



PRE-FILLABLE GLASS SYRINGES

FINE-TUNED TO YOUR NEEDS



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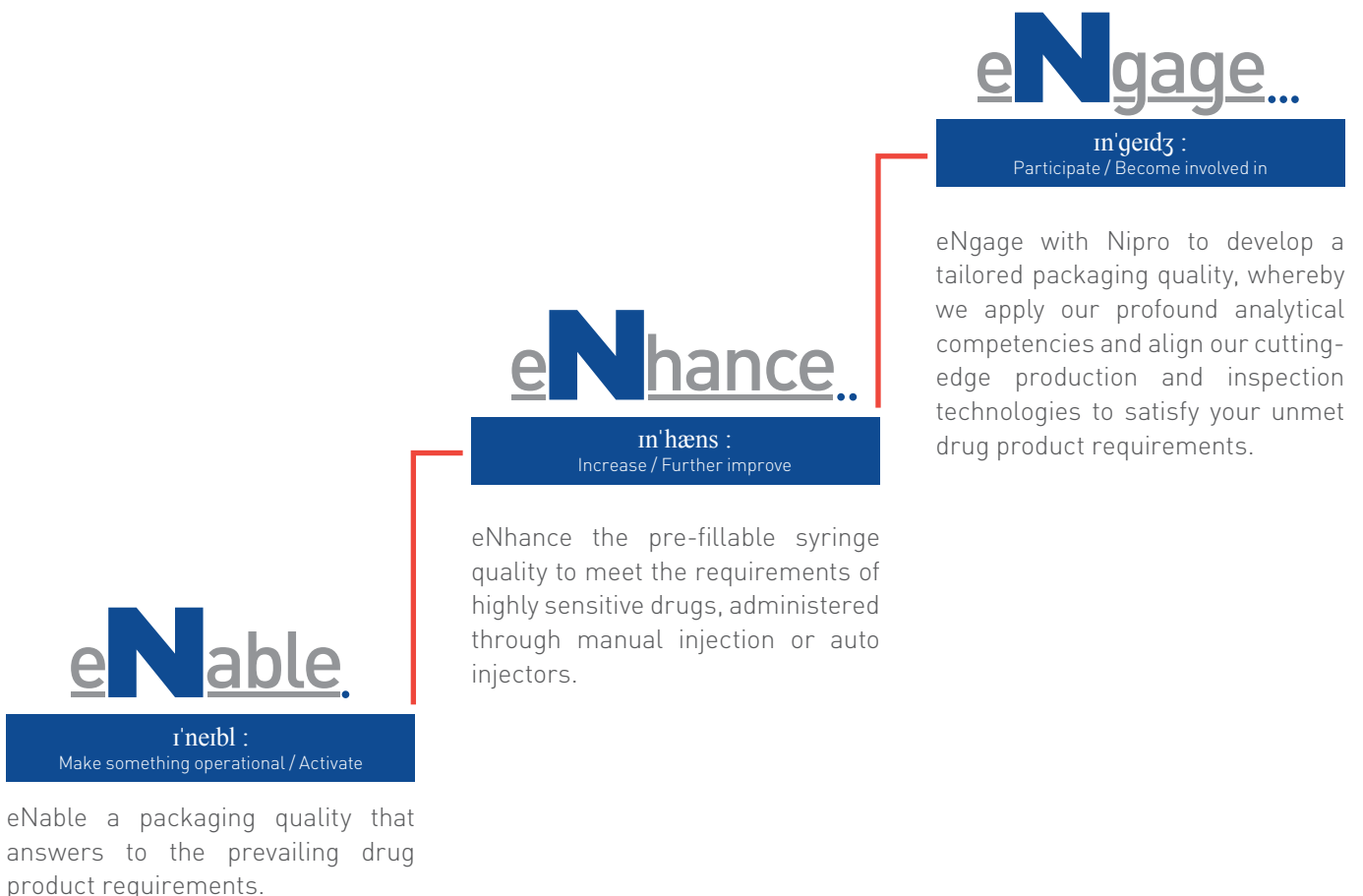
The pre-fillable syringe market has grown significantly in the past years. Pharmaceutical companies are developing an increasing number of drug products in injectable formats, since this packaging type offers exceptional benefits: decreased total cost of ownership, improved drug-container compatibility, and increased patient safety.

At Nipro PharmaPackaging, we understand the diverse quality requirements in the pharmaceutical industry. To address these various demands for quality and their intricacies, we present three distinct quality levels for our pre-fillable glass syringes.

NIPRO QUALITY LEVELS

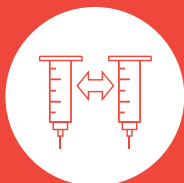
The process of defining the right quality level for primary packaging is a complex, involved process. In order to ensure the optimal match, there must be understanding and collaboration: specific data must be exchanged, requirements discussed, and numerous parameters defined.

Our Nipro Quality Levels form the perfect base to fine-tune your quality and service requirements, thereby providing you with the optimal packaging solution.



Our state of the art production facility in Germany features advanced manufacturing and inspection technologies that are capable of controlling exceptionally tight tolerances, even for your most advanced drug products.

ADVANCED MANUFACTURING AND INSPECTION TECHNOLOGIES



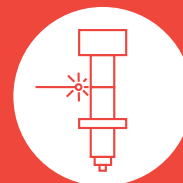
No glass to glass contact



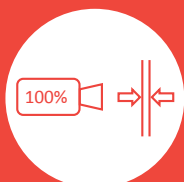
Low tungsten



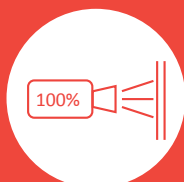
Dive in nozzle



Laser based cutting



Cosmetic inspection



Dimensional inspection



Silicone distribution



Container closure integrity

Data sharing is key in understanding needs and facilitating both development and supply. Therefore, all necessary data is available and will be adapted to meet your processes.

DATA SHARING



Simple LoA request procedure



Adaptable CoC and CoA

**SIMPLY SELECT THE QUALITY LEVEL
FINE-TUNED TO YOUR SPECIFIC DRUG REQUIREMENTS!**

RANGE

LUER SLIP SYRINGES



Volume(ml)	Outside Ø(mm)	Inside Ø(mm)	Flanges	Printing
0.5	6.85	4.65	Round, Round small, Cut	Graduation, Dose mark
1.0 (long)	8.15	6.35		
1.0	10.85	8.65		
2.25	10.85	8.65		
3.0	10.85	8.65		

Closure	Plunger stopper	Plunger rod
Tip cap	Standard, Coated	Transparent, Color
Ribbed tip cap		

Components supplied by: Aptar Stelmi, Datwyler, West, Nipro

LUER LOCK SYRINGES



Volume(ml)	Outside Ø(mm)	Inside Ø(mm)	Flanges	Printing
0.5	6.85	4.65	Round, Round small, Cut	Graduation, Dose mark
1.0 (long)	8.15	6.35		
1.0	10.85	8.65		
2.25	10.85	8.65		
3.0	10.85	8.65		

Closure	Plunger stopper	Plunger rod
Luer lock adapter + Tip cap	Standard, Coated	Transparent, Color
Vetter V-OVS		

Components supplied by: Aptar Stelmi, Datwyler, West, Vetter, Nipro

STAKED NEEDLE SYRINGES



Volume(ml)	Outside Ø(mm)	Inside Ø(mm)	Flanges	Printing
0.5	6.85	4.65	Round, Round small, Cut	Graduation, Dose mark
1.0 (long)	8.15	6.35		
1.0	10.85	8.65		
2.25	10.85	8.65		

Outside Ø (G & mm)	Inside Ø (mm)	Free length (inch & mm)	Bevel
25G (0.50)	0.30	5/8" (16.0)	3-bevel, V-bevel
27G (0.40)	0.20	1/2" (12.7)	
27G (0.40)*	0.26	1/2" (12.7)	
29G (0.33)	0.13	1/2" (12.7)	
29G (0.33)*	0.19	1/2" (12.7)	

* Wall type = "Thin walled" (TW). Other sizes upon request.

Closure	Plunger stopper	Plunger rod
Soft needle shield	Standard, Coated	Transparent, Color
Rigid needle shield		

Components supplied by: Aptar Stelmi, Datwyler, West, Nipro



LUER LOCK SYRINGE



STAKED NEEDLE SYRINGE



LUER SLIP SYRINGE

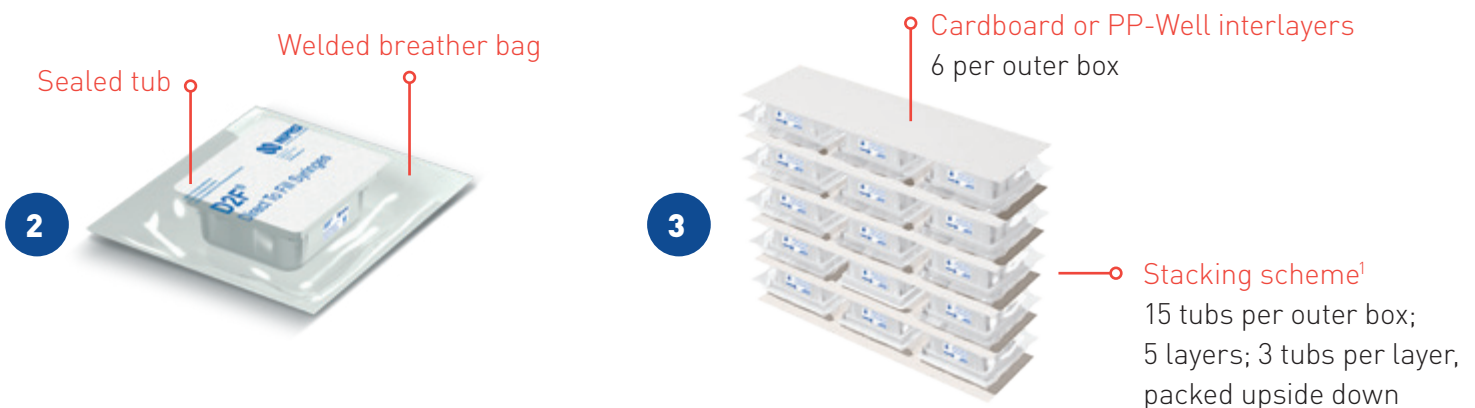
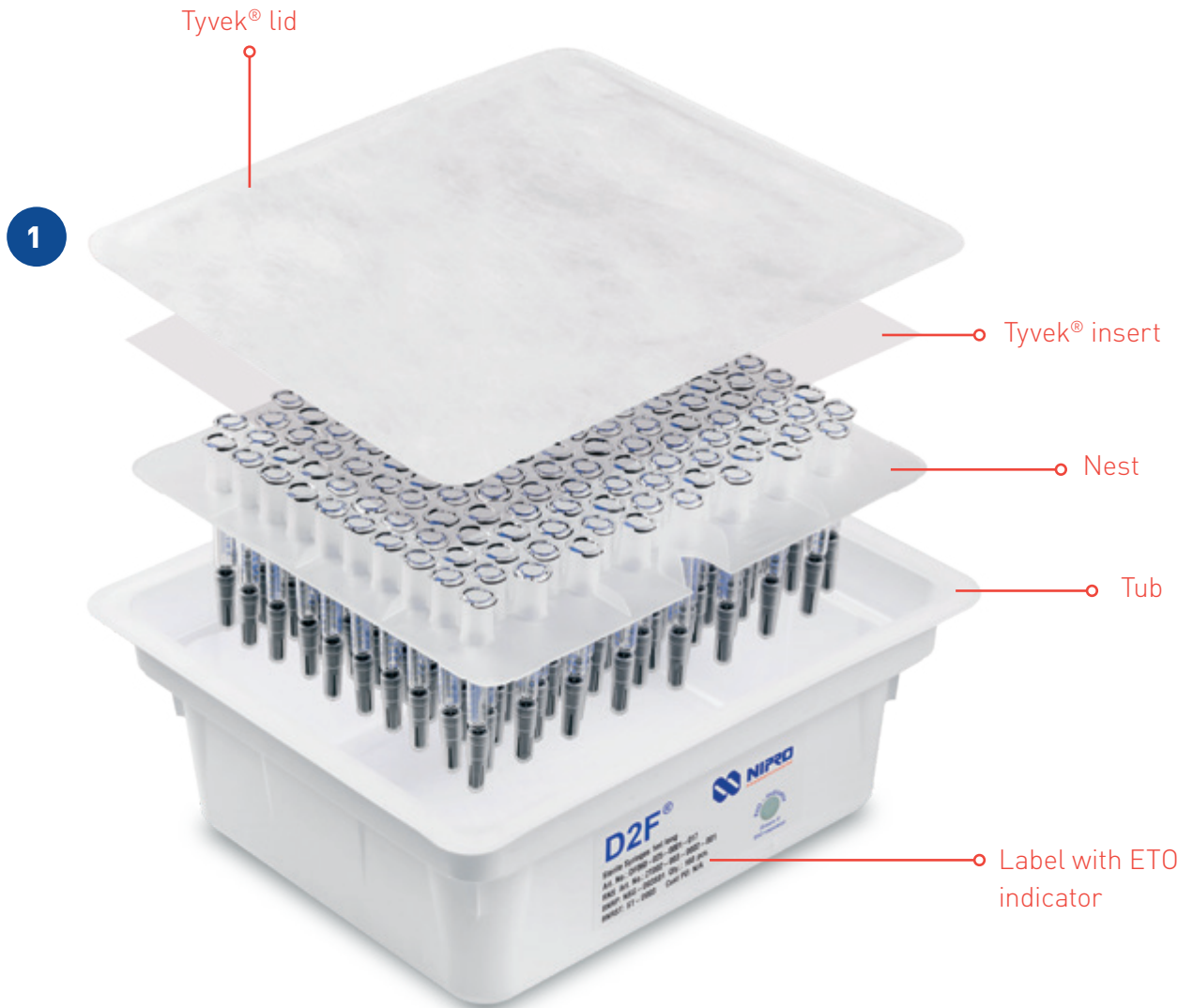




DIRECT-TO-FILL

STERILIZED PACKAGING SOLUTIONS

Nipro PharmaPackaging manufactures D2F syringes in technologically advanced production sites that are certified according to ISO 9001, ISO 15378, ISO 14001, and ISO 50001. Our fully automated cleaning and packaging process takes place in an ISO 7 / ISO 8 cleanroom with 100% monitoring under laminar air flow.



1. Different stacking schemes are available (depending on type of tub)

D2F MANUFACTURING PROCESS

NESTS AND TUBS ARE FIRST CLEANED WITH IONIZED AIR TO MINIMIZE PARTICLE LOAD.

Robots then load the washed, siliconized, and final assembled pre-fillable syringes into nests and tubs. The tubs are covered with a Tyvek® insert, sealed with a corresponding Tyvek® lid, and then entered into a breather bag which is welded closed (double inserts & breather bags optional).

Our 100% in-line inspection systems allow for continuous quality monitoring as part of In Process Controls (IPC). This ensures that all pre-fillable syringes are foreseen with closures and that tubs are 100% filled and correctly sealed.

Afterwards, machines transfer the tubs to a station for final packing. Tubs are stacked and placed in outer boxes.

Outer boxes are placed on pallets, protective angle boards are applied, and fixation is ensured with PE-Bands. The total pallet is wrapped in plastic foil to ensure safe transportation.

Final packed pre-fillable syringes are then ETO sterilized. Labels on the tubs and outer boxes are provided with a special ETO indicator (a color change from blue to green after ETO exposure). This allows for visual confirmation of ETO sterilization and subsequent exposure.

Nipro's D2F packaging design is a smart, efficient choice. It prevents glass to glass contact while enabling immediate and direct use on the filling line. In essence, Direct to Fill.

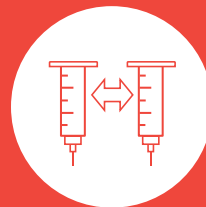
KEY TECHNOLOGIES



Cleaned with ionized air



100% camera inspection



No glass to glass contact



Intelligent label



Label with ETO indicator

Outer Cardboard or PP-Well Box
80 x 53 x 24 cm

Nipro PharmaPackaging is specialized in developing and manufacturing advanced pharma packaging products and complete packaging solutions for early development drugs or the enhancement of packaging solutions for existing drugs.

With a worldwide manufacturing footprint of 15 plants, multiple sales offices, and internal lab services, Nipro PharmaPackaging offers an exceptional service platform. Through our personnel, products, and services, Nipro PharmaPackaging enables you to provide a safer and healthier administration to your customers.

Nipro PharmaPackaging is part of Nipro Corporation Japan, established in 1954. As a leading global healthcare company with over 28.000 employees worldwide, Nipro serves the Pharmaceutical, Medical Device, and Pharma Packaging industries.

