

5S-Drive

Introducing **simatec's**
Gas Producing Dry Cell
Technology



simatec

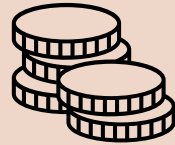
Reducing Health Care Costs Together

Today's Challenges



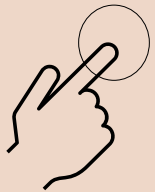
Sustainability

Increasing demands on the circular economy and environmental impact



Costs

Costs of health care increase annually



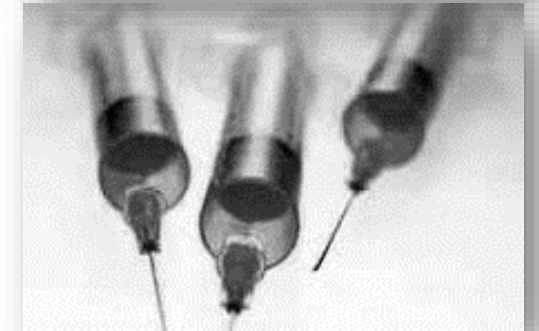
Easy to Use

Quality, patient safety and user friendliness remain top priorities



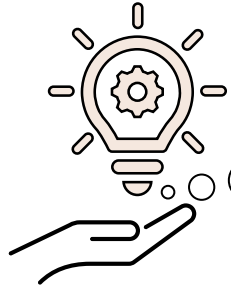
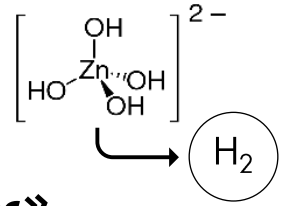
Home Care

Trend to home care¹ has an unmet need for wearables

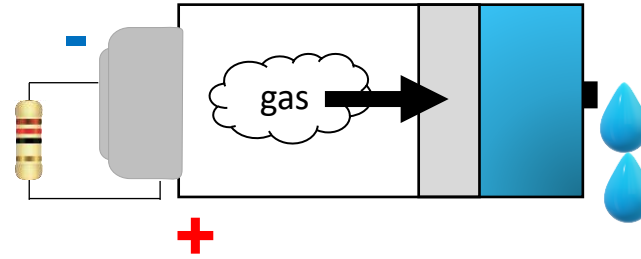


¹ Home care resulted in a 53% decrease in healthcare costs.

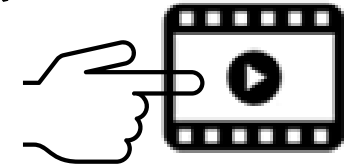
5S-Drive I The Unique Advantages for Pumping Liquids



Gas production controllable only by a simple resistor.



«How easy it works»



Small

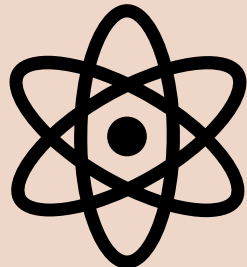
Lightweight (1.8g), and smaller than a fingertip. Small CO₂ footprint & low environmental impact

11.6mm



Simple

No needs for any additional energy sources. Simple assembly and disassembly.



Silent

Pulseless, silent and works in every position. 1 cell can produce 140ml of hydrogen gas.



Strong

Gas volume and rates scalable by stacking cells; up to 25bar. Ideal for high viscosities.



Smart

Wide range of functions: configurable delivery rates, start-stop anytime on demand. Gas formation is proportional to the current.




5S-Pump

Large Volume / Smart Device



© simatec

Device specification

Drive	Gas producing dry cell
Volume	5ml / 10ml / 20ml / 50ml / 100ml / >100ml*
Viscosity	1..>100 cP
Flow rate	0.5-50ml/h (fix or <i>adjustable</i>)* Starts/Stops at any time on demand
Accuracy	< +/-5%
Weight	30g, drive system
Handling	Pre-filled or patient-filled
Temperature	-20°C..+55°C
Storage time	>3y of the gas producing cell
Primary container	Polymer / glass
Drive benefits	Silent; pulsation free
Pressure	Up to 2bar
Waste disposal	Battery recycling 
*	Other specifications on request

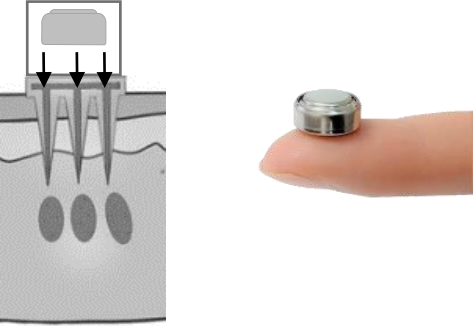
The medical devices shown are not yet available for purchase.

simatec

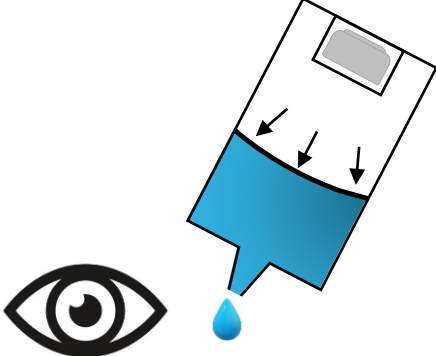
5S-X | Wide Range of Applications

Microneedles

deliver drugs via microneedle patch, hollow MN

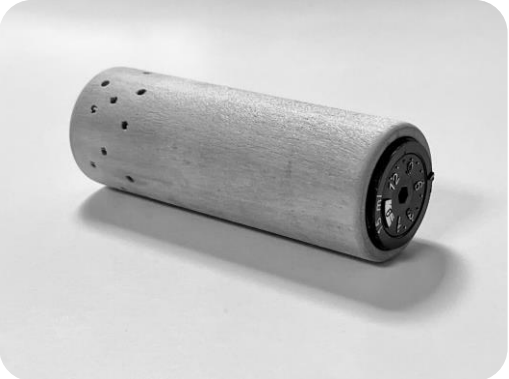


Dispenser for eye drops



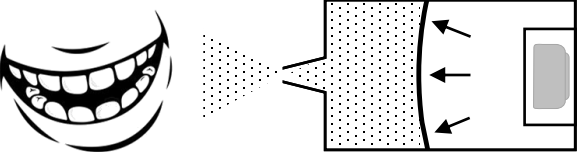
Dispenser for essential oils

1 drop/day



Inhaler

Soft-mist with on demand propellant filling



Unlimited Possibilities





Let's Get in Touch!



Matthias Meier
Research & Development
mmeier@simatec.com



Michael Weber
Research & Development
mweber@simatec.com



Marco Angliker
Business Analyst
marco.angliker@simatec.com



Raoul Waldburger
PHD, Scientific Advisor

www.simatec-medical.com



Family-Owned – Swiss – Worldwide



Mischa Wyssmann, CEO

simatec ag
Stadthof 2
CH-3380 Wangen a.A.
+41 32 636 50 00
www.simatec.com

