



SmartPilot™
YpsoMate

Go for smart guidance.



swissmade+

Reusable add-on transforms YpsoMate® into a fully connected smart product system.

- Bluetooth®-based wireless tracking of injection date, time and success
- Advanced patient guidance throughout the injection process
- NFC-based identification of combination product label to increase patient safety
- YpsoMate® autoinjector compatibility with SmartPilot™ without further changes
- No need to charge SmartPilot™ during its entire lifetime



More confidence. More success. With Ypsomed Delivery Systems.

YPSOMED
SELF-CARE SOLUTIONS



SmartPilot™ to improve therapy outcomes

Both market and technology are driving smart device adoption

Technology push

- Compact and low-cost processing power and data storage
- Sensor miniaturisation and energy efficiency
- Network benefits of ubiquitous wireless connectivity



Payers

Cost control & outcome



Smart device and therapy management solution



Pharmaceutical industry

Analysis & study



Patient

Advanced guidance



Smartphone with mobile application



HCPs & hospitals

Therapy monitoring



Smart devices to improve adherence & therapy outcomes

Market pull

- Trend towards outcome-based payments
- Need to analyse real-world drug effectiveness during clinical trials and commercial use
- Improving patient support and convenience



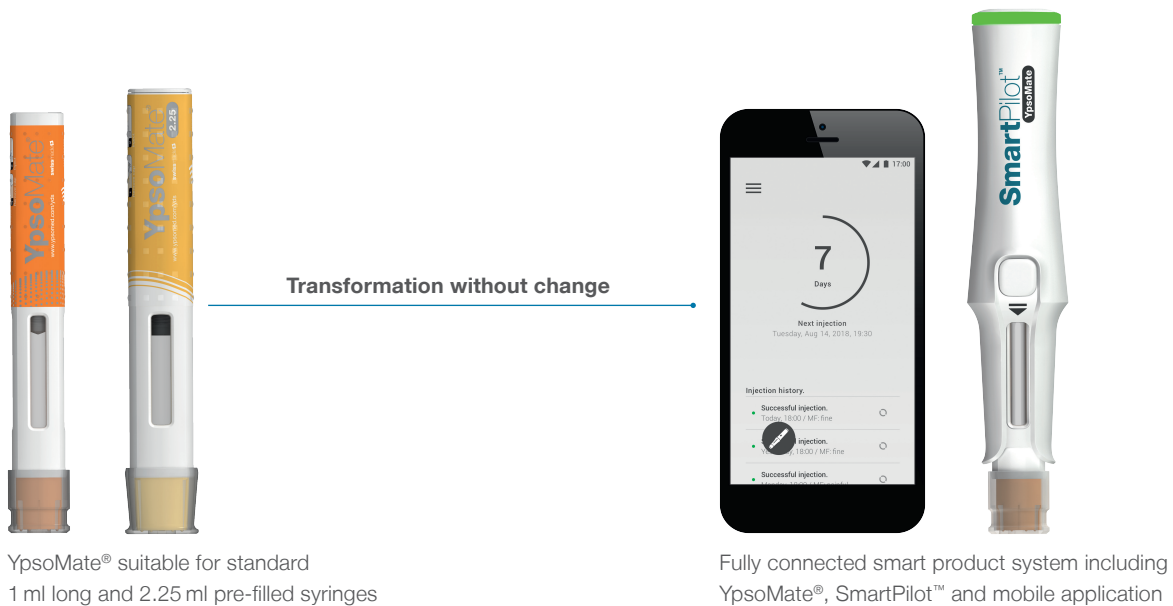
SmartPilot™ for YpsMate® enables advanced adherence monitoring by transforming the proven YpsMate® autoinjector into a fully connected smart product system. It supports the seamless provision of therapy-relevant data to patients, physicians and other healthcare stakeholders.



Towards advanced adherence monitoring

Transforming YpsoMate® into a connected smart system

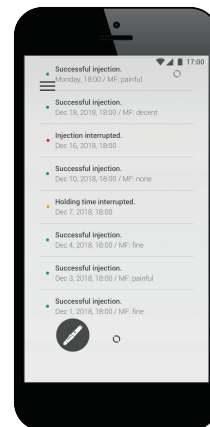
SmartPilot™ provides advanced adherence tracking without requiring any physical modification to the YpsoMate® autoinjector. It enables the use of advanced adherence monitoring services during clinical trials and as part of life cycle management following commercial launch.



SmartPilot™ tracks usage of YpsoMate® autoinjector

Capturing injection result including potential use errors

- Real-time tracking of injection events
 - Drug identification (incl. batch number, expiry date etc.)
 - Injection date and time
 - Successful injection
 - Injection interrupted
 - Holding time deviation
- Bluetooth®-based wireless transmission of injection events to mobile application
- Injection events (date, time and result) are recorded on SmartPilot™ local memory for later read-out
- Compatible with third-party therapy management app



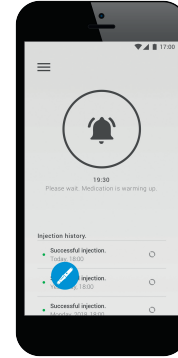
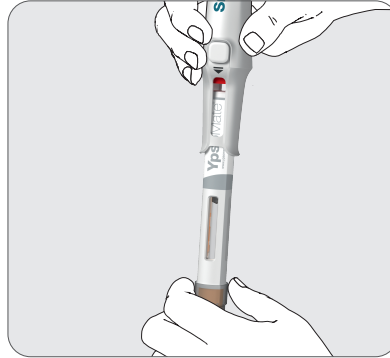


Step-by-step user guidance to avoid handling errors

Advanced visual and audible feedback throughout the injection process

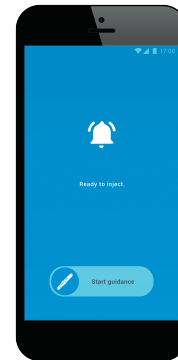
Step 1

Couple YpsoMate® autoinjector with SmartPilot™ and get information on drug identity, batch number and expiry date



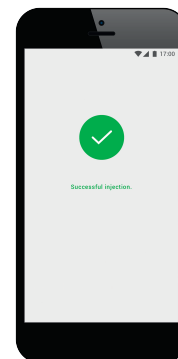
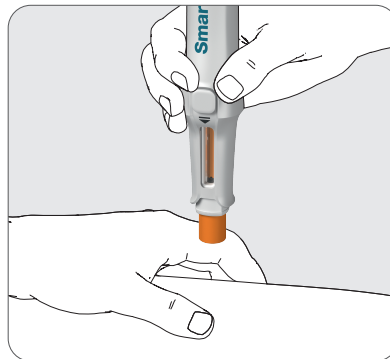
Step 2

Perform the injection and automatically transfer data to mobile application



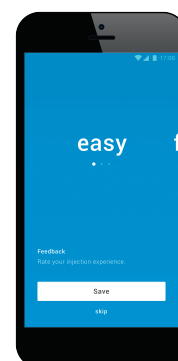
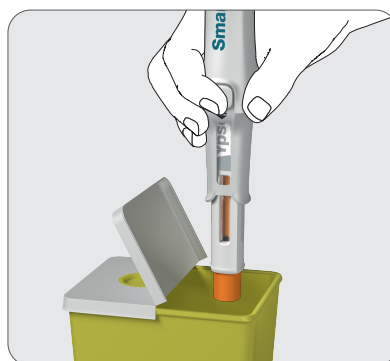
Step 3


Remove from skin after completion of injection including holding time



Step 4

Discard YpsoMate®, save SmartPilot™ for future use, and rate perceived experience when performing self-injection

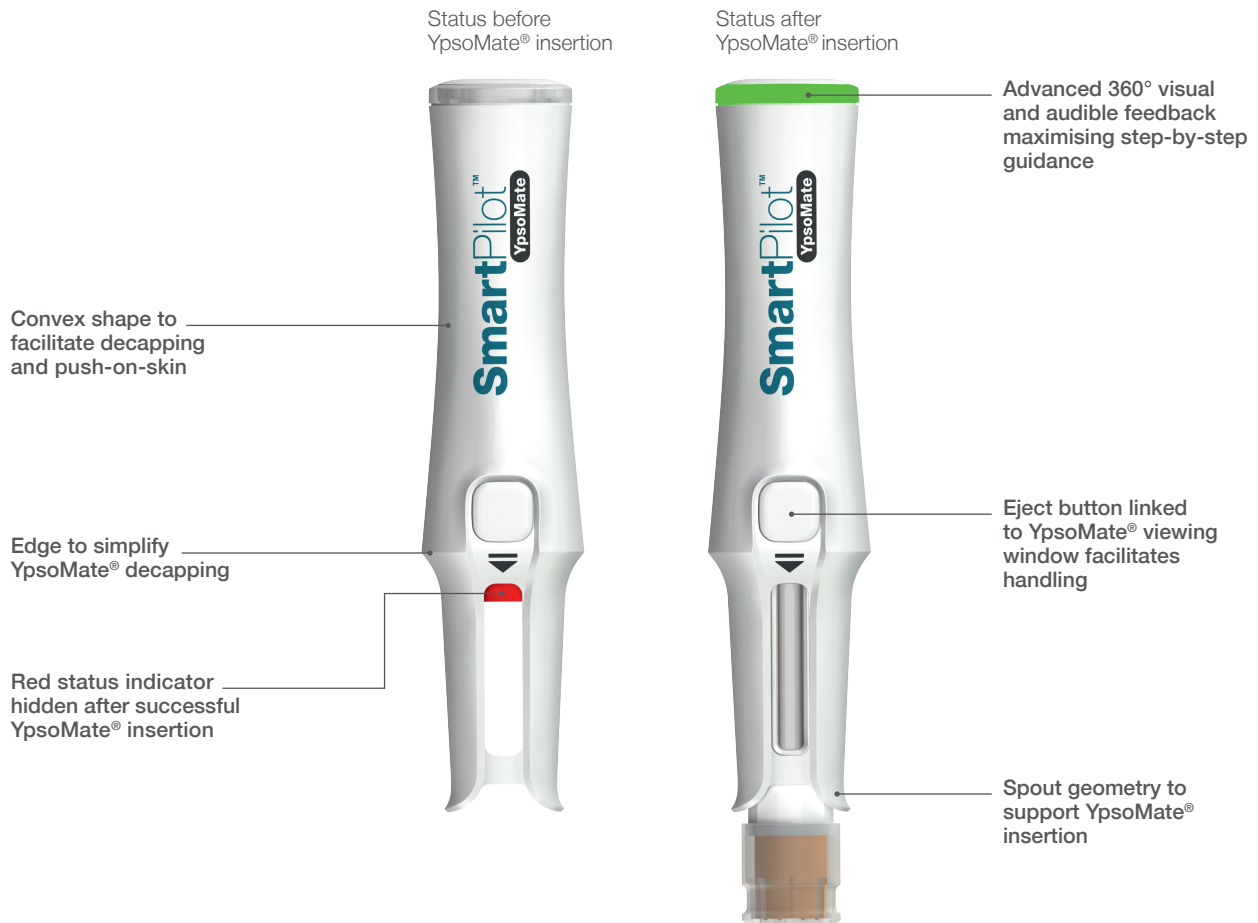


 These handling instructions are for marketing purposes only and do not replace the instruction for use of the product.



Industrial design provides further patient guidance

SmartPilot™ for YpsoMate® design attributes support each use step



Patient guidance even in absence of mobile application

Clear communication of YpsoMate® use status

Both visual and audible feedback are implemented to minimise use errors e.g. holding time. SmartPilot™ for YpsoMate® guides patients throughout the injection process including feedback once the drug has reached room temperature.



Drug is warming up



Ready to use



Injection interrupted



Holding time deviation



Adding a new dimension to patient safety

NFC-based authentication of the combination product

SmartPilot™ recognises smart Near Field Communication (NFC)-based labels on YpsoMate® notifying patients of the correct dose strength and checking that the drug has not expired.



SmartPilot™ for YpsoMate®

NFC-based identification



YpsoMate® autoinjector

Smart NFC label
in collaboration with

schreiner
MediPharm



- **Correct product:** Ensure that the drug product is not a counterfeit
- **Simplify expiry management:** Relate real-time with the expiry date
- **Check usage:** Ensure that correct YpsoMate® is used e.g. dosing intervals and dose strength
- **Support recalls:** Manage product recalls through cloud-based device serialisation



Touch-to-pair further improves ease-of-use

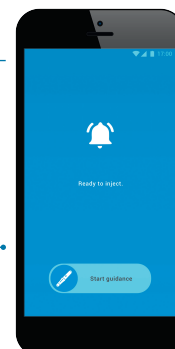
Facilitating intuitive and secure Bluetooth® pairing

NFC-based touch-to-pair provides a more convenient and secure means to establish Bluetooth® connectivity. An NFC-enabled smartphone is placed close to SmartPilot™. Credentials are automatically exchanged via NFC, with the close proximity preventing other smartphones from pairing with SmartPilot™.



1. NFC-based touch-to-pair

2. Secure and authenticated Bluetooth® connectivity





Introducing a mature smart device platform

Innovation targeted product attributes

Sensor concept

Sensor selected to optimise interaction with YpsoMate® mechanics

Signal processing algorithm

Advanced algorithm robustly detects injection events

NFC-based drug product identification

Authentication at point-of-use to further increase patient safety



Secure mechanical attachment

Spring-assisted system to simplify the patient handling experience

User-centred industrial design

Optimised following human factors and eye tracking studies

Feedback patterns

Advanced visual and audible feedback to maximise patient guidance

Life-time energy concept

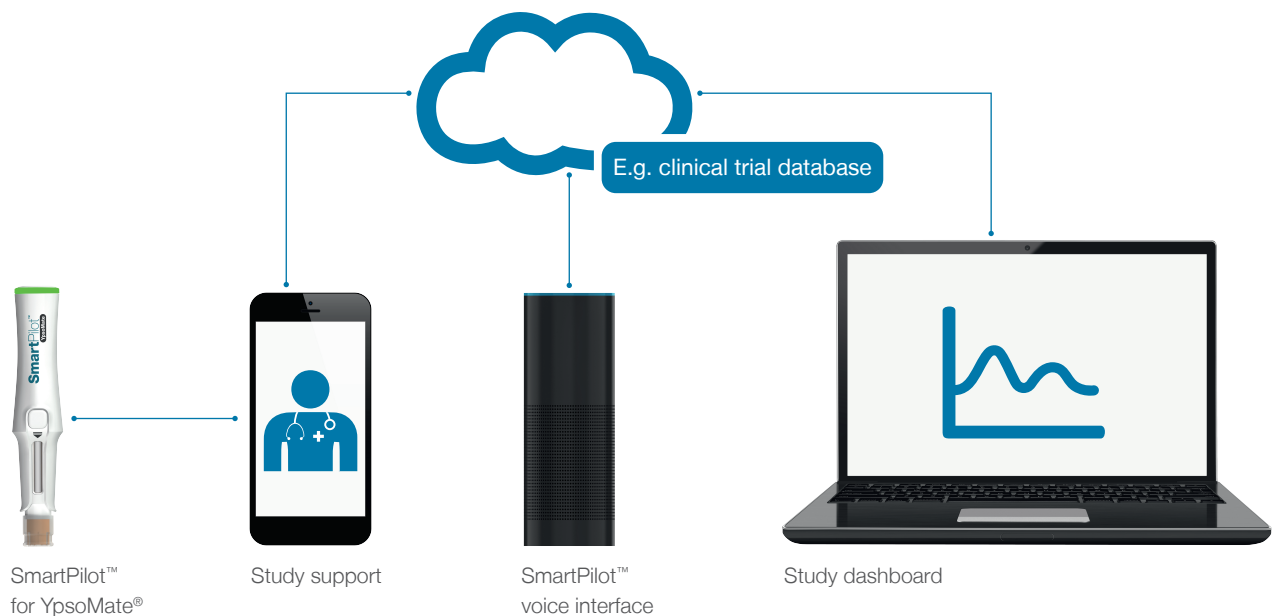
Eliminating the need to charge SmartPilot™ for YpsoMate® during its entire lifetime



Enabling integration within broader digital health ecosystems

Focus on ease-of-integration via web-based interfaces

YDS SmartServices™ embed SmartPilot™ for YpsoMate® in a broader digital ecosystem. The digital services provide a turnkey solution to simplify adherence monitoring and provide secure smart device integration. SmartPilot™ for YpsoMate® may be integrated into clinical trials and commercial patient monitoring programs.



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Deliverysystems

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



Pen systems



Autoinjector systems



Patch injector systems



Digital Health

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.

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