

# SERIES 2 SOLENOID DIAPHRAGM PUMPS



# SOLENOID DIAPHRAGM PUMPS

Series 204.1 solenoid diaphragm pumps are electronically controlled, versatile dosing pumps for maximum operational reliability in robust industrial design. Performance range from 0.4 l/h to 35 l/h at pressures up to max. 10 bar.

## APPLICATIONS

For exact process-dependent controlled dosing of slightly outgassing media in all areas of industry.

## OVERVIEW OF ADVANTAGES

- directly controllable
- PROFIBUS DP - Interface
- High dosing accuracy
- High diaphragm life\*
- High quality materials
- linear control characteristic
- Low maintenance
- Low operating costs
- Leakage free
- Safe to run dry
- Easy to use
- Low weight

\*in comparison to conventional working diaphragms

# DESIGNS

## MATERIALS

The high quality of the materials guarantees the reliable long-term use. The optimum material is available for every requirement.

## PUMP BODY AND VALVES

PVC, PP, PVDF, 1.4571, PP-FRP, PVDF-FRP

## VALVE BALLS

PTFE, 1.4401, Al<sub>2</sub>O<sub>3</sub>

## VALVE SEALS

EPDM, FPM, FEP-covered, FFKM

## WORKING DIAPHRAGM

PTFE-faced

## MANUAL VENTING VALVE

PP-FRP, PVDF-FRP

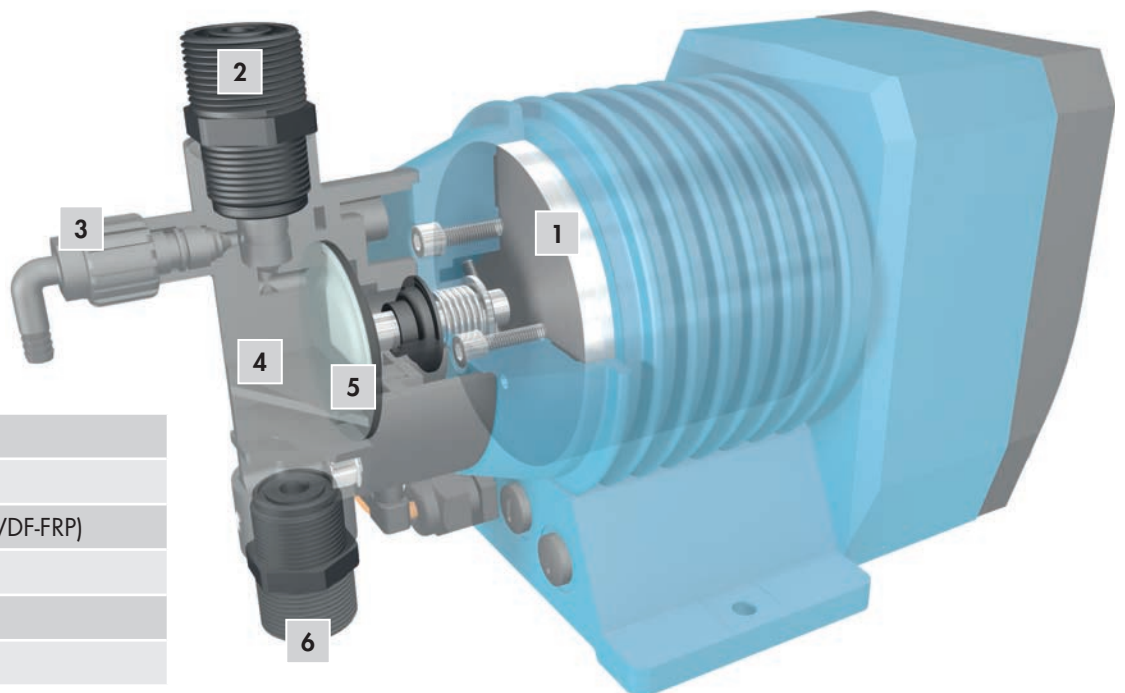
## DRIVE

The drive unit of the solenoid diaphragm pumps consists of a powerful lifting magnet in a robust plastic housing. The non-rotating solenoid is equipped with thermal overload protection.

## ACCESSORIES

- Control cable
- Flow controller
- Flow meter
- PROFIBUS Y-Distributor
- PROFIBUS Terminal resistor

For optimal installation of dosing pumps, all necessary accessories such as valves, pulsation dampers, dosing valves, dosing tanks, flow monitors, etc. can be ordered at **sera**.



1	Drive magnet
2	Pressure valve
3	Vent valve (PP, PVDF-FRP)
4	Pump body
5	Diaphragm
6	Suction valve



# TECHNICAL DATA R204.1

PUMP DATA			R 204.1-...				
			1,2e	2,4e	7,0e	10e	35e
Permissible pressure $p_{2max}$ at the pump outlet	bar		10	10	10	6	1,5
Nominal capacity QN at $p_{2max}$	l/h	50/60 Hz	0-1,2	0-2,4	0-7	0-10	0-35
Quantity per stroke	ml/stroke (100%)		0,13	0,27	0,78	1,11	3,89
Max. suction height	mWC		2	2	3	3	3
Min./max. permissible pressure at the pump inlet	bar	$p_{1min/max}$	-0,2/0	-0,2/0	-0,3/0	-0,3/0	-0,3/0
Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	5	10
Nominal stroke frequency	1/min	50/60 Hz	150	150	150	150	150
Weight approx.	kg		4,1	4,1	4,8	4,8	5,1

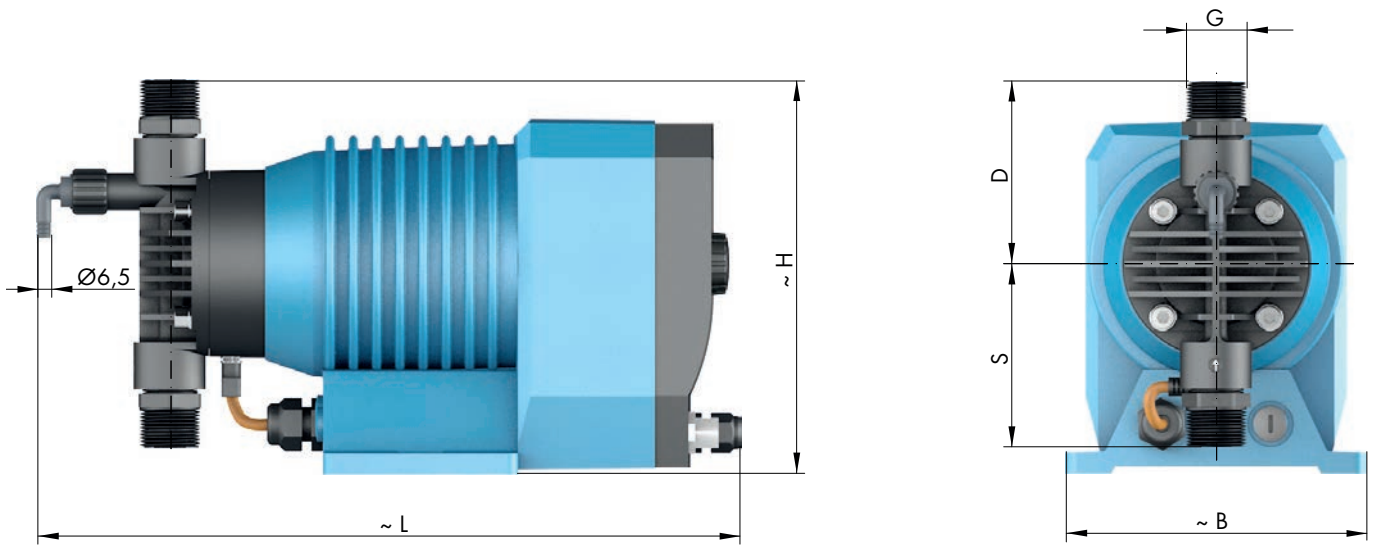
ELECTRICAL DATA		R 204.1-...e
Middle power draw	W	20
Nominal voltage	V	100 - 240
Frequency	Hz	50/60
Inlet voltage, control input	V DC	5...30
Minimum contact signal time	ms	55
Analogue input resistance	$\Omega$	100
Current Consumption during stroke	A (at 230V)	max. 1,0
Recommended fuse (circuit breaker)		C2A
Insulation class	ISO	F
Enclosure	IP	65

# TECHNICAL DATA C204.1

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Recommended nominal diameter DN of the connecting pipes	mm		5	5	5	5	10
Nominal stroke frequency	1/min	50/60 Hz	150	150	150	150	150
Weight approx.	kg		4,1	4,1	4,8	4,8	5,1

ELECTRICAL DATA		C 204.1-...e
Middle power draw	W	33
Nominal voltage	V	100 - 240
Frequency	Hz	50/60
Inlet voltage, control input	V DC	5...30
Minimum contact signal time	ms	55
Analogue input resistance	$\Omega$	100
Current Consumption during stroke	A (at 230V)	max. 1,0
Digital output internal/external supply		PNP max. 15V DC, 50mA / max. 30V DC, 350mA
Recommended fuse (circuit breaker)		C2A
Insulation class	ISO	F
Enclosure	IP	65

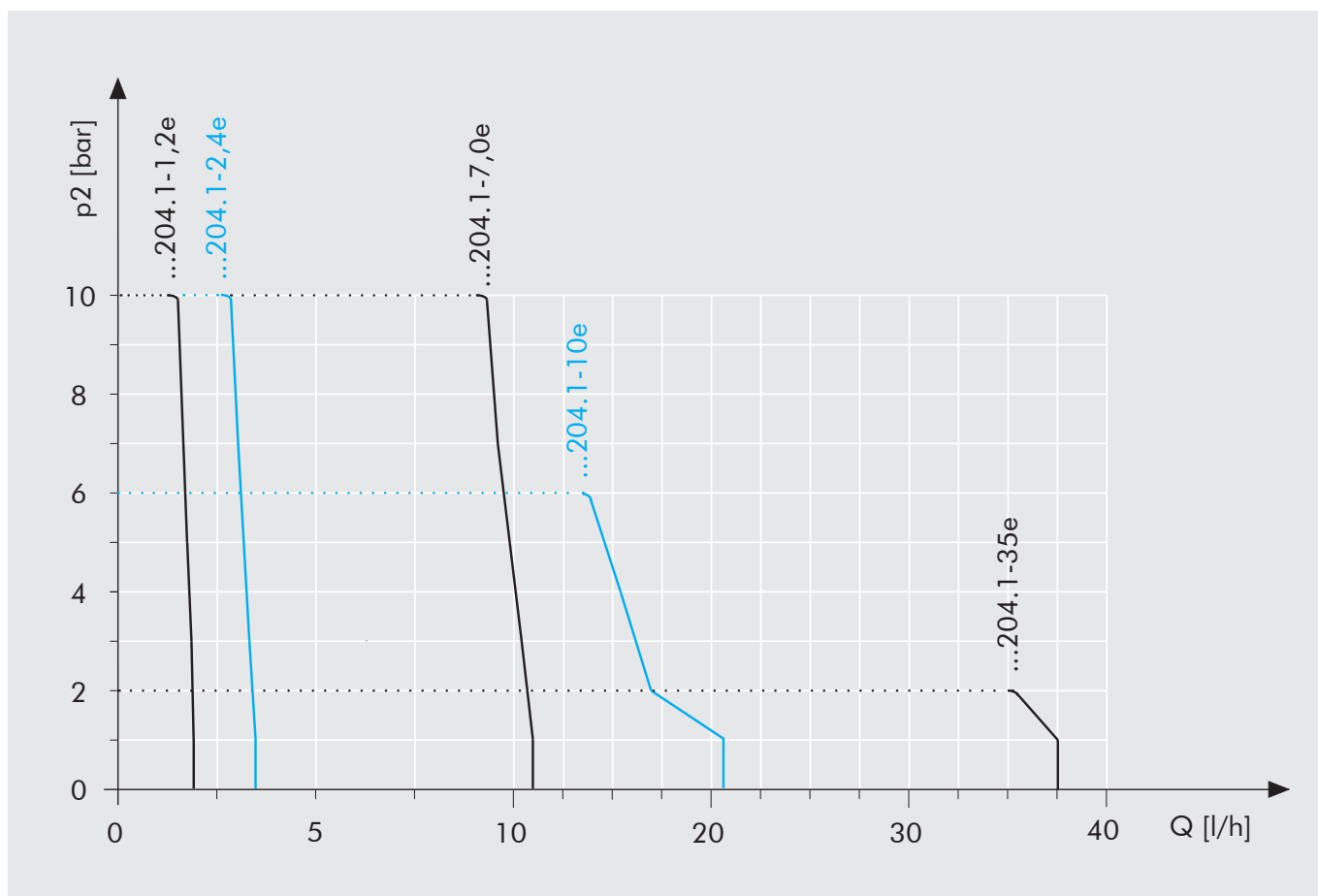
# DIMENSIONS



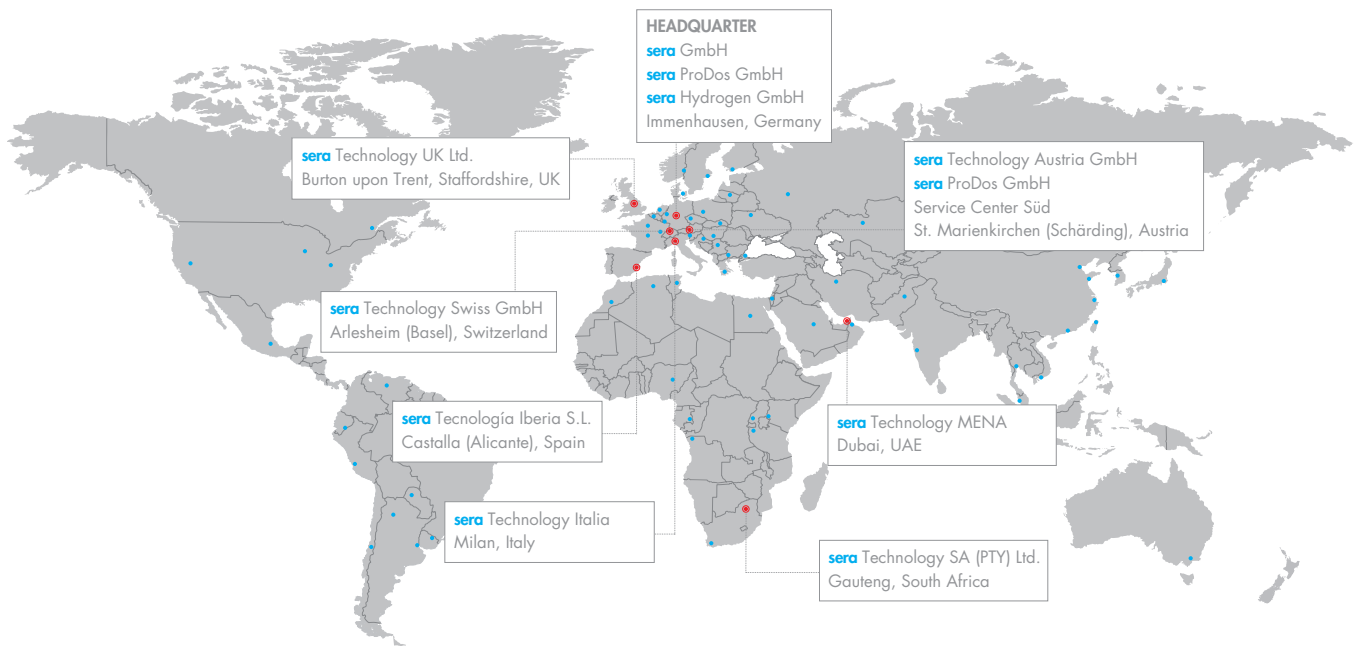
	...-1,2e	...-2,4e	...204.1-... ...-7,0e	...-10e	...-35e
<b>SUCTION VALVES</b>					
<b>DN</b> Nominal width	5	5	5	5	10
<b>G</b> Connection thread	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$
<b>S</b> PP-FRP / PVDF-FRP	80	80	80	80	75
<b>S</b> PVC-U	70	70	70	70	80
<b>S</b> 1.4571	70	70	70	70	76
<b>PRESSURE VALVES</b>					
<b>DN</b> Nominal width	5	5	5	5	10
<b>G</b> Connection thread	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$	G $\frac{3}{4}$
<b>D</b> PP-FRP / PVDF-FRP	80	80	80	80	75
<b>D</b> PVC-U	70	70	70	70	80
<b>D</b> 1.4571	70	70	70	70	76
<b>MAX. TOTAL HEIGHT</b>					
<b>H</b>	175	175	175	175	175
<b>MAX. TOTAL WIDTH</b>					
<b>B</b>	130	130	130	130	130
<b>MAX. TOTAL LENGTH</b>					
<b>L</b>	275	275	275	275	275
<b>L</b> (with vent valve)	305	305	305	305	—

(Measurements in mm)

# CHARACTERISTIC CURVES



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## WORKING FOR YOU ALL OVER THE WORLD

**sera GmbH**  
sera-Straße 1  
34376 Immenhausen  
Germany  
Tel.: +49 5673 999-02  
[info@sera-web.com](mailto:info@sera-web.com)

**sera ProDos GmbH**  
sera-Straße 1  
34376 Immenhausen  
Germany  
Tel.: +49 5673 999-02  
[sales.prodos@sera-web.com](mailto:sales.prodos@sera-web.com)

**sera Hydrogen GmbH**  
sera-Straße 1  
34376 Immenhausen  
Germany  
Tel.: +49 5673 999-04  
[sales.hydrogen@sera-web.com](mailto:sales.hydrogen@sera-web.com)

**sera ProDos GmbH Service Center Süd**  
Gewerbstraße 5  
4774 St. Marienkirchen bei Schärding  
Austria  
Tel.: +49 5673 999-02  
[sales.prodos@sera-web.com](mailto:sales.prodos@sera-web.com)

**sera Technology Austria GmbH**  
Gewerbstraße 5  
4774 St. Marienkirchen bei Schärding  
Austria  
Tel.: +43 771 131 7770  
[sales.at@sera-web.com](mailto:sales.at@sera-web.com)

**sera Technology Swiss GmbH**  
Altenmattweg 5  
4144 Arlesheim  
Switzerland  
Tel.: +41 615 114 260  
[sales.ch@sera-web.com](mailto:sales.ch@sera-web.com)

**sera Technology UK Ltd.**  
Unit 5, Granary Wharf Business Park  
Wetmore Road, Burton upon Trent  
Staffordshire DE14 1DU  
United Kingdom  
Tel.: +44 1283 753 400  
[sales.uk@sera-web.com](mailto:sales.uk@sera-web.com)

**sera Technology SA (PTY) Ltd.**  
Unit 3-4, Airborne Park  
Cnr Empire & Taljaard Str Bartletts  
Boksburg, 1459 Gauteng  
South Africa  
Tel.: +27 113 975 120  
[sales.za@sera-web.com](mailto:sales.za@sera-web.com)

**sera Tecnología Iberia S.L.**  
Calle Cocentaina nº8,  
03420 Castalla  
(Alicante)  
Spain  
Tel.: +34 666 024 388  
[sales.es@sera-web.com](mailto:sales.es@sera-web.com)

**sera Technology Italia**  
Milan  
Italy  
Tel.: +39 340 81 92 744  
[sales.it@sera-web.com](mailto:sales.it@sera-web.com)

**sera Technology MENA**  
Dubai  
UAE  
Tel.: +971 589 287 559  
[sales.mena@sera-web.com](mailto:sales.mena@sera-web.com)

[www.sera-web.com](http://www.sera-web.com)

