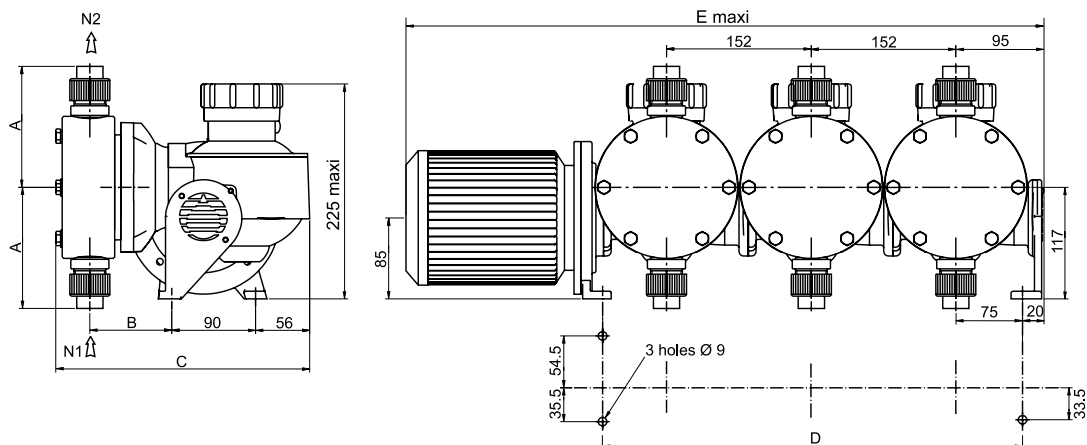
## Dimensions and connections

**Simplex version as a standard:** vertical motor (SX)



**Multiplex version as a standard:** horizontal motor (DX - TX)

**Simplex version as an option:** horizontal motor (HX)



## Dimensions and connections

### GM 2 to GM 50 (size in mm)

| Versions                              |      | Connection | A   | B  | C   | D                  | E                  |
|---------------------------------------|------|------------|-----|----|-----|--------------------|--------------------|
| <b>Simplex SX</b><br>vertical motor   | PP   | T          | 91  | 40 | 200 | 220                | 312                |
|                                       | PVDF | T          |     |    |     |                    |                    |
|                                       | 316L | N          | 102 | 39 |     |                    |                    |
| <b>Simplex HX</b><br>horizontal motor | PP   | T          | 91  | 39 | 205 | 142 <sup>(1)</sup> | 395 <sup>(1)</sup> |
|                                       | PVDF | T          |     |    |     |                    |                    |
|                                       | 316L | N          | 102 |    |     |                    |                    |
| <b>Duplex DX</b><br>horizontal motor  | PP   | T          | 91  | 39 | 205 | 294                | 547                |
|                                       | PVDF | T          |     |    |     |                    |                    |
|                                       | 316L | N          | 102 |    |     |                    |                    |
| <b>Triplex TX</b><br>horizontal motor | PP   | T          | 91  | 39 | 205 | 445                | 698                |
|                                       | PVDF | T          |     |    |     |                    |                    |
|                                       | 316L | N          | 102 |    |     |                    |                    |

<sup>(1)</sup> For GM 25 and GM 50 models, D=143 and E=450

### Connections:

**T** = Hose 6x8, 6x12 and G 1/2" male  
**N** = Threaded socked 1/2" BSP female  
**Q** = Female socket for DN15 rigid tubing (PVC)

### GM 90 to GM 240<sup>(2)</sup> (size in mm)

| Versions                       |      | Connection | A   | B  | C   | D   | E   |
|--------------------------------|------|------------|-----|----|-----|-----|-----|
| Simplex SX<br>vertical motor   | PP   | Q          | 127 | 82 | 272 | 220 | 312 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |
| Simplex HX<br>horizontal motor | PP   | Q          | 127 | 80 | 277 | 142 | 395 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |
| Duplex DX<br>horizontal motor  | PP   | Q          | 127 | 80 | 277 | 294 | 547 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |
| Triplex TX<br>horizontal motor | PP   | Q          | 127 | 80 | 277 | 445 | 753 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |

<sup>(2)</sup> Triplex (TX) version is not available for GM 240 model

### GM 330 to GM 500 (size in mm)

| Versions                       |      | Connection | A   | B  | C   | D   | E   |
|--------------------------------|------|------------|-----|----|-----|-----|-----|
| Simplex SX<br>vertical motor   | PP   | Q          | 127 | 82 | 272 | 220 | 312 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |
| Simplex HX<br>horizontal motor | PP   | Q          | 127 | 80 | 277 | 142 | 395 |
|                                | PVDF | N          | 131 |    |     |     |     |
|                                | 316L | N          |     |    |     |     |     |

## Weight and packing

| Versions                               |                          | Simplex         | Duplex          | Triplex         |
|----------------------------------------|--------------------------|-----------------|-----------------|-----------------|
| <b>Net Weight (kg)<sup>(1)</sup></b>   | with plastic liquid end  | 7               | 12              | 19              |
|                                        | with S. Steel liquid end | 13              | 24              | 33              |
| <b>Gross Weight (kg)<sup>(1)</sup></b> | with plastic liquid end  | 9               | 17              | 24              |
|                                        | with S. Steel liquid end | 15              | 29              | 38              |
| <b>Packing (L x W x H - mm)</b>        |                          | 400 x 300 x 490 | 800 x 600 x 620 | 800 x 600 x 620 |

<sup>(1)</sup> Approximately

## G<sup>TM</sup> M pump servomotors

These electronic servomotors are intended to replace the manual stroke control by an automatic system.

- Supply: 230 V single-phase (option: 110 V single-phase)
- Frequency: 50/60 Hz
- Enclosure: IP65
- Visual position indicator
- Emergency manual control
- Control signal: 0-20 mA or 4-20 mA (option: 0-10 V or 2-10 V)
- Recopy potentiometer: 0-20 mA or 4-20 mA (option: 0-10 V or 2-10 V)

(see data-sheet ref. 160 7001 201N)

## VARIPULSE<sup>®</sup> control module

A simple unit, very economical and reliable, to provide speed variation in proportion to an analogue signal.

Two versions available:

- Frequency variation
- Three operating modes
- Supply voltage: 220 V (-7% to 10%) single-phase mains for 230 V three-phase motor (option: 400 V three-phase mains)
- Frequency: 50/60 Hz
- Power: 0.09 to 0.25 kW
- Enclosure: IP55

(see data-sheet ref. 160 7003 201N)

VARIPULSE<sup>®</sup>  
control module



Heterogeneous G<sup>TM</sup> M Triplex dosing pump  
with an electronic servomotor

## Stroke counter by magnetic probe detector

- Supply: from 10 to 30 VCC
- Residual undulation: < 10%
- Permanent output current: 300 mA maximum
- CEM according to EN 60 947-5-2
- Protection: IP67
- Output: PNP or NPN
- Cable length: 2 m
- Wires section: 0.25 mm<sup>2</sup>



A network of over 100 distributors and sales and service offices.

To find your local representative, visit our website:

**www.miltonroy-europe.com**

G<sup>TM</sup> M - Ref. 160 5208 201N - 03/07 - Rev. K

All rights reserved for modification without prior notice - SIREN 663 650 547 B - RC Evreux - Printed in France.

Your partner in Germany:



**MEDOTEC**

Mess- und Dosiertechnik GmbH

Dörmgesstr. 6, 41238 Mönchengladbach

Telefon: +49 (0) 2166 - 18 99 90

Telefax: +49 (0) 2166 - 18 99 91

Email: mail@medotec.de

**www.medotec.de**