

# Sinapi LEVÖ chest drain



Cardiac & Thoracic drainage

early patient mobilisation  
early catheter removal  
designed for safety

**Sinapi**  
biomedical

## For Cardiac use

- Blocked catheter detection
- Safe tube clearing
- Uninterrupted suction from OR to ICU
- A micro fluid chamber increases sensitivity to confirm drainage



## For Thoracic use

- Confirms no air leak
- Confirms negative intra- pleural pressure
- Needle-free sample port



## 1. Shortens length of stay <sup>(1.1)</sup>

- Early patient mobilization shortens length of stay: patients mobilise up to three days faster, leave hospital 30-50% sooner, and incur up to 49% less costs <sup>(1.1)</sup>
- LEVO is compact and lightweight and can be orientated in any way, helping patients mobilize
- Unique indicators assist in faster clinical decisions



## 2. Safer to use <sup>(2.1)</sup>

- Maintains the seal, even if knocked over
- Tube clamping is never required
- Safe and easy patient transport
- Simplicity equals safety



## 3. Addresses ICU nurse shortage <sup>(3.1)</sup>

- OR: Connect & drain, no setup
- ICU: Saves time, simple to use
- Easy patient mobilisation
- No need to replace canisters
- Less training required
- Less complications



#### 4. Approved for outpatient management

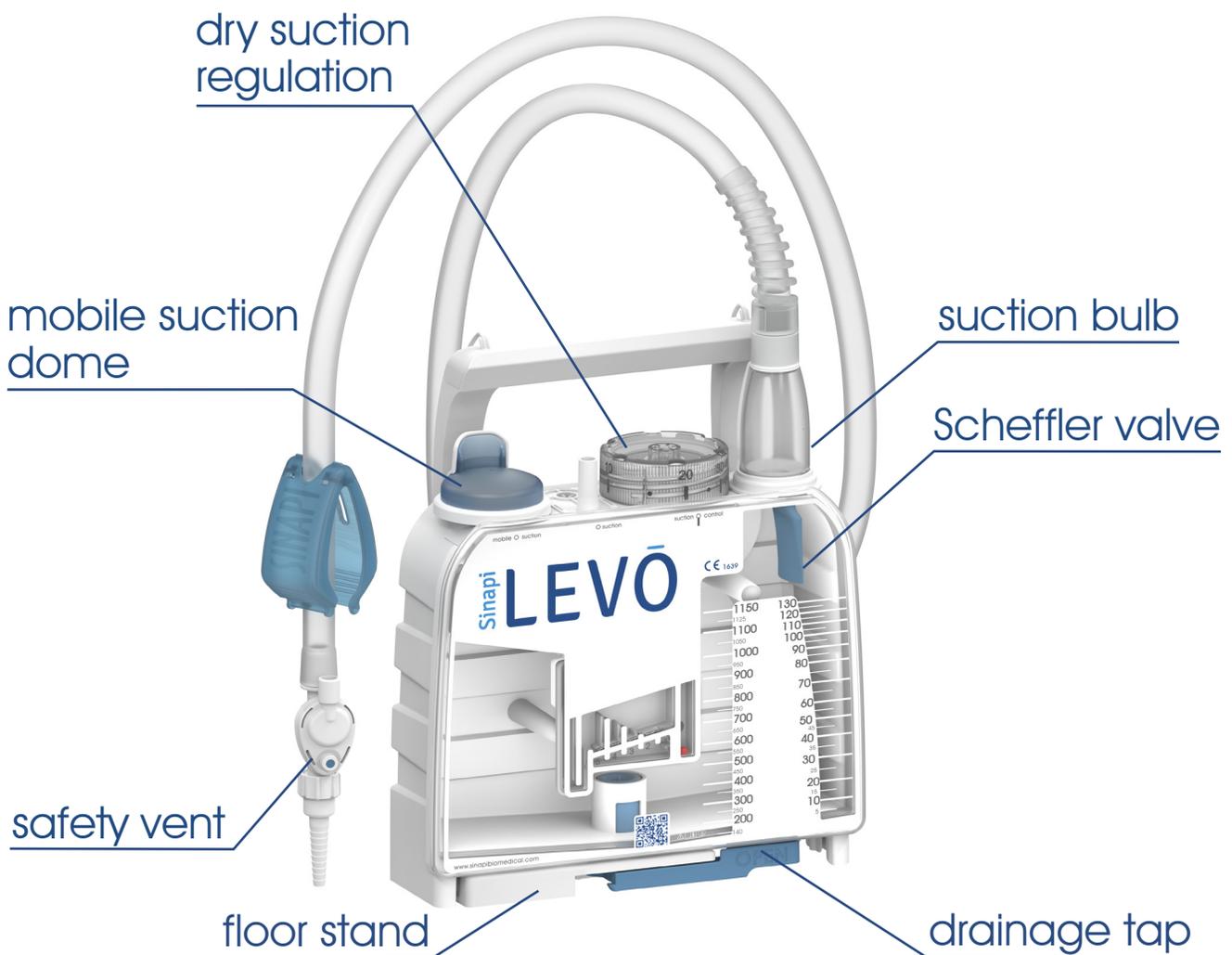
(4.1, adults)

- Low probability for user error & complications
- Patients can perform self-care activities with reduced risk of harm
- Lower probability of hospital acquired infections.



#### 5. Less units used<sup>(5.1)</sup>

- Only one LEVO needed per chest catheter
- Fewer canisters are procured, stored and discarded as medical waste
- LEVO saves costs at every step of the supply & 'in-use' chain<sup>(5.1)</sup>



## Clinical Evidence

### 1. Shortens length of stay

1.1 Bertrandt, R.A., Saudek, D.M., Scott, J.P., Madrzak, M., Miranda, M.B., Ghanayem, N.S. & Woods, R.K. 2019. "Chest tube removal algorithm is associated with decreased chest tube duration in pediatric cardiac surgical patients." *Journal of Thoracic and Cardiovascular Surgery* 1209–1217.

1.2 Cooper, C et al. 2006. "Xpand chest drain: assessing equivalence to current standard therapy – a randomised controlled trial." *SAJS* 44 (4).

1.3 Takroni, M., Albarrati, A., Akomolafe, T. & al Enazy, M. 2021. The Effect of Early Mobilization on ICU and Hospital Length of Stay and Its Impact on the Cost of Care in Post-Open Heart Surgery Patients: A Randomized Control Trial (RCT). *Journal of Heart Health*.

### 2. Safer to use

2.1 Mattioli, S et al. 2008. "Survey on chest drainage systems adopted in Europe." *Interactive Cardio Vascular and Thoracic Surgery* 7: 1155–1159.

### 3. Addresses OR/ICU Nursing shortage

3.1 Xu G, Zeng X, Wu X. 2021 Jul. "Global prevalence of turnover intention among intensive care nurses: A meta-analysis." *Nursing in Critical Care*.

### 4. Regulated for outpatient management

4.1 Massongo, M., Leroy, S., Scherpereel, A., Vaniet, F., Dhalluin, X., Chahine, B., Sanfiorenzo, C., Genin, M., & Marquette, C. H. 2014. "Outpatient management of primary spontaneous pneumothorax: A prospective study." *European Respiratory Journal* 43(2), 58.

4.2 Gogakos A, et al. 2015. "Heimlich valve and pneumothorax." *Ann Transl Med* 3 (4): 54.

### 5. Less units used

5.1 Abdulsalam, Y. & Schneller, E. 2019. "Hospital Supply Expenses: An Important Ingredient in Health Services Research." *Medical Care Research and Review* 240–252.

## Catalogue

CODE	PATIENT USE	COLLECTION CHAMBER VOL	QTY PER BOX
XS100	Adult outpatient management	80ml	10
XL1150Si	Paediatric	1150ml	14
XL1150S	Adult	1150ml	14
XL1150SC	Adult	1150ml	14
XL1150SCi	Paediatric	1150ml	14
XL2200S	Adult	2200ml	8
XL2200SD	Adult	2200ml	8
D1150		1150ml	30

Accessories: Y-Connector, Drainage container

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