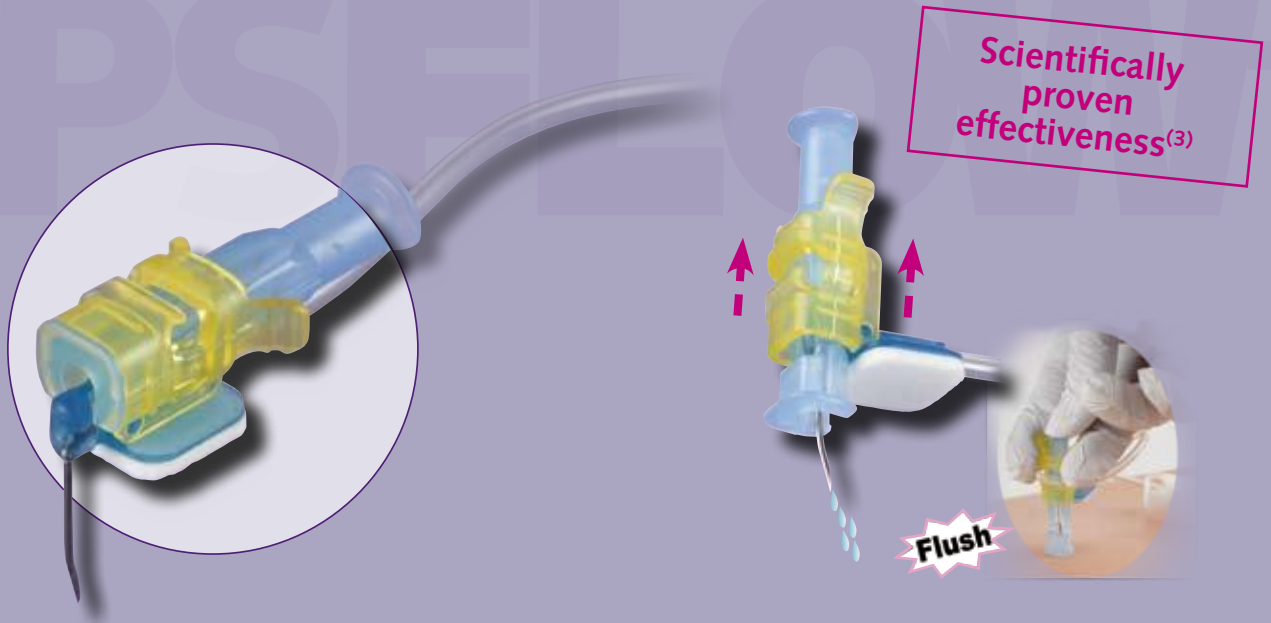


▶ PPS® FLOW+

New generation of safety
Huber needles
Automatic positive pressure



- ▶ **Automatic positive pressure⁽¹⁾** upon removal
- ▶ **Single-hand activation:**
17 times fewer accidental puncture risks⁽²⁾
- ▶ **Cost reduction** due to the management of catheter obstruction⁽³⁾

(1) According to HAS guidelines, December 2000.

(2) Survey of the occurrence circumstances of Accidental Blood Exposure due to punctures with safety materials, GERES – AFSSAPS Collaboration, G. Pellissier, 18th Annual GERES conference, 2008.

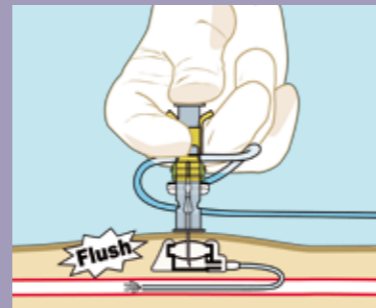
(3) Lapalu J et al., Totally Implantable Port Management: Impact of positive pressure during needle withdrawal on catheter tip occlusion (An experimental study), Journal of Vascular Access, in press.

▶ **PPS® FLOW+** New generation of safety Huber needles - Automatic positive pressure

AUTOMATIC POSITIVE PRESSURE

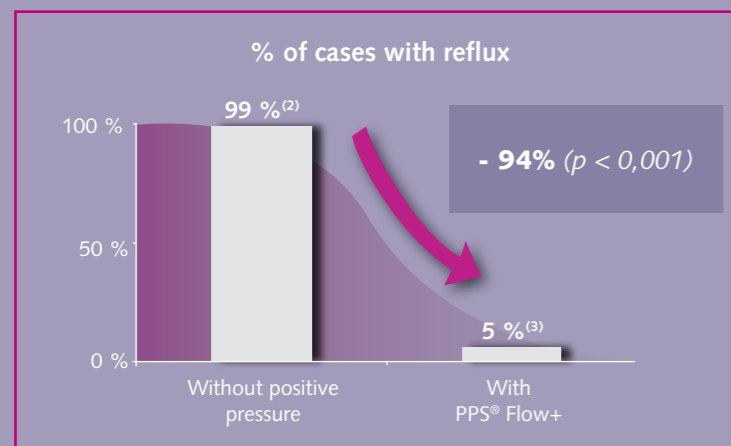
▶ **Prevention of catheter obstruction:**

- Catheter obstruction rate on implantable catheter port: **28%**⁽¹⁾



▶ **Automatic positive pressure upon removal of the needle:**

- Significant reduction of blood reflux at the distal tip of the catheter

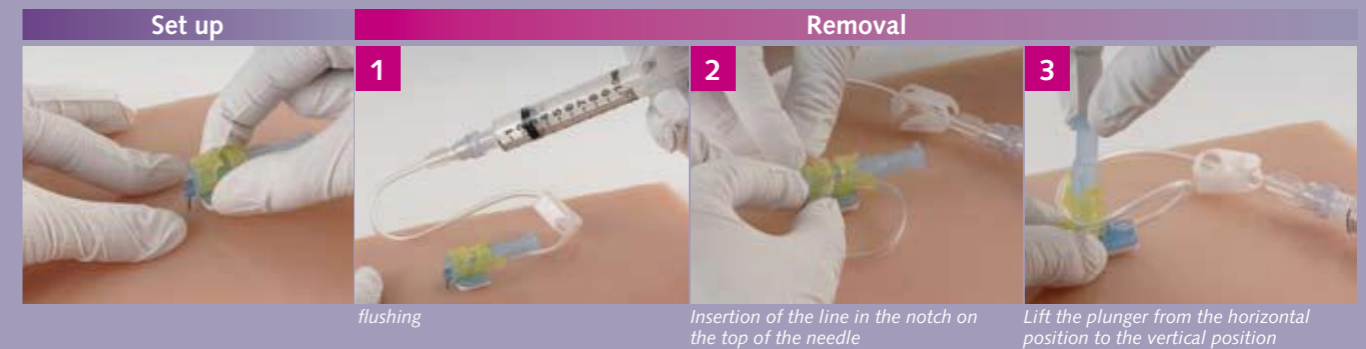


Manual positive pressure:
Reflux in 20% of cases⁽²⁾
(operator-dependent)

↓

Benefit of an automatic positive pressure

SINGLE-HAND ACTIVATION



Implantable port	Puncture rate for 10 ⁵ safety huber needles	95% CI
Two-hands activation	16,89	[6,42 – 27,36]
Single-hand activation	0	-



Using your thumb, lower the plunger against the skin, and simultaneously lift up the extractor until you hear a click (lockout).

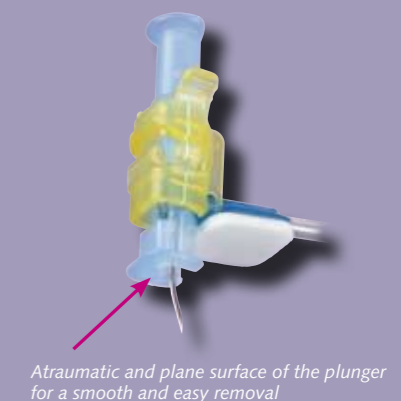
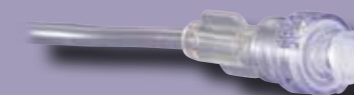
▶ **The last step allows automatic injection of saline in the implantable port = POSITIVE PRESSURE**

COST REDUCTION

- ▶ Reduction of the use of fibrinolytic agents⁽²⁾
- ▶ Reduction of cost following catheter obstruction complications⁽⁴⁾ (X-Rays, nurse time, explantation, etc.)

PREVENTION OF CATHETER-RELATED BLOODSTREAM INFECTION (CRBI)⁽⁶⁾

- ▶ BD Q-Syte™ closed Luer access device: maintains a sterile environment for the entire infusion line assembly



(1) Carlo JT et al., *The American Journal of Surgery* 188:722-727, 2004
 (2) Lapalu J et al., *Totally Implantable Port Management: Impact of positive pressure during needle withdrawal on catheter tip occlusion (An experimental study)*, *Journal of Vascular Access*, in press.
 (3) EC mark file
 (4) Biffi R et al., *Totally implantable central venous access ports for long-term chemotherapy*, *Annals of Oncology* 9:767-773, 1998.
 (5) *Survey of the occurrence circumstances of Accidental Blood Exposure due to punctures with safety materials*, GERES – AFSSAPS Collaboration, G. Pellissier, 18th Annual GERES conference, 2008.
 (6) Jarvis W et al., *American Journal of Infection Control*, Vol 33, Num 5, June 2005.

▶ PPS® FLOW+



References with BD Q-Syte™ on the main line (without Y-site)	Reference with BD Q-Syte™ on the Y-connector	Gauge	Needle Ø (mm)	Useful length of the needle (mm)
721507*	-	22G	0,7	15
721707	-	22G	0,7	17
722007	732007	22G	0,7	20
722507	732507	22G	0,7	25
723007	-	22G	0,7	30
723507	-	22G	0,7	35
721709	-	20G	0,9	17
722009	732009	20G	0,9	20
722509	732509	20G	0,9	25
723009	-	20G	0,9	30
723509	-	20G	0,9	35
721711	-	19G	1,1	17
722011	732011	19G	1,1	20
722511	732511	19G	1,1	25
723011		19G	1,1	30
723511		19G	1,1	35

Huber PPS® Flow+ needles are packaged in cartons of 12 units.
Sterilized using ethylene oxide. **DEHP free**

*Restricted to paediatric use.

This device is CE marked by notified body LNE-GMED