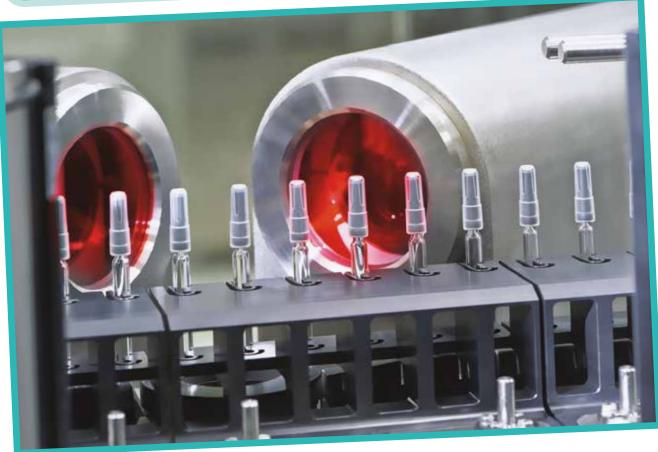
# Optimum solution choice simplified by GERRESHEIMER performance levels



Gerresheimer's new, standardised division into three different performance levels for injection vials, syringes, cartridges and ampoules makes it easier to choose the right solution.

GERRESHEIMER's stellar performance at producing injection vials, syringes, cartridges and ampoules was exhibited recently in Düsseldorf to great acclaim as its expertise and innovation in glass manufacturing continues to set a benchmark in the industry – all thanks to the company's high quality standards.



ments of the pharmaceutical active agent or area of application. Gx Elite products offer the highest performance and are especially suitable for innovative biopharmaceutical products. Says Holger Krenz, Global Vice President Business Development High Value Products Tubular Glass: "We offer the right solution for all active ingredients, therapeutic areas and production requirements. The new performance levels give our customers a

transparent overview of our portfolio and make it easier to select the right product."

# CLEAR STRUCTURE HELPS WITH FINDING THE RIGHT SOLUTION FAST

By dividing its product portfolio into the three above listed performance levels, Gerresheimer has created a standardised structure for its product platforms for both bulk and pre-sterilized 'ready-to-fill' primary packaging. This lets customers quickly find

the right product for their application. The portfolio encompasses syringes, cartridges, ampoules and injection vials for the full spectrum of pharmaceutical applications in human and veterinary medicine, including solutions for innovative biopharmaceutical products in the areas of cell and gene therapy.

# GX VALUE: PROVEN PHARMACEUTICAL-GRADE PRODUCTS

The Gx Value product line for injection vials, syringes,

ampoules and cartridges encompasses pharmaceutical-grade products made of type I borosilicate glass. Having proven their value millions of times over, these items mark the entry point of the Gerresheimer product world. Gx Value products meet all qualitative, regulatory and technical requirements. Gerresheimer produces Gx Value products worldwide for the various regional markets. With local production sites, Gerresheimer is able to ensure high product availability and fast delivery. Gx Value solutions are used for a broad spectrum of pharmaceutical products, such as anticoagulants and anaesthetics.

# GX ADVANCE: HIGHER EFFICIENCY DURING THE FILL & FINISH PROCESS

Gx Advance injection vials, syringes, ampoules and cartridges offer all the properties

of Gx Value products, plus expanded product features, including the enabling of greater filling efficiency. This means tighter tolerances, reduced glass-to-glass and glass-to-metal contact and higher surface quality. It allows for an efficient filling process that can lower costs. Gx Advance syringes and Gx Advance cartridges are also optionally available as ready-to-fill (RTF) products. Gx Advance solutions are typically used in largescale industrial mass production where they are applied for such items as vaccines or for active agents for diabetes treatment - such as insulin or GLP-1.

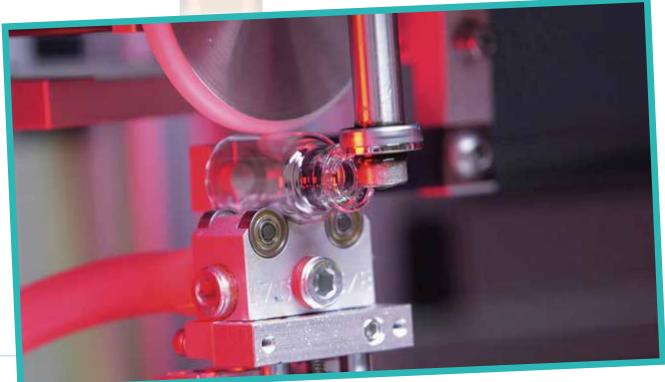
#### GX ELITE: HIGHEST PERFORMANCE AND TOP-NOTCH PROTECTION FOR SENSITIVE PHARMACEUTICALS

Gx Elite injection vials, syringes and cartridges offer all the advantages of the Gx Advance level while also

providing significantly higher breakage protection, strict adherence to tolerances and maximum surface quality. This ensures a highly-efficient and reliable filling process as well as top-notch protection for the pharmaceutical products. Such product characteristics are achieved through a special production process that is gentle on the materials, with no glass-to-glass contact and minimised glass-to-metal contact. Gx Elite products are an optimum choice for pharmaceuticals with special requirements, including such biopharmaceuticals as mRNA active agents, gene therapies and applications for ophthalmology use.

## READY-TO-FILL WITH ECO-FRIENDLY STERILISATION

All Gx Elite products are available presterilized in a ready-to-fill (RTF) version. For this Gerresheimer offers two packaging platforms, namely EZ-fill and EZ-fill Smart. For the first time, vapourised hydrogen peroxide



(VHP) sterilisation will also be available for the EZ-fill Smart packaging platform. This eco-friendly, resourceconserving method uses no toxic substances at all - meeting the most stringent requirements set of the U.S. Food and Drug Administration (FDA). Gerresheimer is taking on a leading role by implementing VHP sterilisation in the RTF manufacturing process. Customer benefits include optimised delivery times for the EZ-fill and EZ-fill Smart packaging platforms, both of which are compatible with all standard commercially available fill & finish lines - enabling a flexible, reliable and costeffective filling process.

#### COMPLETE SYSTEMS AND SOLUTIONS

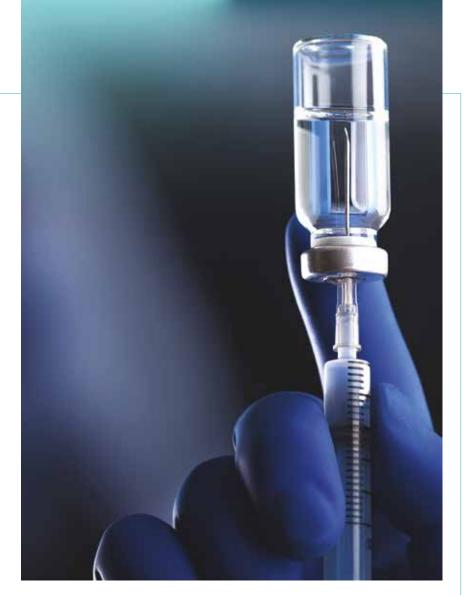
All injection vials, syringes, cartridges and ampoules at the GX Value, Advance and Elite performance levels are also available as complete systems with the suitable components. This includes a broad array of different sealing and closure solutions along with various rubber components and built-in needle protection systems for prefillable syringes. Some products are also available in special configurations, such as silicone oil-free prefillable syringes. The new Gx performance levels are supplemented by Gx Choice, which lets customers freely configure a broad range of customer-specific product solutions.

### gerresheimer

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#### ABOUT GERRESHEIMER

Gerresheimer is an innovative systems and solutions provider and a global partner for the pharma, biotech and cosmetic industries. The company offers a comprehensive portfolio of pharmaceutical containment solutions, drug delivery systems and medical devices as well as solutions for the health industry. Its product range includes digital solutions for therapy support, medication pumps, syringes, pens, auto-injectors and inhalers as well as vials, ampoules, tablet containers, infusion, dropper and syrup bottles - and more. Gerresheimer ensures the safe delivery and reliable administration of drugs to the patient. With 35 production sites in 16 countries in Europe, America and Asia, it has a global presence and produces locally for regional markets. With around 12,000 employees, the company generated revenues of around EUR 2 billion in 2023. Gerresheimer AG is listed in the MDAX on the Frankfurt Stock Exchange (ISIN: DE000A0LD6E6). Gx®, RTF® and EZ-fill SmartTM are all registered trademarks of Gerresheimer.

