

Go for proven solutions.

swissmade 

Speed up time-to-market with customised platform products.

- Modular and proven platform technologies reducing time-to-clinic and time-to-market
- Clearly differentiated products based on innovative and patented technical solutions
- User-tested designs to improve patient compliance
- Reliable technical concepts for large-scale manufacturing
- Swiss quality



More confidence. More success. With Ypsomed Delivery Systems.



The Ypsomed Group

Leading developer and manufacturer of injection and infusion systems



The Ypsomed Group is a leading, independent developer and manufacturer of injection systems for self-medication and a renowned diabetes specialist with over 30 years of experience. Founded in 1984 as Disetronic, today Ypsomed supplies insulin pump and injection systems as well as pen needles for the treatment of diabetes, growth disorders, infertility and other therapeutic areas. Ypsomed is a leader in innovation and technology and the preferred partner of pharmaceutical and biotech companies in the self-medication field worldwide.

The **Ypsomed Delivery Systems (YDS)** product range reflects many years of experience and competence in the field of injection systems. Under the brand name mylife™ Diabetescare, Ypsomed provides patients with an extensive range of products for the treatment of diabetes.



Watch Ypsomed's company movie



Ypsomed Delivery Systems

The complete range of technology and services for self-injection systems

YDS Disposable and Reusable Pen Systems

Ypsomed's broad range of injection pens covers reusable and disposable injection systems for the treatment of diabetes, growth disorders, infertility, osteoporosis and other indications where liquid stable or lyophilised drugs are provided in cartridges.

YDS Flexible Volume Autoinjector Systems

cover a broad range of syringe-based disposable devices for the growing range of infrequently injected long-acting and antibody-based drugs. The auto-injectors are triggered by push-on-skin activation which is convenient, ergonomic and preferred by patients.

YDS Extended Services

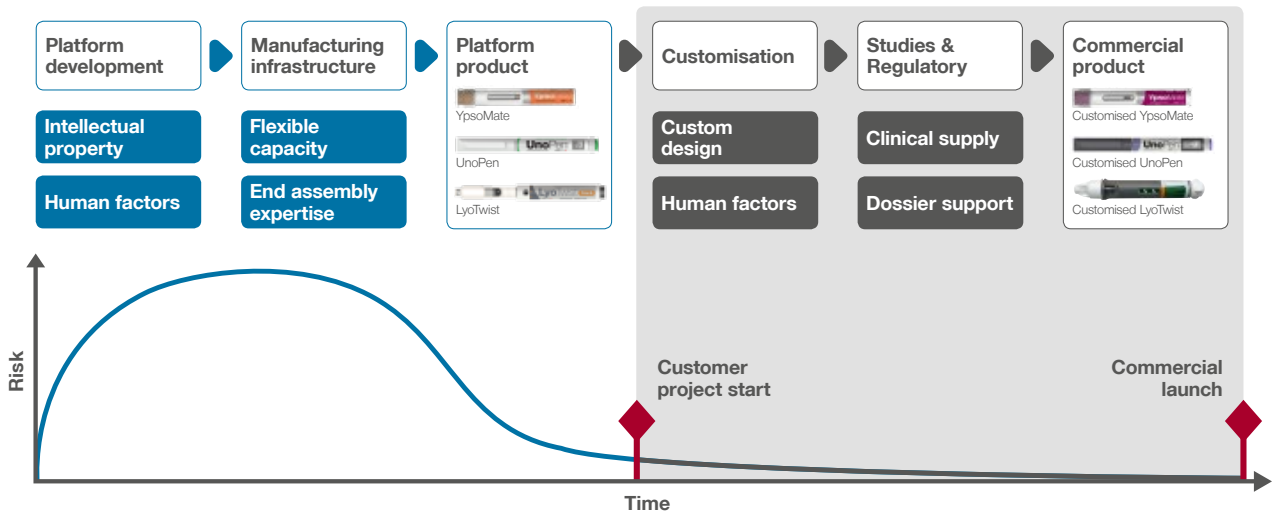
Ypsomed offers extended device services to pharmaceutical and biotech companies to allow them to focus on their core competence of drug development. For all device related aspects Ypsomed offers support tailored to the needs of each project: From industrial design, human factors engineering and patent landscape management to final assembly infrastructure and registration support.

YDS Contract Manufacturing leverages Ypsomed's broad expertise for the demanding manufacture of injection devices, using semi-automated as well as fully automated manufacturing infrastructure.



YDS Custom Products

Fast and low-risk customisation of innovative injection systems



Platform products enable flexible customisation while minimising project risks and shortening time-to-market.

Biopharmaceutical companies increasingly focus on self-injection devices to differentiate their drug products and at the same time fulfil patients' and payers' needs for **convenient, discreet, safe, compliant and cost effective drug administration**. Responding to customer requirements, Ypsomed has built up a comprehensive range of platform products that each meet key customer needs and are specifically designed to be modified to generate customer-specific commercial products.

Ypsomed decouples the development of new platform products from the customer project and thereby moves risk in-house to cover platform development and installation of manufacturing infrastructure. **Each customer project stems from an existing platform based on an established patent position and proven technology.** Driven by patient needs, market intelligence and new technology, the development of novel platform products also requires significant investments in manufacturing

capacity. Ypsomed supports its partners not only by customising the injection systems to market demands, dosing needs and primary container but also by incrementally expanding its installed manufacturing infrastructure to match customer demand.

For YDS customers the **platform-based strategy accelerates time-to-market and lowers project risk**. In combination with its extensive development capabilities Ypsomed is able to manage all processes during the development of innovative injection systems effectively – from early-stage innovation, clinical supply and commercial launch, to customer support throughout the product lifecycle.








Learn more about the fast and low-risk customisation of innovative injection devices.



Ypsomed platform products

The starting point for your therapy-specific injection system

	ServoPen®	YpsoPen®	UnoPen™	UnoPen™ Fix	FixPen™
					
3 ml cartridge	■	■	■*	■*	■*
1 ml dual-chamber cartridge					
1 ml long prefilled syringe					
2.25 ml prefilled syringe					
Reusable	■	■			
Disposable			■	■	■
Automatic injection	■				
Multi dose	■	■	■	■	■
Single dose					
Variable dose	■	■	■		
Fixed dose				■	■
Min dose [ml]	0.01	0.01	0.01	0.01	0.04
Max dose [ml]	0.6	0.6	0.6	0.6	0.4
Built in needle safety					
Optional needle safety	■	■	■	■	■

* 1.5 ml cartridge optional

** other configurations possible

Ypsomed offers a broad range of pen and autoinjector platforms for use with standard cartridges, dual-chamber cartridges and syringes. With this broad portfolio, Ypsomed stands out in the market by being able to serve any customer enquiry independent of the required primary drug container. This makes

Ypsomed the injection device partner of choice for pharmaceutical companies that want to leverage a successful partnership and create synergies across different development projects and commercial products.











Custom design

Proven technology – unique in appearance

A customer project is typically based on a fully developed platform product. Each product can be customised for specific fill volumes and dosing requirements. The customers may also select a distinct look instead of proceeding with the standard

platform product design without interfering with the mechanics of the device system. This ensures that the customers benefit from all technical advantages of the device platform while at the same time developing a unique appearance for their injection device.

LyoTwist™ Trio	LyoTwist™ Trio S	LyoTwist™ Vario	LyoTwist™ Vario S	YpsoMate®	YpsoMate® 2.25	YpsoMate® 2.25 Pro	VarioJect™
							
■	■	■	■				■*
				■			■
					■	■	
■	■	■	■	■	■	■	■
	■		■	■	■	■	
■	■	■	■	■	■	■	■
		■	■				■
■	■			■	■	■	
0.1	0.1	0.1	0.1	0.2	0.4	0.4	0.1
1.0	1.0	1.0	1.0	1.0	2.25	2.25	0.5**
				■	■	■	■
■	■	■	■				



Human factors

Keeping the patient in focus

Human factors engineering is essential for the development of a platform that results in safe and effective devices. Based on 30 years of experience in device development and having marketed dozens of devices globally, Ypsomed has substantial knowledge of all relevant guidelines and standards and broad experience putting this knowledge into practice. During the customisation project of a platform product, Ypsomed fully supports its customers during formative human factor studies as well as summative human factor studies, thus contributing significantly to the success of the registration process.



Learn more about human factor testing.



Intellectual property

Providing protection and managing the complex patent landscape

Ypsomed protects its platforms and advanced technologies by numerous patent families in key markets. It constantly monitors the patent environment

and possesses an in-depth knowledge of the specific injection device intellectual property landscape.



Manufacturing infrastructure

Swiss quality – continuously improved

When developing new platform products Ypsomed ensures that the most reliable and economic manufacturing process is selected. Furthermore, Ypsomed then strategically invests in flexible infrastructure based on state-of-the-art processes using either high capacity, fully automated equipment for high annual volumes or flexible, semi-automatic equipment for low annual volumes.

In line with the tradition of outstanding Swiss manufacturing quality, we not only invest in the latest equipment but, above all, in refining the competences of our skilled workforce. We thus ensure that every piece of equipment in our park is operated with maximum skill and ability. Moreover, this serves to deepen our knowledge regarding the design and optimisation of the manufacturing processes. Continuous improvement is not just a promise but is an integral part of Ypsomed's daily activities.



End assembly expertise

Focusing on end assembly from the start

As end assembly of drug and device is the last step of the manufacturing process of a combination drug product, it is typically set up close to the drug filling site. To ensure reliable and efficient processes throughout the whole manufacturing cycle up to the final combination drug product, defining final assembly machine concepts is an integral part of the platform development process. Ypsomed flexibly supports its partners by providing readily available assembly machine layouts from various suppliers and for different annual capacities and by supporting implementation of final assembly equipment at both customer and/or contract filling locations, as required.





Clinical supply

Qualified processes and tooling

Ypsomed supports the manufacture of clinical devices by means of fully qualified tooling and manufacturing equipment. Ypsomed manufactures most tools in-house plus works with leading global

tool manufacturers. Customers benefit from clinical devices that are rapidly available, not only in the platform design, but also in their specific custom design.



Dossier support

30 years of regulatory expertise

Drug submission processes for combination products are complex. As a device specialist with a 30 year track record, Ypsomed's dedicated team of regulatory experts provides dossier support for each

customisation project. Thus helping customers streamline the device related process and allowing them to concentrate on the drug related part of the submission.



Ypsomed's contribution to your success

Easily customised platforms to create commercial products

Ypsomed's platforms are the result of great innovative energy and tireless commitment driven by the strong wish to provide customers with injection devices that are:

- Safe and reliable as proven by human factor studies during platform development and customisation projects.
- Easily adapted to accommodate the specific demands of individual drugs including customer-specific outer designs, substantially minimising project risks for the customer.
- Affordable in terms of customisation cost and cost of goods due to Ypsomed's significant investment in platform development and manufacturing infrastructure.
- Manufactured with state-of-the-art processes using either high capacity, fully automated equipment for high annual volumes or flexible, semi-automatic equipment for low annual volumes.
- Swiss made: Ypsomed designs, develops and manufactures in Switzerland.



For more information, please visit www.ypsomed.com/yds and subscribe to the YDS newsletter.

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



Pen
systems



Autoinjector
systems



Contract
manufacturing



Extended
services

Ypsomed Delivery Systems provides a complete range of products and services for dedicated drug delivery devices from development and design to manufacturing and packaging, giving more confidence and leading to more market success.



Company movie

For more information visit www.ypsomed.com/yds

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