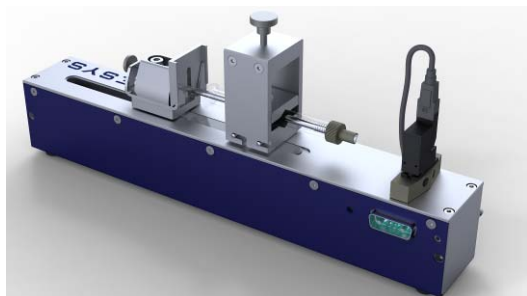


# NEMESYS<sup>®</sup> DOSING UNIT

## High Precision Syringe Pump

### Features

The dosing module is a pulsation-free dosing unit for high-precision dosing of fluid streams in the range of microlitres and nanolitres. Connect up to 12 of these modules to a BASE-module.



### Mechanical Data

Weight ..... 1,3 kg  
Dimensions (L x W x H) ..... 310 x 47 x 56 mm

### Electrical Data

Power Supply Voltage ..... 24 VDC  
Dosing Unit Current typical at 24 VDC ..... 0,3 A  
Dosing Unit Current peak at 24 VDC ..... 0,6 A

### Environment

Operating Temperature ..... 0°C to 45°C  
Storage Temperature ..... -40°C to 75°C  
Operating Humidity ..... 20% to 80%, non-condens.  
Storage Humidity ..... 20% to 80%, non-condens.

### Interfaces

CAN ..... max. 1 Mbit / s  
RS-232 ..... max. 115200 bit/s

### Configuration

Gear ..... 14,1 (optional 1 / 23,7 / 29,2)  
Syringes outer diameter ..... 6 to 30 mm  
Syringes stroke ..... 62 mm

### Valve

Body material ..... PEEK  
Seal material ..... FFPM (EPDM, FPM)  
Temperature media ..... 10 to +40°C  
Viscosity ..... max. 20 mm<sup>2</sup>/s  
Internal Volume ..... < 13 µl  
Orifice ..... DN 0.6 mm or 1,35 mm  
Port connection ..... Flange, UNF 1/4"-28

### Dosing Performance

Gear	1,0	14,1*	23,7	29,2
Pusher Velocity min (nm/s)	383,333	<b>27,259</b>	16,190	13,146
Pusher Velocity max (mm/s)	89,000	<b>6,329</b>	3,759	3,052
Pusher Force max. (N)	40	<b>390</b>	660	815
<b>Syringe 0,5 µl / 60 mm stroke</b>				
Flow Rate min (pl/min)	191,667	<b>13,630</b>	8,095	6,573
Flow Rate max (µl/min)	44,500	<b>3,164</b>	1,879	1,526
Dosing Vol. min (pl) = 1 step	4,100	<b>0,289</b>	0,172	0,140
<b>Syringe 100 µl / 60 mm stroke</b>				
Flow Rate min (nl/min)	38,333	<b>2,726</b>	1,619	1,315
Flow Rate max (ml/min)	8,900	<b>0,633</b>	0,376	0,305
Dosing Vol. min (pl) = 1 step	8,138	<b>0,579</b>	0,344	0,279
<b>Syringe 2,5 ml / 60 mm stroke</b>				
Flow Rate min (µl/min)	0,958	<b>0,068</b>	0,040	0,033
Flow Rate max (ml/min)	222,500	<b>15,822</b>	9,397	7,630
Dosing Vol. min (pl) = 1 step	203,450	<b>14,468</b>	8,593	6,977
<b>Syringe 25 ml / 60 mm stroke</b>				
Flow Rate min (µl/min)	9,583	<b>0,681</b>	0,405	0,329
Flow Rate max (ml/min)	2225,000	<b>158,222</b>	93,973	76,303
Flow Rate min (µl/min)	9,583	<b>0,681</b>	0,405	0,329

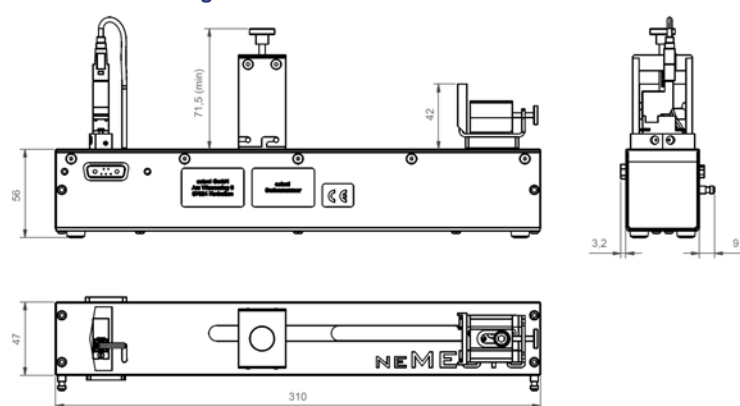
\*standard configuration

### Valve options

Orifice	Working Pressure (max)	Materials
DN 0.60 mm*	3 bar	FFPM / EPDM / FPM
DN 1.35 mm	1 bar	FFPM / EPDM / FPM

\*standard configuration

### Mechanical Drawing



04.12.2009

cetoni GmbH  
Am Wiesenring 6  
07554 Korbussen  
Germany  
Phone: +49 36602 338 0  
Fax: +49 36602 338 11  
Email: info@cetoni.de  
[www.cetoni.de](http://www.cetoni.de)

