

Outstanding services supporting your drug product development



Customized drug delivery solutions

- Specific designs for Rx and OTC
- Designed and developed by multi-disciplinary project team
- Highly customer-centric approach and structured design techniques
- Integrated quality driven project management system



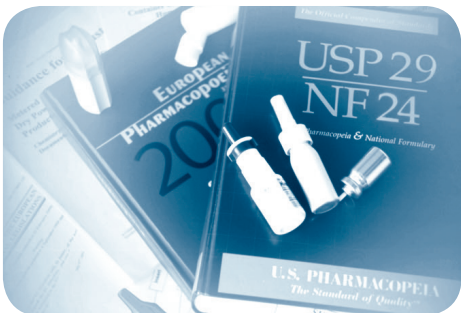
Analytical Laboratories

- Elastomer and plastic extractables, silicone oil assay
- Non-destructive 3D tomography imaging



Physical Laboratories

- Aerodynamic sizing and spray characterization
- Mechanical, stress and content uniformity testing
- IV BE testing
- Fully validated nasal casts available



Regulatory Expertise

- Over 20 years of experience guiding and supporting our customers globally
- Dedicated regulatory affairs experts with 20 DMFs and over 30 first pass NDAs generated
- Fast approval data packages



Classic Technology Platform





Classic Technology Platform

The classic offering for local and systemic drug delivery allows for administration of Rx and OTC products via the nasal, oral, dermal, and other routes

Benefits

Key Benefits

- Excellent spray performance
- Suitable for solutions, suspensions and viscous drug formulations including gels
- Gamma-irradiation available
- Wide range of dose volumes from 45µl to 1,000µl
- Wide range of closures, actuators and accessories
- Upside-down feature optional
- Child Resistant feature optional: compliant with 16 CFR 1700.20 and ISO8317
- Dose Counters approved in US and EU

Key Differentiators

- Numerous key drug product references launched worldwide
- Highly-customizable for branding differentiation
- Successful track record of multi-site large scale GMP production

Nasal Spray Actuators



Standard Actuators
Dose volume: 45µl to 140µl



Infant Actuators
Dose volume: 45µl to 140µl



Gel Actuators
Dose volume: 70µl to 140µl



Dose Counters
Dose volume: 91µl



Child Resistant Feature
Dose volume: 45µl to 140µl

Oral & Dermal Systems



Spray Actuators
Dose volume: 45µl to 250µl



Lotion Actuators
Dose volume: 280µl to 1000µl

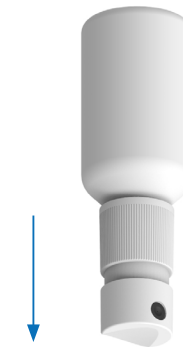


Drop Actuators
Dose volume: 45µl to 250µl



Gel Actuators
Dose volume: 45µl to 140µl

Upside-Down Systems

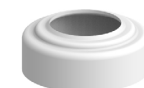


Dose volume: 50µl to 120µl

Closures



Screw (DIN, GPI, etc.)
Sizes: 18 mm to 24 mm



Crimp
Sizes: 13 mm to 20 mm



Snap-on
Size: 20 mm