Prefilled Syringes and Cartridges

Patheon gives you access to the latest technology and nearly unlimited options.

Patheon is fully committed to the development, optimization, and scale-up of prefilled syringes and cartridges. Our experience spans a large number of projects for a wide variety of large and small molecules. In addition to our deep expertise, we also offer the expansive resources, technologies, and a broad range of forms and sizes to deliver exactly the right solution for your project.

- Syringe and cartridge sizes: 0.5 ml to 20 ml in glass and polymer
- Batch sizes: 40 L to 1,000 L or up to 150,000 units
- High potency compounds: Category 3B
- High viscosity products: up to 350,000 centipoise
- Vacuum filling and stoppering
- Air bubble reduction and nitrogen blanket available
- Automated labeling and finishing
- Single-use equipment components available
- Cold storage (2°-8°C) and inventory management available

These premeasured dose forms are popular with patients for their ease of use, which makes them popular within the healthcare industry because they enable self-administering of drugs that used to require a clinician visit. For pharmaceutical companies, they present lifecycle management opportunities with minimal or no reformulation. What’s more, precision dosing means minimal overfilling for minimal waste of costly product.

New state-of-the-art commercial-scale GMP manufacturing suite

Right now in Monza, Italy, Patheon is building a world-class GMP commercial manufacturing suite exclusively for prefilled syringes and cartridges. Occupying over 1,000 m², this €11.8M facility will integrate sterilization, compounding, automated fill-finish, primary packaging and cold storage. When fully operational in early 2014, it will have an annual capacity of 37 million units based on batches of 150,000 1 ml syringes.

For more information, email us at doingbusiness@patheon.com
Now is the time to start planning your project for Patheon’s new manufacturing suite

**Preparation**
- API storage: available dedicated freezers
- API thawing: 2°C - 8°C in segregated area
- Solution prep: SS cooled vessels with CIP/SIP or disposable plastic bag system
- Single-use components: available for solution prep tanks and tubing to needle

**Filling**
- Automated debagger: outer packaging
- Automated decontamination: electronic beam via tub introduction
- Automated de-lid/de-liner, sealing foil and Tyvek® liner removal
- Filling line speed: up to 600/min
- Temperature control during filling via small intermediate holding tank
- Dosing: peristaltic pumps with disposable technology or rotary piston pumps with CIP/SIP
- Automated vacuum filling and stoppering: air bubble reduction for high viscosity products
- Automated plunger placement
- Nitrogen flushing: available for filling and closing
- Automatic IPC: up to 100%

**Inspection**
- Automated visual inspection: with auto-denester, speed 400 units per minute

**Packaging**
- Automated labeling and finishing
- Secondary packaging in bulk
- Cold storage: 2°-8°C, dedicated inventory management available
- Terminal sterilization: counter pressure autoclave

**Integrated Development Services**
- Analytical development
- Formulation development
- Biopharmaceutical development
- Process design and clinical trial material manufacturing

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