NEOFUSER SERIES TRAINING

S&S MED

ELASTOMERIC INFUSION PUMPS

An elastomeric infusion pump that continuously delivers a predetermined dosage of medication over a set period of time.

- Used to manage patient pain through an elastomeric infusion pump or PCA module installed in the body (ex. intravenously or epidurally) as needed when experiencing pain.

- Utilized for various pain therapies, such as acute postoperative pain, cancer-related pain, neuropathic pain, and childbirth pain.

S&S MED

S&S MED – ELASTOMERIC INFUSION PUMPS

Neofuser	Neofuser Plus
Neofuser Vario	Neofuser Vario Plus

MODELS with options

Neofuser Onco

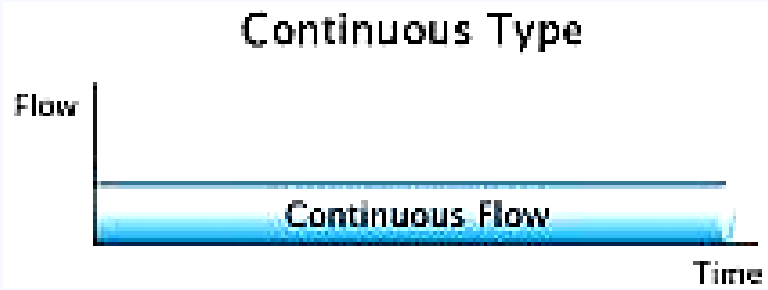
Neofuser Duo
Neofuser Twin

Neofuser Run
Neofuser DFO

Neofuser Nax

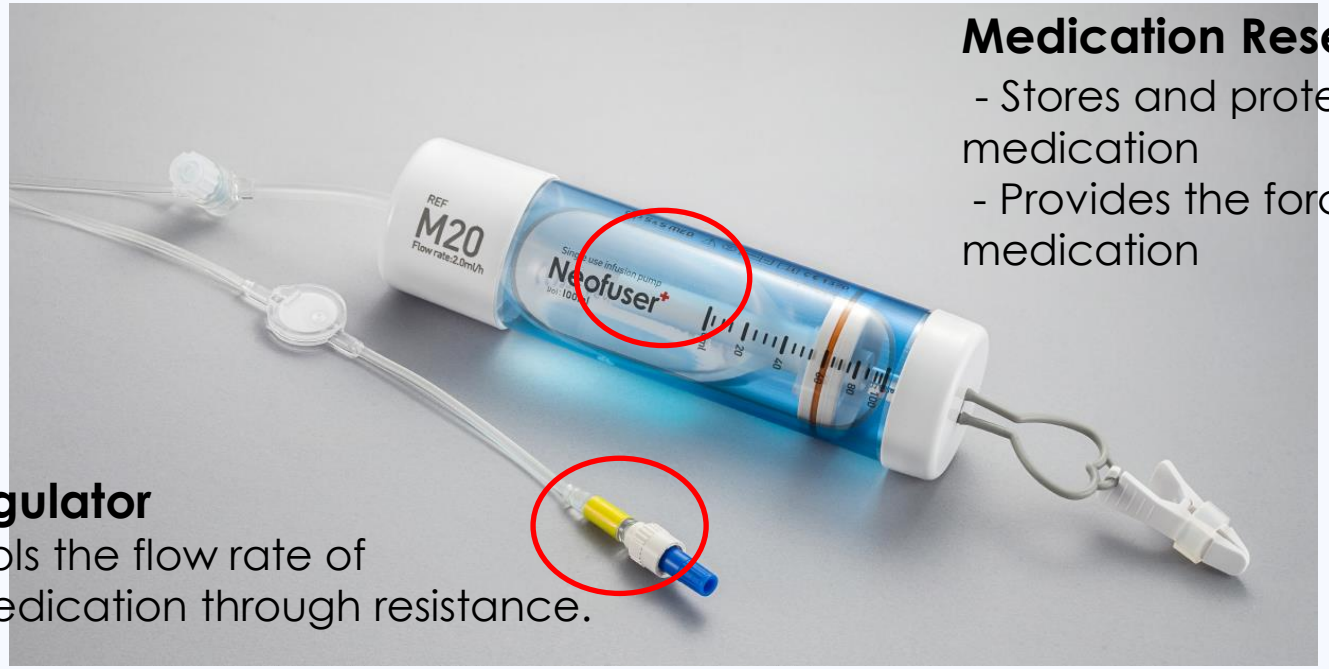
S&S MED

NEOFUSER & NEOFUSER VARIO (Continuous)



S&S MED

NEOFUSER & NEOFUSER VARIO (Continuous)



Medication Reservoir

- Stores and protects the medication
- Provides the force to expel the medication

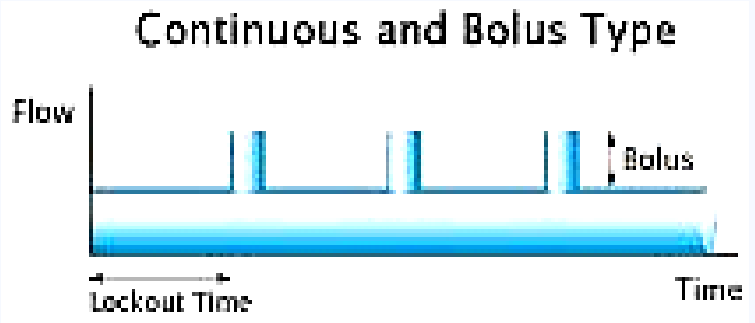
Flow Regulator

- Controls the flow rate of the medication through resistance.

► Medication is continuously infused under predetermined conditions (elastic force, resistance).

S&S MED

NEOFUSER PLUS & NEOFUSER VARIO PLUS (PCA module)



NEOFUSER PLUS & NEOFUSER VARIO PLUS (PCA module)

Medication Reservoir

- Stores and protects the medication
- Provides the force to expel the medication

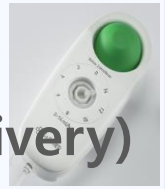
Bolus button

- Additional Medication Delivery
- Bolus Volume: 0.5mL, 1.0mL, 2.0mL

► The basal flow is continuously infused, and additional flow is delivered when **the Bolus button** is pressed according to the patient's needs.

S&S MED

NEOFUSER SERIES

	NEOFUSER	NEOFUSER PLUS	NEOFUSER VARIO	NEOFUSER VARIO PLUS
Basal (basal flow rate) 	O	O	Selectable basal flow rates	
BOLUS (Additional Delivery) 	X	O	X	O

NEOFUSER (C TYPE)

: Continuously infuses at the basal flow rate.

Model	Vol. (ml)	Basal Flow Rate
S (small)	60	0.5 ~ 250 ml/hr
M (Medium)	100	
R (Regular)	180	
L (Large)	275	
X (X-Large)	450	
G (Giant)	600	

Ex) **M2** : 100ml, Basal Flow Rate 2.0ml/hr

L4 : 275ml, Basal Flow Rate 4.0ml/hr

S10 : 60ml, Basal Flow Rate 10ml/hr

S&S MED

NEOFUSER PLUS (P TYPE)

- The basal flow is continuously infused, and additional flow is delivered when the Bolus button is pressed according to the patient's needs.

- To prevent excessive medication infusion, the Bolus is safely managed by a lockout mechanism (Lockout Time).

Volume	Basal Flow Rate	Bolus Volume	Lock-out Time
60ml(S), 100ml(M), 180(R), 275ml(L), 450(X), 600(G)	0.5 ~ 10.0 ml/hr	0.5 / 1.0 / 2.0 ml	6-60 min

PCA Module

► The Bolus button uses a momentary pressure-sensitive anti-reflux valve to prevent unintentional medication infusion.

Dosage Indication	Bolus Single Dose Volume
R	0.5 ml
E	1.0 ml
W	2.0 ml

S&S MED

NEOFUSER VARIO

The continuous infusion volume of the medication can be selected according to the intensity of the pain, with up to 7 steps available, and the basal infusion can be stopped if necessary.

Volume	Basal Flow Rate
60ml(S), 100ml(M), 120ml(N), 180(R), 275ml(L), 450ml(X), 600ml(G)	0 ~ 14.0 ml/hr

Basal Flow Rate Selectable Dial

- Insert the control key into the flow controller, then turn it until you hear a click to set the flow rate. (7 steps + OFF mode)
- To ensure the set flow rate is not changed, remove the control key after use and keep it stored by the medical staff for safety!
- When the product is first shipped, it is set to the highest flow rate, so be sure to adjust it to the desired flow rate before use.

Step interval	Flow range
0.5ml	0.5 ~ 3.5 ml/hr
1.0ml	1.0 ~ 7.0 ml/hr
2.0ml	2.0 ~ 14.0 ml/hr

S&S MED

NEOFUSER VARIO PLUS

The continuous infusion volume of the medication can be selected according to the intensity of the pain, with up to 7 steps available, and the basal infusion can be stopped if necessary.

Additional flow can be delivered when the Bolus button is pressed according to the patient's needs.

Volume	Basal Flow Rate	Bolus Volume	Lock-out Time
60ml(S), 100ml(M), 120ml(N), 180(R), 275ml(L), 450ml(X), 600ml(G)	0 ~ 14.0 ml/hr	0.5 / 1.0 / 2.0 ml	5 ~ 60 min

Basal Flow Rate Selectable Dial + PCA Module

- Insert the control key into the flow controller, then turn it until you hear a click to set the flow rate. (7 steps + OFF mode)
- To ensure the set flow rate is not changed, remove the control key after use and keep it stored by the medical staff for safety!
- Incorporates the advantages of electronic infusion pumps (can be used as a replacement).

Dosage Indication	Bolus Single Dose Volume
R	0.5 ml
E	1.0 ml
W	2.0 ml

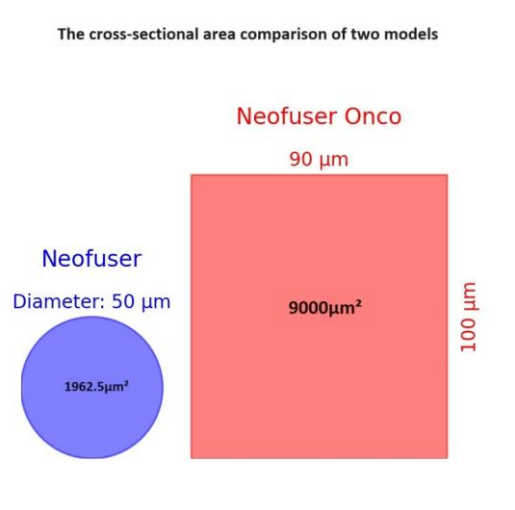
S&S MED

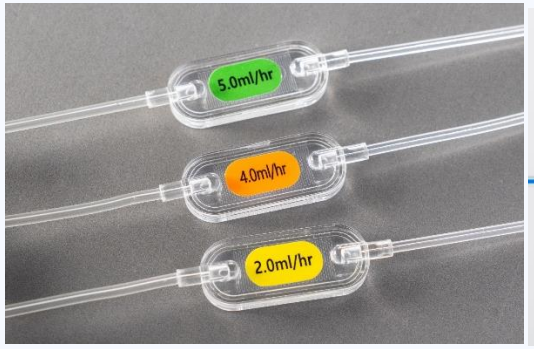
NEOFUSER ONCO for Oncology

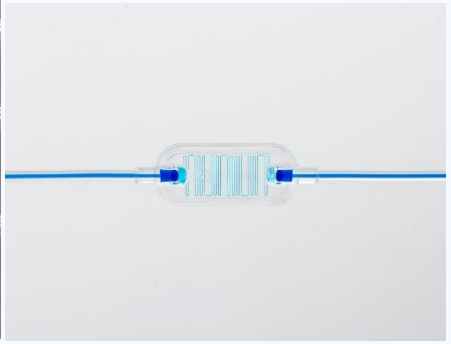
■ It incorporates a microfluidic chip technology with a flow limiter specifically developed for 5-fluorouracil infusion, enhancing control.

■ The wide-channel flow regulator, tailored for 5-Fluorouracil infusions, maintains high flow accuracy crucial for effective treatment.

■ The cross-sectional area of the microfluidic channel in the L50-O is about 4.6 times larger than the L50 50um capillary, preventing blockages caused by drug crystallization.

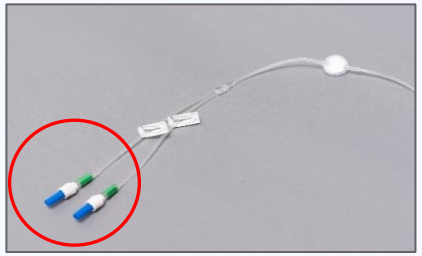




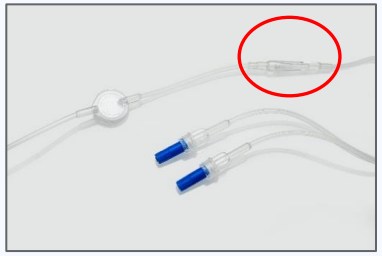


NEOFUSER with options

Neofuser DuO

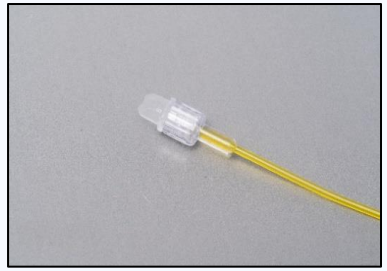


Neofuser TwiN



Neofuser Run
Neofuser DFO

Neofuser NaX



■ **Neofuser Duo :** Two catheters with each flow restrictor

■ **Neofuser TwiN :** Two catheters with one flow restrictor before the split

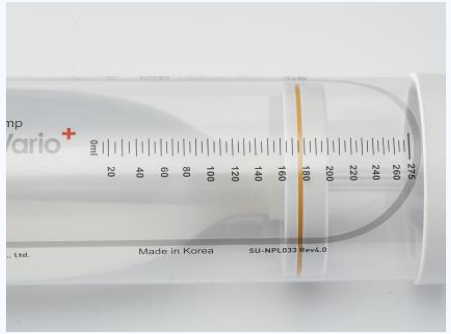
■ **Neofuser Run :** With a fast flow rate, especially for short-term infusions of antibiotics.

■ **Neofuser DFO** (Infusion of deferoxamine)
: For a drug to remove iron, with a flow restrictor to match the high viscosity.

■ **Neofuser NaX :** With neuraxial connectors according to ISO 80369-6
: All pain therapy models come with ISO 80369-6-compliant neuraxial connectors.

S&S MED

NEOFUSER FEATURES



Medication Reservoir (balloon reservoir)

- **Silicone:** Maintains consistent pressure without bursting or leaking.
- **Orange scale:** Allows for easy monitoring of infused and remaining medication volume.

Medication Filling Port

- One way check valve
- Prevents medication backflow
- Blocks medication retrieval

I.V. Filter

- Removes air and fine impurities

Air Vent Female cap.

- 0.2um Hydrophobic Membrane Filter
- Allows air to pass through but not the medication.

S&S MED

PRODUCT CODE ASSIGNMENT METHOD

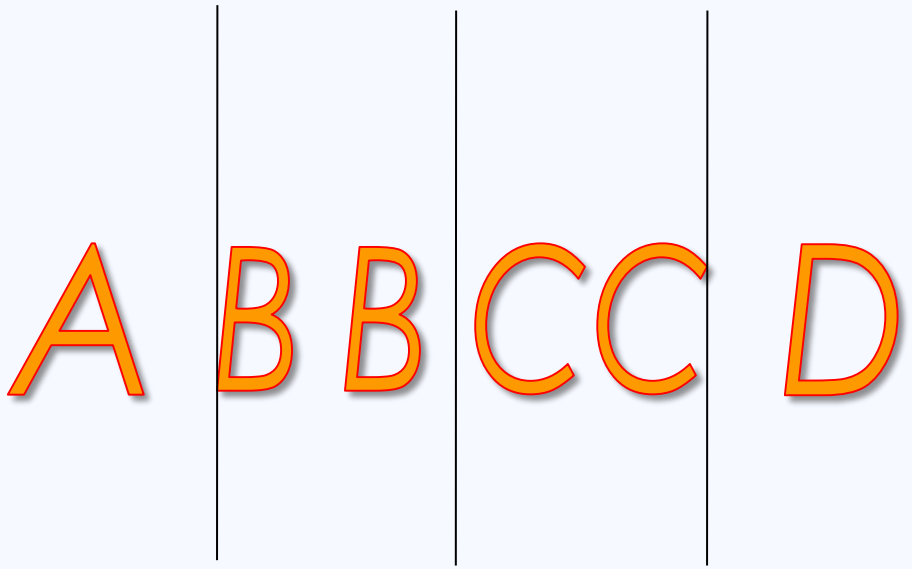
A : Size (Volume)

B : Basal flow rate

C, D : Bolus information

C : Lockout time

D : Bolus Volume



S&S MED

PRODUCT CODE ASSIGNMENT METHOD

VL17

1. Type ; Vario

2. Volume ; L - 275ml

3. Flow Rate ; 1 ~ 7ml/hr

S&S MED

PRODUCT CODE ASSIGNMENT METHOD

L2015R

1. Type ; P Type
2. Volume ; L - 275ml
3. Flow Rate ; 2.0ml/hr
4. Lockout time ; 15min
5. Bolus volume ; R - 0.5 ml

Quiz : How many times can the Bolus button be pressed in one hour?

S&S MED

PRODUCT CODE ASSIGNMENT METHOD

M1030E

1. Type ; P Type
2. Volume ; M - 100ml
3. Flow Rate ; 1.0ml/hr
4. Lockout time ; 30min
5. Bolus volume ; E - 1.0 ml

Quiz : How many times can the Bolus button be pressed in one hour?

S&S MED

PRODUCT CODE ASSIGNMENT METHOD

VL1715E

1. Type ; Vario Plus

2. Volume ; L - 275ml

3. Flow Rate ; 1.0~7.0ml/hr

4. Lockout time ; 15min

5. Bolus volume ; E - 1.0 ml

S&S MED

PRODUCT CODE SUMMARY

V	S	0	5	3	5	0	5	R
Flow rate	Volume (ml)	Basal flow rate value (ml/hr)				Lock-out time (min.)		Bolus

Flow rate

None :
Mono-rate

V :
Multi-rate

Volume (ml)

S: 60
M: 100
I: 180
L: 275
X: 450
G: 600

Range:
(Min.-Max.)
60(36-70)
100(60-110)
180(120-210)
275(165-310)
450(270-480)
600(420-650)

Basal flow rate value (ml/hr)

00 : 0ml/hr
05 : 0.5
10 : 1.0
20 : 2.0
25 : 2.5
40 : 4.0
50 : 5.0
80 : 8.0
100 : 10.0
130 : 13.0
500 : 50.0
1000 : 100.0
2000 : 200.0
2500 : 250.0

Multi-rate

0535 : 0.5-3.5ml/hr
(0-0.5-1-1.5-2-2.5-3-3.5ml/h selectable)

17 : 1-7ml/hr
(0-1-2-3-4-5-6-7ml/h selectable)

214 : 2-14ml/hr
(0-2-4-6-8-10-12-14ml/h selectable)

Lock-out time (min.)

03 : 3min.
05 : 5
06 : 6
07 : 7
08 : 8
10 : 10
15 : 15
30 : 30
60 : 60

Bolus

R : 0.5ml
E : 1.0ml
W : 2.0ml

Models with options

1. DuO
Add '-D' to the end of code.
2. TwiN
Add '-T' to the end of code.
3. OncO
Add '-O' to the end of code.
4. Nax
Add '-N' to the end of code.

Example)
'VM0535' → 'VM0535-D'
'VL1715W' → 'VL1715W-T'
'M0015E' → 'M0015E-TN'

S&S MED

ELASTOMERIC PUMPS VS ELECTRONIC PUMPS

VS

S&S MED

ELASTOMERIC PUMPS VS ELECTRONIC PUMPS

ELASTOMERIC	ELECTRONIC
• The integrated design makes it easy to set up. • No batteries or recharging are required. • It can be discarded after the medication infusion is complete, with no need for retrieval. • It operates silently. • It is lightweight and easy to carry. • Cost-effective	• History can be checked (including bolus history). • Alarm function available. • Can be used for research purposes; Excel file download available.

S&S MED

P-TYPE User Guide

1. Open the product packaging.

2. Remove the medication filling port cap

3. Inject 50ml of N/S (Normal Saline)

4. Check if the scale rises during injection.

5. Re-inject the medication and the remaining N/S.

6. Verify that the scale matches the total volume.

7. Close the medication filling port cap.

P-TYPE User Guide

8. Push the Bolus 1-2 times to remove air from the button

Wait 15 to 30 minutes.

9. Check if medication appears at the end to ensure proper flow.

10. Close the end with the Blue cap.

VARIO PLUS User Guide

1. Open the product packaging.

2. Remove the medication filling port cap

3. Inject 50ml of N/S (Normal Saline)
4. Check if the scale rises during injection.
5. Re-inject the medication and the remaining N/S.

6. Verify that the scale matches the total volume.

7. Close the medication filling port cap.

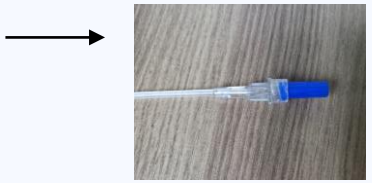
VARIO PLUS User Guide

8. Check if medication appears at the end to ensure proper flow.

8. Press the Bolus button once to remove the air from the module. At this time, press and hold the center of the button for more than 2 seconds.

9. Ensure that all air is removed from the line and check if the medication appears at the distal end.

9. Insert the module key and select it to the basal flow rate to be administered to the patient. A clicking sound should be heard each time the dial moves by one step



10. Close the end with the Blue cap.

S&S MED

INSTRUCTIONS FOR USE

If there is air inside the Neofuser?

- **Air in the medication reservoir** – Automatically dissipated through the silicone.
- **Air in the tube** – Removed through the air filter.
- If air comes out each time the Bolus button is pressed:

: It is possible that the air inside the module has not been completely removed and priming was not fully done.

: There is no need to re-prime due to the use of TWO FILTERS

S&S MED

TECHNICAL SPECIFICATION

1. Basal flow rate may be affected by the temperature and viscosity of the used medication

► The effect of gravity due to height differences can influence the flow rate, and the flow rate is most stable when the medication reservoir and the flow control part are on the same horizontal level.

► Minimizing the height difference between the pump and the injection site when securing the pump can reduce flow rate errors.

2. Temperature – The Neofuser series is manufactured based on temperatures of 23°C or 32°C.

3. Viscosity – Manufactured based on 5% D/W. The flow rate may vary depending on the concentration of the medication mixture.

4. Mixing medications with different pH levels can lead to crystallization, which may cause blockages.

5. ACCURACY: ± 10%

S&S MED

SPECIFICATION

Models	Nominal volume (ml) (Min~Max)	Basal flow rate (ml/hr)	Lock-out time (min.)	Bolus volume (ml)
Neofuser	**60 (36~70)** **100 (60~110)** **180 (120~210)** **275 (165~310)** **450 (270~480)** **600 (360~650)**	0.5, 1, 2, 2.5, 3, 4, 5, 6, 7, 8, 10 or 13	N/A	N/A
Neofuser Vario		0/0.5/1/1.5/2/2.5/3/3.5 0/1/2/3/4/5/6/7 0/2/4/6/8/10/12/14 (Selectable continuous basal flows)		
Neofuser Plus		0.5, 1, 1.5, 2, 4, 5, 8, 10 or 13	3, 5, 6, 7, 8, 10, 15, 30 or 60	0.5 (Orange color) 1.0 (Blue color) 2.0 (Green color)
Neofuser Bolus		N/A		
Neofuser Vario Plus		0/0.5/1/1.5/2/2.5/3/3.5 0/1/2/3/4/5/6/7 0/2/4/6/8/10/12/14 (Selectable continuous basal flows)		
Models with options				
Neofuser Onco		0.5, 1, 1.5, 2, 2.5, 3, 4, 5, 6, 7 or 10	N/A	N/A
Neofuser Run		50, 100, 200 or 250		
Neofuser DFO		1, 2, 2.5, 3, 4, 5, 6 or 7		

- Duo : Two catheters can be used with the Neofuser model. (Two catheters with each flow restrictor)
- Twin : Two catheters can be used with the Neofuser model. (Two catheters with one flow restrictor before the split)
- Nax : Nax connector can be used with any models. (With neuraxial connectors according to ISO 80369-6)

S&S MED

•In a dry place

NEOFUSER STORAGE

- At room temperature below 38°C
- In a cool place
- In a dry place
- In a clean place
- Avoid direct sunlight
- Avoid places with heat or where it might be damaged

S&S MED

THANK YOU.