



SHL's High Viscosity, High Volume Injection Solutions

Antonio Bendek, Sr. Director Development & Innovations,

SHL Group  SHL GROUP



SHL's High Viscosity, High Volume Injection Solutions

These needle based injection systems fulfill the following requirements:

- Accommodate **larger injection volumes, greater than 1 mL.**
- Accommodate **higher viscosity injections, up to 100 cP**
- Able to perform **injections within 5 to 15 seconds.**
- Remains **cost effective solutions** without the need to go electro-mechanical based or unproven solutions.



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- All SHL's solutions presented today are all **two step autoinjectors**.
- Can accommodate a **1.5, 2.0 and 3.0mL Single-Chamber cartridges** or a **2.25mL staked needle syringe**.

Cartridge-Based AI

2.25mL PFS AI

Maggie






Bertha



Rotaject



	Cartridge-Based AI	2.25mL PFS AI	
	Maggie	Bertha	Rotaject
			
Fill Volume	Up to 3.0mL	Up to 2.25mL	Up to 2.25mL
Viscosity	Up to 30cP	Up to 60cP	Up to 100cP
Needle Gauge	Tailored to Therapy Needs	29G, 27G	29G, 27G
Injection Feedback	Audible: Continuous Clicking	Audible: Continuous Clicking Visual: Dosing Ribbon	Audible: Beginning and End of dose



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- These single-use autoinjectors can be tailored to **accurately deliver a range of doses**. From a full evacuation of the drug container, to a partial single dose.
- Cartridge based AIs are an **excellent solution** for drug products with **Tungsten oxide concerns**.
- Cartridge based AIs **behave** as a typical **staked needle syringe injection system**
- Cartridge based AIs provide **bubble free filling** advantages to **minimize** the need for **priming**.
- Cartridge based AIs are an excellent solution for **air sensitive drug** products.



Thank you for your attention