

# Go for pre-filled and ready-to-use.



## YpsoDose® – the large volume disposable patch injector.

- Pre-filled and pre-assembled for easy patient training and use
- Patch and inject for simple and ergonomic handling
- Clearly communicates via visual and audible feedback before, during and after injection
- Ready-to-fill cartridge for easy drug filling and final assembly
- Unique electromechanical drive accommodates a range of viscosities and fill volumes



More confidence. More success. With Ypsomed Delivery Systems.



## Higher payloads, less frequent injections

Wearable injectors for volumes above 2 ml

Many pharmaceutical companies around the globe are focusing on biologic therapeutics, many based on monoclonal antibodies e.g. for autoimmune diseases and immuno-oncology therapies. Injections are infrequent, typically weekly, biweekly or monthly and there is demand for even less frequent injections e.g. every two, three or six months. The trend to fewer injections means that larger drug doses and thus larger injection volumes are required, often in excess of 2 ml.

### **These larger injection volumes require a new product concept, a large-volume patch injector.**

Compared to an infusion pump, which performs drug infusions over hours or days, the large-volume patch injector is intended to administer 3–10 ml of drug, often of higher viscosity, within 2–30 minutes. The low injection frequency and need to wear the device means that the injector must be easy to use. To cover this need Ypsomed has developed YpsoDose®, a single-use injection device that is patched directly to the skin with an integrated pre-filled drug reservoir, sterile fluid path and needle system.



## Ready-to-use, pre-assembled patch injector

Patch and inject – as simple as that

The YpsoDose® single-use injector is an electromechanical pre-filled and pre-assembled patch device for 10 ml glass cartridges. Needle insertion, injection, end of injection feedback and needle safety steps are all performed automatically. The needle remains hidden at all times and is made safe after injection and device removal.

- Unique sterile cartridge/fluid path and drive system provide safe and reproducible injections
- Unique programmable electromechanical drive system for a range of viscosities and fill volumes
- Programmable electronics to provide customisable patient feedback and connectivity
- Customisable device housing shells to provide customer-specific device designs



## Simplicity by design

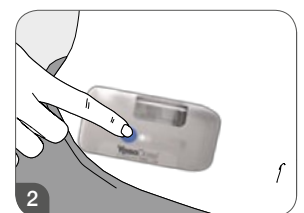
Meeting patient needs

YpsoDose® is handled in a simple 2-step process:  
Patch and inject.

- Ready to inject when attached and skin contact was automatically detected
- Needle insertion and injection is initiated by the press of a button



Patch



Inject

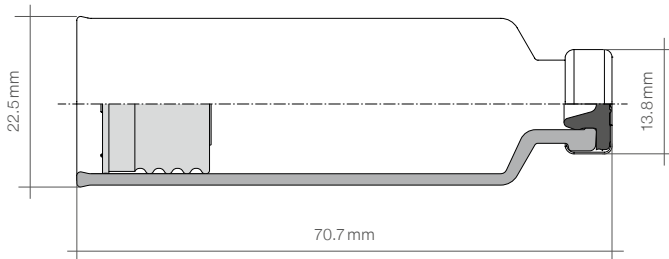
YpsoDose® clearly communicates with the patient or caregiver via visual and audible feedbacks before, during and after injection.



## Simplified handling for the pharmaceutical industry

Standard glass cartridges in a ready-to-fill format

YpsoDose® works with a 10 ml glass cartridge that allows conventional bulk filling processes as well as filling in a ready-to-fill tub format. This allows the glass cartridge to be filled on a range of already existing filling equipment infrastructure. The fluid path is completed only at the actual time of injection.

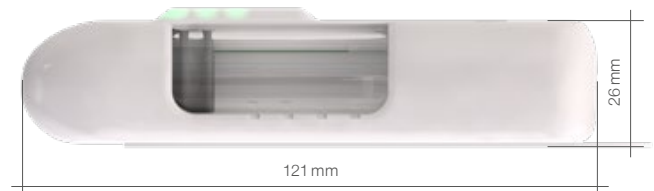


Cartridge filling in tub format



## Dimensions and specifications

Facts and figures



### Device specifications

|                          |   |
|--------------------------|---|
| <b>Primary container</b> | 10 ml glass cartridge   |
| <b>Fill volume</b>       | 3.0–10.0 ml   |
| <b>Dosing</b>            | Fixed, complete content   |
| <b>Viscosity</b>         | Broad range due to motor-driven system<br>e.g. a 5 ml, 50cp solution injected in 5 mins |
| <b>Fluid path/needle</b> | 27G or 29G  |

|                               |  |
|-------------------------------|--|
| <b>Injection time</b>         | Programmable for each customer version                         |
| <b>Needle system</b>          | Automated insertion and retraction                             |
| <b>Needle insertion depth</b> | 5–8 mm   |
| <b>Injection feedback</b>     | Visual and audible feedback before, during and after injection |



## Platform development and industrialisation

Over 30 years of advanced injection technology expertise

Ypsomed has changed the rules in the market for self-injections systems by developing and industrialising platforms which significantly accelerate and de-risk customer projects. Ypsomed has a proven track record of delivering complex injection devices with in-house engineering, combined with a high level of technological integration for manufacturing pens, autoinjectors, patch injectors, smart devices, pen needles, insulin pumps and infusion sets.

More **confidence.**  
More **success.**  
With **Ypsomed Delivery Systems.**



Pen systems



Autoinjector systems



Patch injector systems



Smart services

Ypsomed Delivery Systems provides a complete range of drug delivery products and services to biopharmaceutical companies. We offer everything from development and design to manufacturing and packaging, giving patients and customers more confidence and leading to more market success.