# pfinnedical Quality and Experience

# VSD Occlusion System Nit-Occlud® Lê VSD

pfm medical's unique Nitinol coil design developed for the transcatheter occlusion of Ventricular Septal Defects (VSD).

The patented coil design with polyester fibres for accelerated occlusion is intended for the closure of perimembranous and muscular VSDs.

www.pfmmedical.com



Nit-Occlud<sup>®</sup> Lê VSD unique flexible coil design for the closure of Ventricular Septal Defects (VSD). Closure of perimembranous (aneurysmatic) and muscular VSDs. In all 350 cases<sup>1,2</sup> no permanent heart (AV) block was reported.

## Benefits

Patented coil design with polyester fibres The coil design with securely attached polyester fibres results in a rapid, effective and safe VSD occlusion.

#### **Outstanding adaptation properties**

Nit-Occlud® Lê VSD adapts perfectly to the anatomy of perimembranous VSDs (especially in those with aneurysmatic formation) as well as muscular VSDs.

#### Safety for the patient's benefit

Due to its flexible design, no permanent AV-Blocks occurred in more than 350<sup>1,2</sup> reported cases.

### **Broad range of different sizes**

Nit-Occlud<sup>®</sup> Lê VSD is available in diameters 8, 10, 12, 14 and 16 mm (largest distal winding), making the implant suitable for closing VSDs of various shapes and sizes.

#### **Small Delivery Sheaths**

Nit-Occlud® Lê VSD can be deployed through small implantation sheaths of 6F and 7F.

# Details

▶ Flexible and adaptive design → Radiopaque

delivery catheter

- pre-mounted in 6F and 7F MR conditional
  - Single-use
- used along with a 6F and 7F implantation sheath
- Repositionable prior
- to release

### Portfolio

- Nit-Occlud® Implantation ▶ Nit-Occlud® PDA Sheath VSD Implantation Accessory
  - PDA Occlusion Device (coil type)
- Multi-Snare® VSD-Loop Set VSD Implantation Accessory
- ▶ Nit-Occlud® PDA-R **PDA Occlusion Device** (plug type)

# Use



**Case 1: Perimembranous VSD** Patient: male, 10 years old VSD size: Ø RV 4 mm, Ø LV 9 mm Distance to aortic valve: 3 mm Selected coil: 10 × 6 mm Clinical outcome: closed no AV-Block or other arrhythmias



**Case 2: Perimembranous VSD** Patient: female, 7 years old VSD size: Ø RV 6 mm, Ø LV 13 mm Distance to aortic valve: 4 mm Selected coil: 14 × 8 mm Clinical outcome: closed no AV-Block or other arrhythmias



**Case 2: Muscular VSD** Patient: male, 25 years old VSD size: Ø RV 6 mm, Ø LV 15 mm Selected coil: 14 × 8 mm Clinical outcome: closed no AV-Block or other arrhythmias

Trials and registries:

VSD Occlusion" (clinicatrials.gov identifier NCT00390702).

<sup>&</sup>lt;sup>1</sup> "International Multicentre Clinical Device Investigation on Safety and Effectiveness of the Nit-Occlud® Lê VSD Spiral Coil System for

<sup>&</sup>lt;sup>2</sup> "The Nit-Occlud® Lê VSD Registry", publication in preparation

# Knowledge

The principal concept of Nit-Occlud® Lê VSD is to tamponade the VSD passageway. For that purpose, the implant has a double coil layer at its proximal portion, one inside the other, to fill the VSD with sufficient material.

During deployment, the inner layer is configured first (Fig. A). To increase the amount of occluding material inside the

defect, reversed windings of the outer layer are added onto the inner windings (Fig. B).

As opposed to rigid double-umbrella designs of other technologies, VSD coil occlusion has been proven to be more gentle to the cardiac anatomy: In more than 350 Nit-Occlud® Lê VSD implantations<sup>1,2</sup> no permanent heart block has been reported.



# **Range of Use**

For the interventional occlusion of ventricular septal defects using catheter techniques.

VSD with perimembranous (aneurysmatic) and muscular location can be treated with Nit-Occlud® Lê VSD.

#### Fig.B

# Configurations

The Nit-Occlud<sup>®</sup> Lê VSD is available in the sizes 8 × 6, 10 × 6,  $12 \times 6, 14 \times 8$ , and  $16 \times 8$  mm corresponding to the distal and proximal diameters respectively.

The 14 × 8 mm and 16 × 8 mm devices have an increased axial stiffness, which improves the adaptation to the septum and the fixation of the coil in larger defects.

#### Handling

#### **Device Selection**

A coil with a distal diameter (D) of at least twice the minimal diameter of the VSD on the right ventricular side and equal to, or 1-2 mm greater than, the diameter of the VSD at the left ventricular opening is appropriate and should be selected.



P = proximalD = distal

Scan the QR code or follow the link and see how the implant works



http://www.pfmmedical.com/clip-vsd

# **Ordering Information**



#### Nit-Occlud® Lê VSD

Permanent coil for the closure of perimembranous and muscular ventricular septal defects (VSD).

> Content: coil, delivery system, implantation catheter

REF	Distal Coil Diameter (D)	Proximal Coil Diameter (P)	Recommended Implantation Sheath	Implantation Catheter Length
149086	8 mm	6 mm	6 F	105 cm
149106	10 mm	6 mm	6 F	105 cm
149126	12 mm	6 mm	6 F	105 cm
149128	12 mm	8 mm	7 F	105 cm
149148	14 mm	8 mm	7 F	105 cm
149168	16 mm	8 mm	7 F	105 cm



Specially designed to support the implantation of Nit-Occlud® Lê VSD.

Content: snare, snare catheter, guide wire, 2 clips

REF	Diameter loop	Catheter Length	Snare Catheter
147015	15 mm (15-20)	145 cm	5 F

The set features a 260 cm hydrophilic-coated crossover wire (0.035 inch with 60° angled tip), and 2 metal clips.



www.pfmmedical.com - Your information source for the products of pfm medical ag.

PB5002EN/2017-03-08