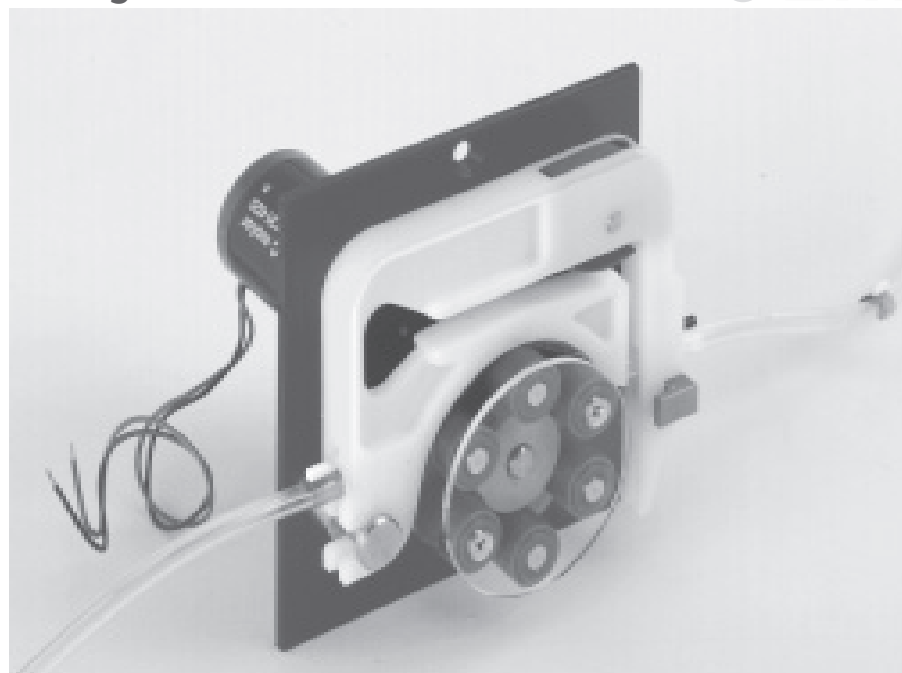
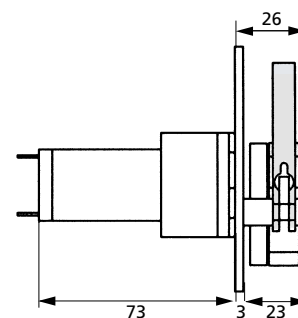


DC motor with gear box

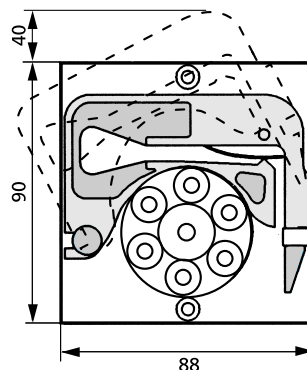
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

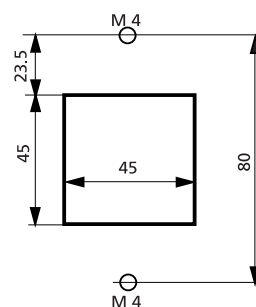
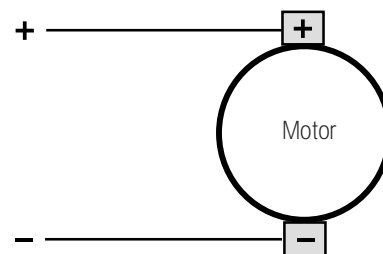


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA1-E/06/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	21.5 34.4 ml/min
Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	1
Pump rollers	6
Weight	0.350 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0014	1.14	0.09
0.19	0.0028	1.22	0.10
0.25	0.0048	1.30	0.11
0.38	0.011	1.42	0.13
0.44	0.014	1.52	0.15
0.51	0.019	1.65	0.17
0.57	0.024	1.75	0.19
0.64	0.030	1.85	0.21
0.76	0.042	2.06	0.25
0.89	0.057	2.29	0.29
0.95	0.064	2.54	0.33
1.02	0.073	2.79	0.37
1.09	0.083	3.17	0.43

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.43 = 34.4

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MS/CA1-E/06/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub> 24 V <sub>DC</sub>		ISM 246	ISM 245
		ISM 382	ISM 251

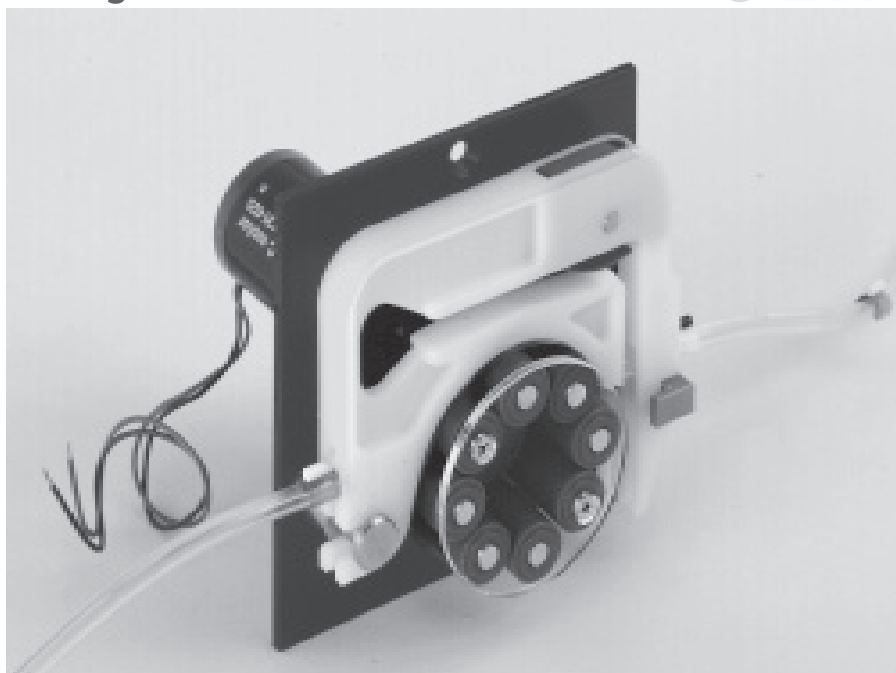
Data sheet

02.2.1

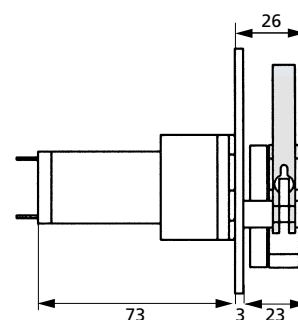
28.06.02

# DC motor with gear box

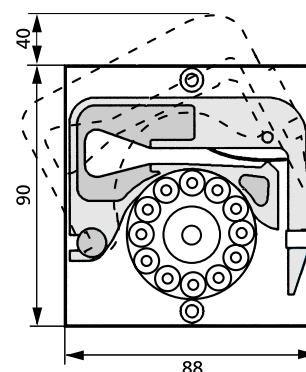
# OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

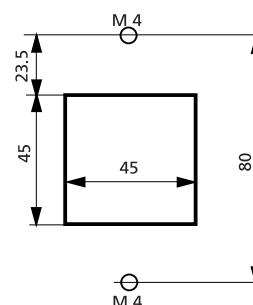
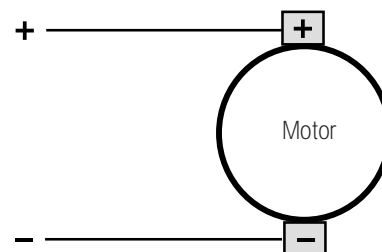


Diagram and electrical connections



**Please note**

The specifications depend on the **motor control** used by the customer.

### Technical specifications

Pump model	MS/CA1-E/08/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	17.5 28 ml/min
Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	1
Pump rollers	8
Weight	0.350 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

### Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0011	1.14	0.078
0.19	0.0023	1.22	0.088
0.25	0.0041	1.30	0.098
0.38	0.0094	1.42	0.11
0.44	0.013	1.52	0.13
0.51	0.017	1.65	0.15
0.57	0.021	1.75	0.16
0.64	0.026	1.85	0.17
0.76	0.036	2.06	0.20
0.89	0.049	2.29	0.24
0.95	0.056	2.54	0.27
1.02	0.063	2.79	0.31
1.09	0.072	3.17	0.35

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.35 = 28

Ask for the ISMATEC®  
 Pump Tubing Selection Guide.

### Ordering information

Nominal voltage	Type MS/CA1-E/08/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		ISM 302	ISM 301
24 V <sub>DC</sub>		ISM 303	ISM 243

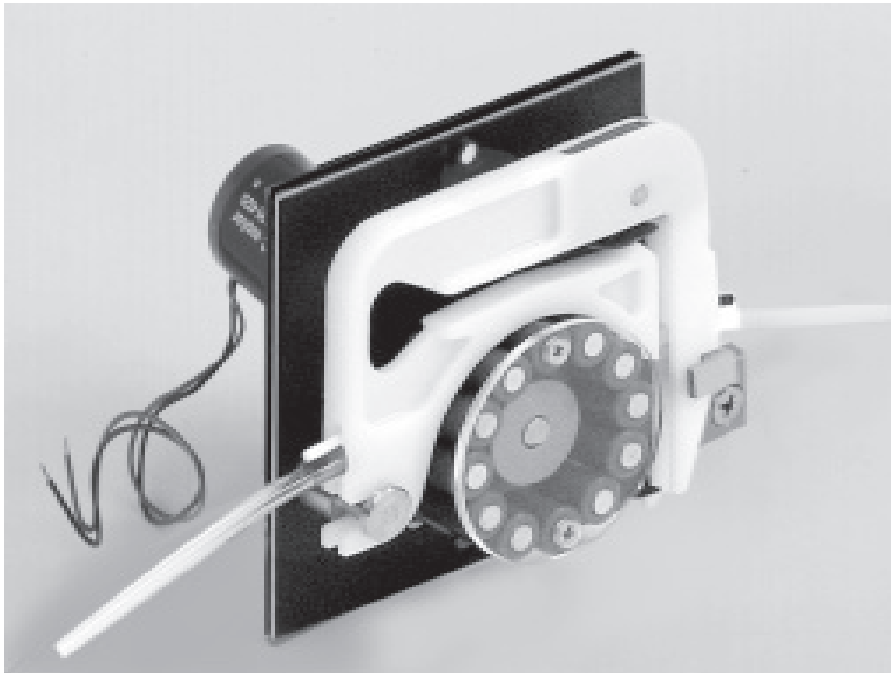
Data sheet

02.2.2

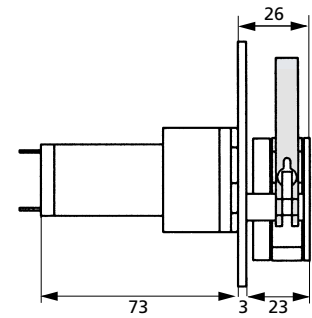
28.06.02

DC motor with gear box

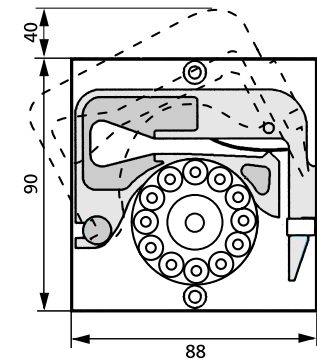
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

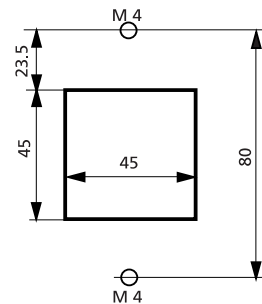
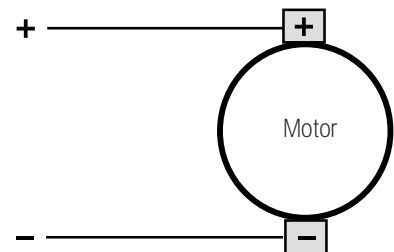


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA1-E/12/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	12 19.2 ml/min

Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	1
Pump rollers	12
Weight	0.350 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**

<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.00093	1.14	0.067
0.19	0.0021	1.22	0.075
0.25	0.0038	1.30	0.083
0.38	0.0088	1.42	0.094
0.44	0.012	1.52	0.10
0.51	0.016	1.65	0.12
0.57	0.019	1.75	0.13
0.64	0.024	1.85	0.13
0.76	0.033	2.06	0.15
0.89	0.044	2.29	0.17
0.95	0.050	2.54	0.19
1.02	0.056	2.79	0.21
1.09	0.063	3.17	0.24

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.24 = 19.2

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MS/CA1-E/12/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		1EB 901	1EB 902
24 V <sub>DC</sub>		1EB 903	1EB 904

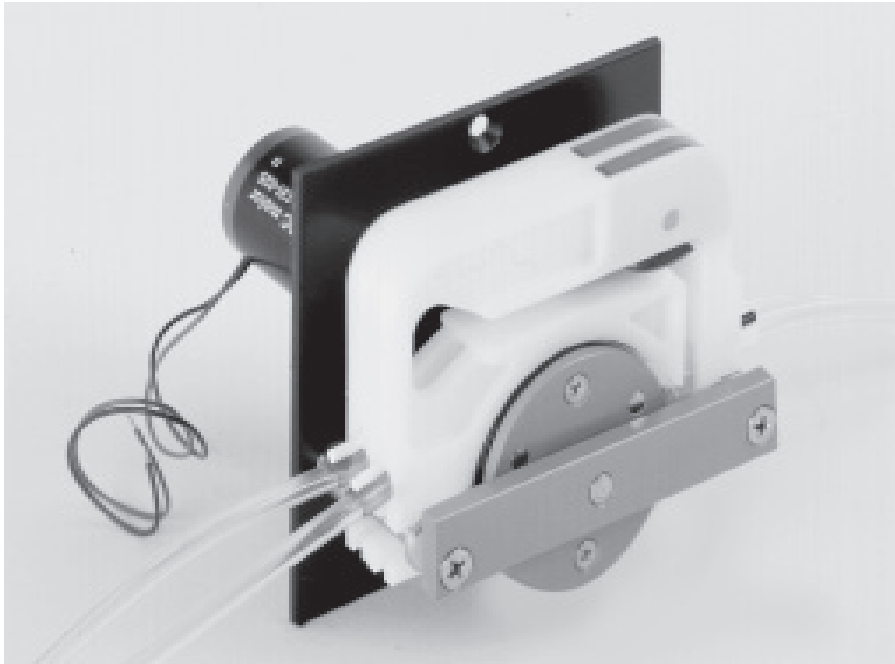
Data sheet

02.2.3

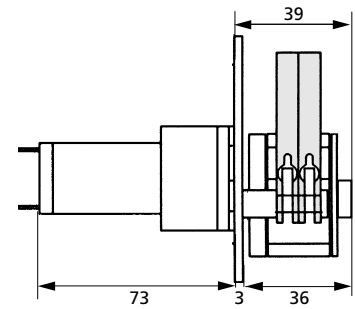
28.06.02

DC motor with gear box

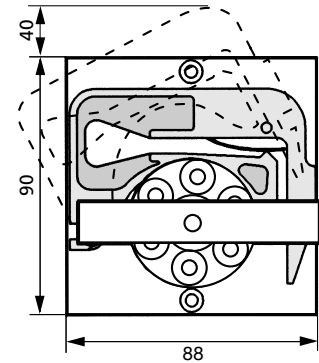
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

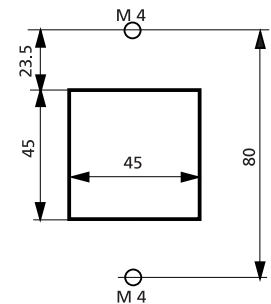
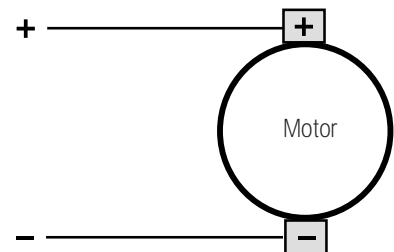


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA2-E/06/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	21.5 34.4 ml/min

Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	2
Pump rollers	6
Weight	0.410 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0014	1.14	0.09
0.19	0.0028	1.22	0.10
0.25	0.0048	1.30	0.11
0.38	0.011	1.42	0.13
0.44	0.014	1.52	0.15
0.51	0.019	1.65	0.17
0.57	0.024	1.75	0.19
0.64	0.030	1.85	0.21
0.76	0.042	2.06	0.25
0.89	0.057	2.29	0.29
0.95	0.064	2.54	0.33
1.02	0.073	2.79	0.37
1.09	0.083	3.17	0.43

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.43 = 34.4

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MS/CA2-E/06/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		ISM 357	ISM 309
24 V <sub>DC</sub>		ISM 311	ISM 339

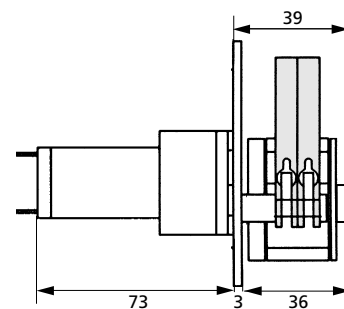
Data sheet  
**02.2.4**  
 28.06.02

# DC motor with gear box

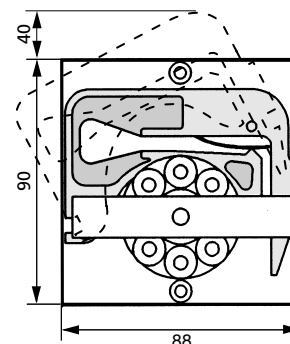
# OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

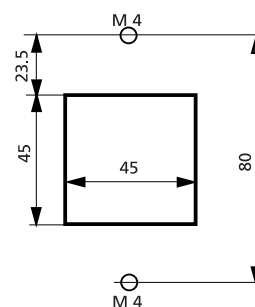
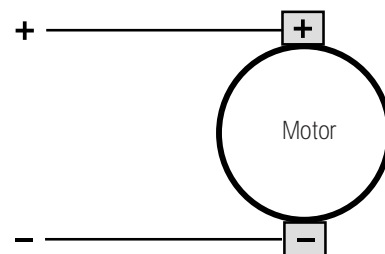


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

## Technical specifications

Pump model	MS/CA1-E/08/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	17.5 28 ml/min
Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	2
Pump rollers	8
Weight	0.410 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

## Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0011	1.14	0.078
0.19	0.0023	1.22	0.088
0.25	0.0041	1.30	0.098
0.38	0.0094	1.42	0.11
0.44	0.013	1.52	0.13
0.51	0.017	1.65	0.15
0.57	0.021	1.75	0.16
0.64	0.026	1.85	0.17
0.76	0.036	2.06	0.20
0.89	0.049	2.29	0.24
0.95	0.056	2.54	0.27
1.02	0.063	2.79	0.31
1.09	0.072	3.17	0.35

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.35 = 28

Ask for the ISMATEC® Pump Tubing Selection Guide.

## Ordering information

Nominal voltage	Type MS/CA2-E/08/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		ISM 383	ISM 306
24 V <sub>DC</sub>		ISM 312	ISM 340

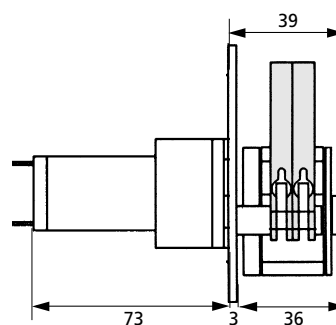
Data sheet  
**02.2.5**  
 28.06.02

DC motor with gear box

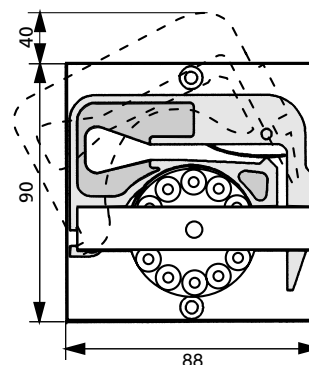
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

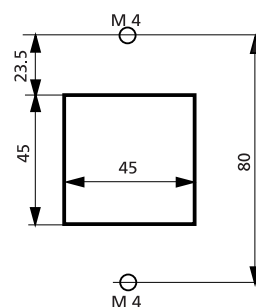
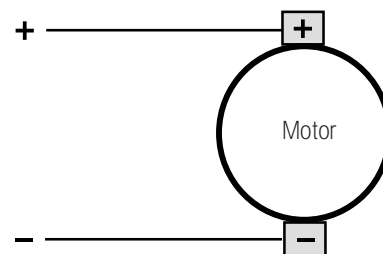


Diagram and electrical connections



Technical specifications

Pump model	MS/CA2-E/12/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	12 19.2 ml/min

Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	2
Pump rollers	12
Weight	0.410 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

Cassettes (Spare part / Option)

- IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>
- IS 0649 MS/CA Pressure lever, **POM-C**
- IS 3629 MS/CA Pressure lever, **PVDF**

<sup>2)</sup> Standard equipment

➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.00093	1.14	0.067
0.19	0.0021	1.22	0.075
0.25	0.0038	1.30	0.083
0.38	0.0088	1.42	0.094
0.44	0.012	1.52	0.10
0.51	0.016	1.65	0.12
0.57	0.019	1.75	0.13
0.64	0.024	1.85	0.13
0.76	0.033	2.06	0.15
0.89	0.044	2.29	0.17
0.95	0.050	2.54	0.19
1.02	0.056	2.79	0.21
1.09	0.063	3.17	0.24

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.24 = 19.2

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

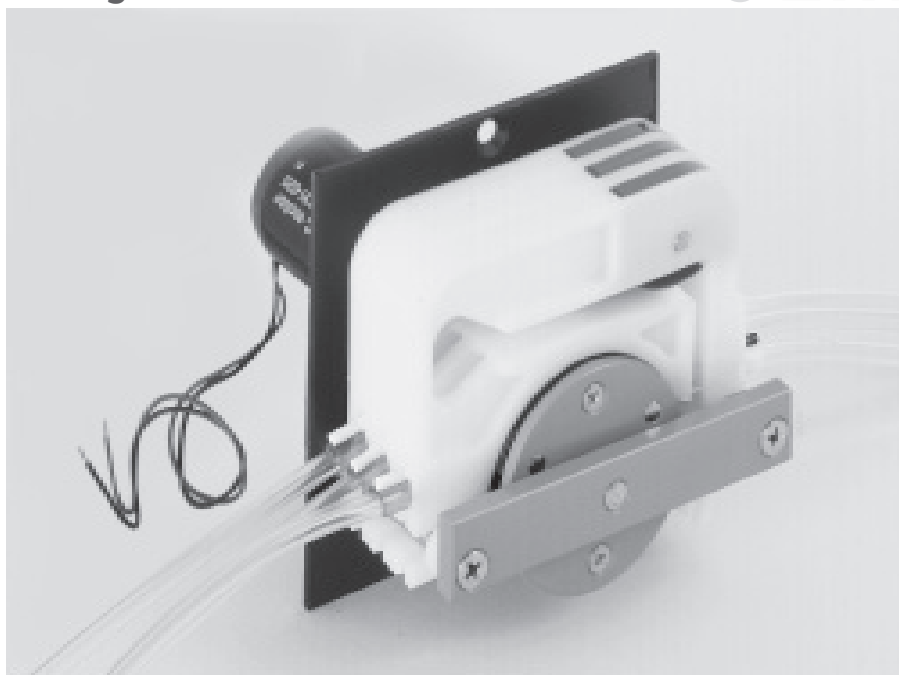
Nominal voltage	Type MS/CA2-E/12/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub> 24 V <sub>DC</sub>		ISM 623	2EB 201
		2EB 200	2EB 202

Please note

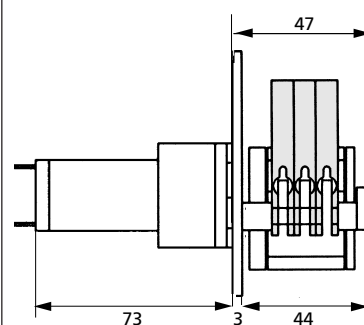
The specifications depend on the **motor control** used by the customer.

DC motor with gear box

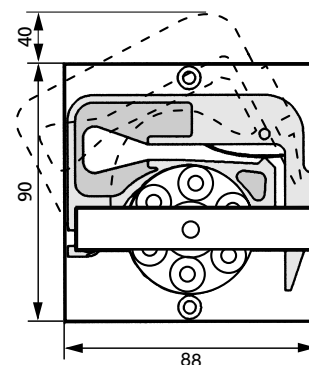
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

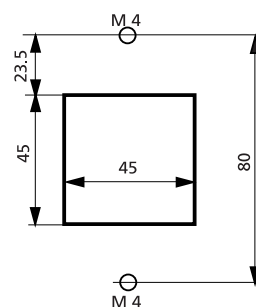
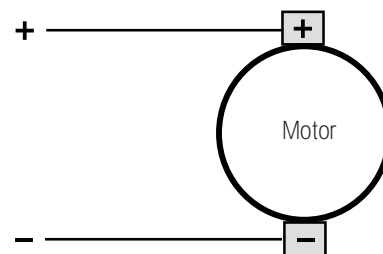


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA3-E/06/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	21.5 34.4 ml/min

Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	3
Pump rollers	6
Weight	0.470 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0014	1.14	0.09
0.19	0.0028	1.22	0.10
0.25	0.0048	1.30	0.11
0.38	0.011	1.42	0.13
0.44	0.014	1.52	0.15
0.51	0.019	1.65	0.17
0.57	0.024	1.75	0.19
0.64	0.030	1.85	0.21
0.76	0.042	2.06	0.25
0.89	0.057	2.29	0.29
0.95	0.064	2.54	0.33
1.02	0.073	2.79	0.37
1.09	0.083	3.17	0.43

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.43 = 34.4

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MS/CA3-E/06/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		3EB 200	3EB 202
24 V <sub>DC</sub>		3EB 201	3EB 203

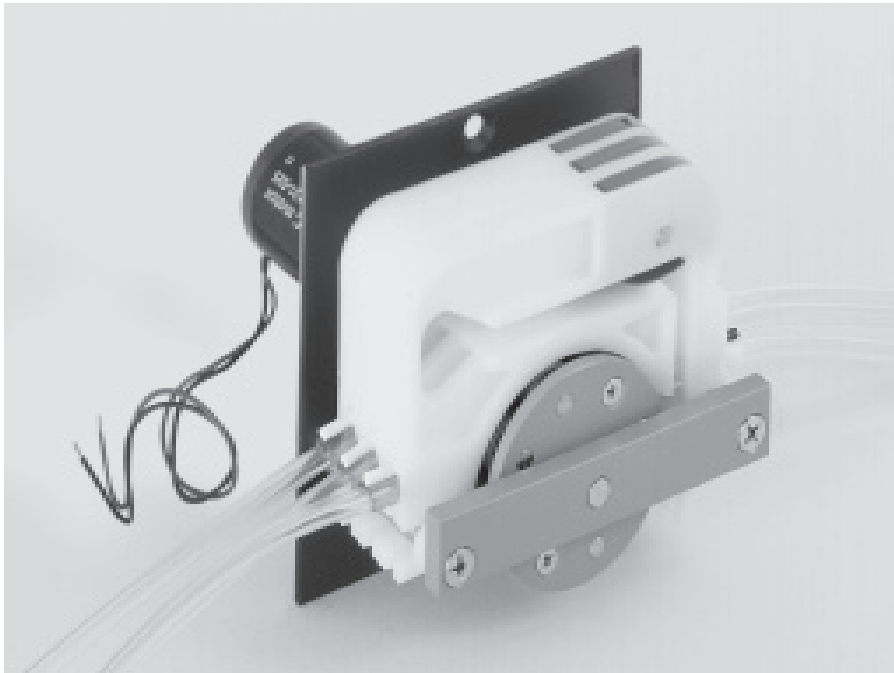
Data sheet

02.2.7

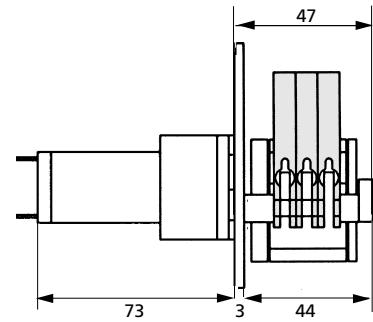
28.06.02

DC motor with gear box

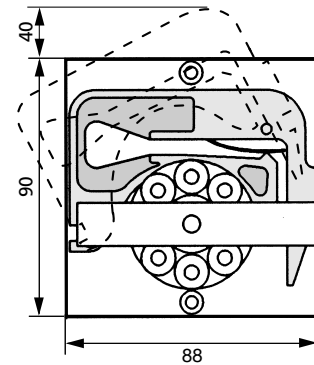
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

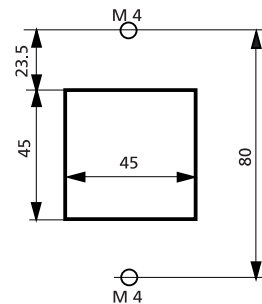
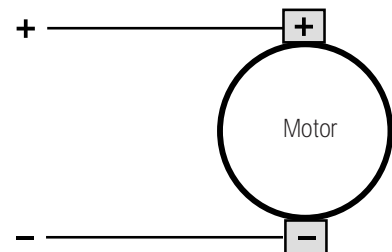


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA3-E/08/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	17.5 28 ml/min
Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	3
Pump rollers	8
Weight	0.470 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.0011	1.14	0.078
0.19	0.0023	1.22	0.088
0.25	0.0041	1.30	0.098
0.38	0.0094	1.42	0.11
0.44	0.013	1.52	0.13
0.51	0.017	1.65	0.15
0.57	0.021	1.75	0.16
0.64	0.026	1.85	0.17
0.76	0.036	2.06	0.20
0.89	0.049	2.29	0.24
0.95	0.056	2.54	0.27
1.02	0.063	2.79	0.31
1.09	0.072	3.17	0.35

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.35 = 28

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

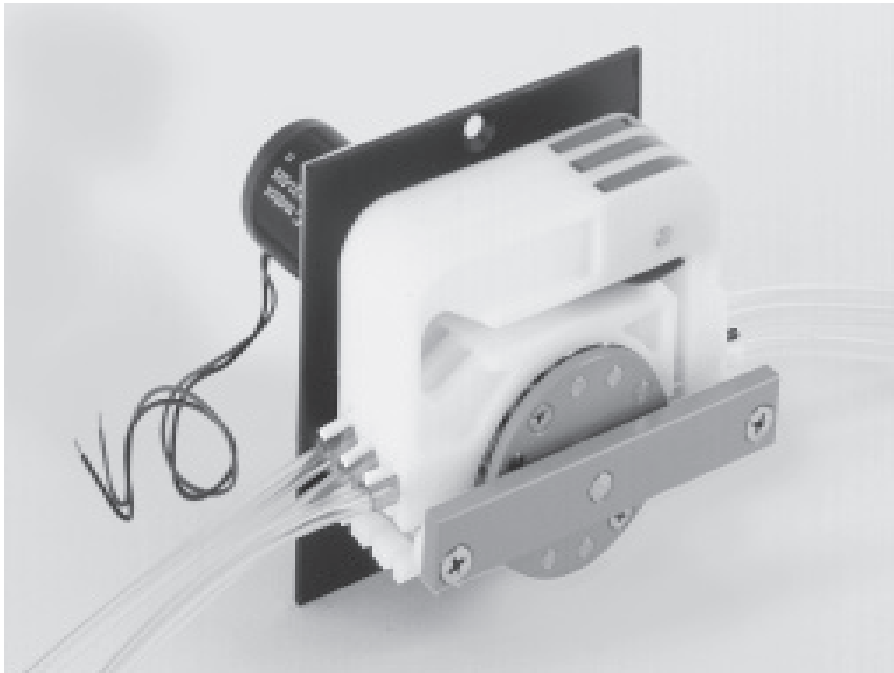
Nominal voltage	Type MS/CA3-E/08/DC/ . . .	100:1	60:1
	Revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		ISM 606	3EB 205
24 V <sub>DC</sub>		3EB 204	3EB 206

Data sheet  
**02.2.8**  
 28.06.02

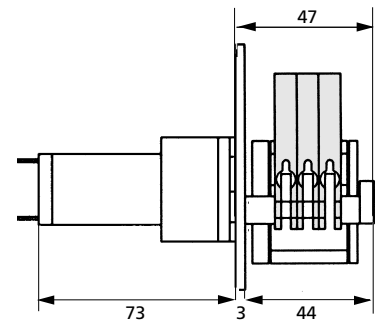


DC motor with gear box

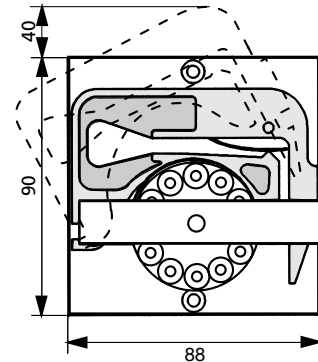
OEM



Side view (mm)



Front view (mm)



Mounting cut-out (mm)

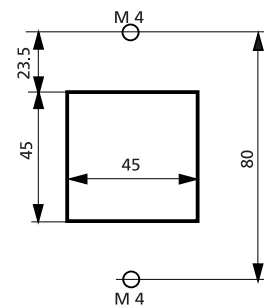
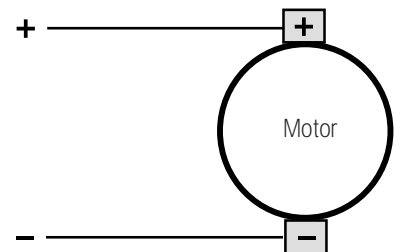


Diagram and electrical connections



Please note

The specifications depend on the **motor control** used by the customer.

Technical specifications

Pump model	MS/CA3-E/12/DC
Motor type	DC motor
Gear ratio	100:1 60:1
Rotation speed* max.	50 80 rpm
Flow rates* max.	12 19.2 ml/min
Motor control	possible, user-dependent
Power consumption	max. 7 W
Channels	3
Pump rollers	12
Weight	0.470 kg

Tubing type	3-stop collared tubing
Tubing i.d.	0.13–3.17 mm
Cassettes	MS/CA Click'n'go, POM

\*The specifications depend on the **motor control** used by the customer.

**Cassettes (Spare part / Option)**  
 IS 3510 MS/CA Click'n'go, **POM-C** <sup>2)</sup>  
 IS 0649 MS/CA Pressure lever, **POM-C**  
 IS 3629 MS/CA Pressure lever, **PVDF**  
<sup>2)</sup> Standard equipment  
 ➔ Please see data sheet 09.1

Flow rates<sup>1)</sup>

Tubing i.d. mm	ml per revolution	Tubing i.d. mm	ml per revolution
0.13	0.00093	1.14	0.067
0.19	0.0021	1.22	0.075
0.25	0.0038	1.30	0.083
0.38	0.0088	1.42	0.094
0.44	0.012	1.52	0.10
0.51	0.016	1.65	0.12
0.57	0.019	1.75	0.13
0.64	0.024	1.85	0.13
0.76	0.033	2.06	0.15
0.89	0.044	2.29	0.17
0.95	0.050	2.54	0.19
1.02	0.056	2.79	0.21
1.09	0.063	3.17	0.24

<sup>1)</sup> Water, Tygon® tubing, without differential pressure

➔ Calculation example for flow rate  
 rpm x ml per revolution = ml/min  
 80 x 0.24 = 19.2

Ask for the ISMATEC® Pump Tubing Selection Guide.

Ordering information

Nominal voltage	Type MS/CA3-E/12/DC/ . . .	100:1	60:1
	revolutions per minute (rpm) max.	50	80
12 V <sub>DC</sub>		ISM 624	3EB 208
24 V <sub>DC</sub>		3EB 207	3EB 209

Data sheet  
**02.2.9**  
 28.06.02