





Infusion time calculation with DOSI-FUSER®

DOSI-FUSER[®] is a single-use, continuous-infusion system for ambulatory patients that works without batteries or electricity. It consists of an elastomeric balloon inside a rigid, transparent container and an infusion line with a Luer-Lock connector.

As with all elastomeric pumps, DOSI-FUSER[®] has a tolerance on the flow rate that affects the infusion time. That means that each unit is different than any other, so the infusion of each will finish at a different time around target.

DOSI-FUSER® was designed with a tendency to delay in a manner that when we fill with the Nominal Capacity (indicated on the label), the infusion time will be a little bit longer than indicated Nominal Infusion Time. At the graphic below we can see the characteristic flow rate of the device due to the elastomeric and geometrical characteristics of the balloon.

The Nominal flow rate is indicated on the label

DOSI-FUSER[®] flow rate is relatively constant when the reservoir is filled at least at 60% up to the maximum volume. As with all elastomeric devices the flow rate can change if the reservoir is filled with a very different volume.

Filling Volumes for different infusion times with DOSI-FUSER®

Label Flow Rate	65D1 2.7 ml/h	150D1 6.2 ml/h	250D1 10.4 ml/h	500D1 20.8 ml/h	600D1 25 ml/h	100D2 2.0 ml/h	150D2 3.1 ml/h	250D2 5.2 ml/h	65D5 0.5 ml/h	100D5 1.2 ml/h	250D5 2.1 ml/h	150D7 0.9 ml/h	250D7 1.5 ml/h
18 h	44 ml	101 ml	169 ml	338 ml	405 ml								
22 h	54 ml	124 ml	206 ml	413 ml	495 ml								
24 h (1d)	59 ml	135 ml	225 ml	450 ml	540 ml								
26 h 40'	65 ml	150 ml	250 ml	500 ml	600 ml								
28 h	68 ml	158 ml	263 ml	525ml	630 ml								
38 h						71 ml	107 ml	178 ml					
46 h						86 ml	129 ml	216 ml					
48 h (2d)						90 ml	135 ml	225 ml					
53 h 20'						100 ml	150 ml	250 ml					
60h						113 ml	169 ml	281 ml					
96 h (4d)									47 ml	72 ml	180 ml		
120 h (5d)									59 ml	90 ml	225 ml		
133 h 20'									65 ml	100 ml	250 ml		
135 h									66 ml	101 ml	253 ml		
144 h (6d)									70 ml	108 ml	270 ml	116 ml	193 ml
168 h (7d)												135 ml	225 ml
186 h 40'												150 ml	250 ml
192 h (8d)												154 ml	257 ml
216 h (9d												174 ml	289 ml

Simple calculation of the volume to be introduced into the pump to obtain a specific infusion time can be done with the following formulations:

Formulation:

Filling Volume = 0.9 x Nominal Capacity x Desired Infusion Time / Nominal Infusion Time

Example:

To obtain 46 hour infusion with a DOSI-FUSER[®] 250D2: Filling Volume = 0.9 x 250ml x 46h / 48h = 216ml

Note: Leventon calibrates DOSI-FUSER[®] filling it at Nominal Capacity with 0.9% saline solution, starting the infusion immediately after filling the reservoir, with a free outlet at the same level as the reservoir, keeping the capillary element at 32°C (89.6°F) and reservoir at 22°C (71.6°F).

	65XX	100XX	150XX	250XX
Nominal Capacity	65 ml	100 ml	150 ml	250 ml
Maximum Volume	80 ml	130 ml	180 ml	300 ml
Residual Volume	<2.5 ml	<3.5 ml	<4 ml	<5 ml

Maximum Volume

Is the maximum amount of liquid that can be introduced in the reservoir safely.

Residual Volume

Is the volume remaining in the pump and tubing at the end of the infusion.



Leventon, S.A.U. C. Newton,18 - 24 08635 Sant Esteve Sesrovires Barcelona. Spain Tel: +34 938 176 300 leventon@leventon.es

www.leventon.es

