

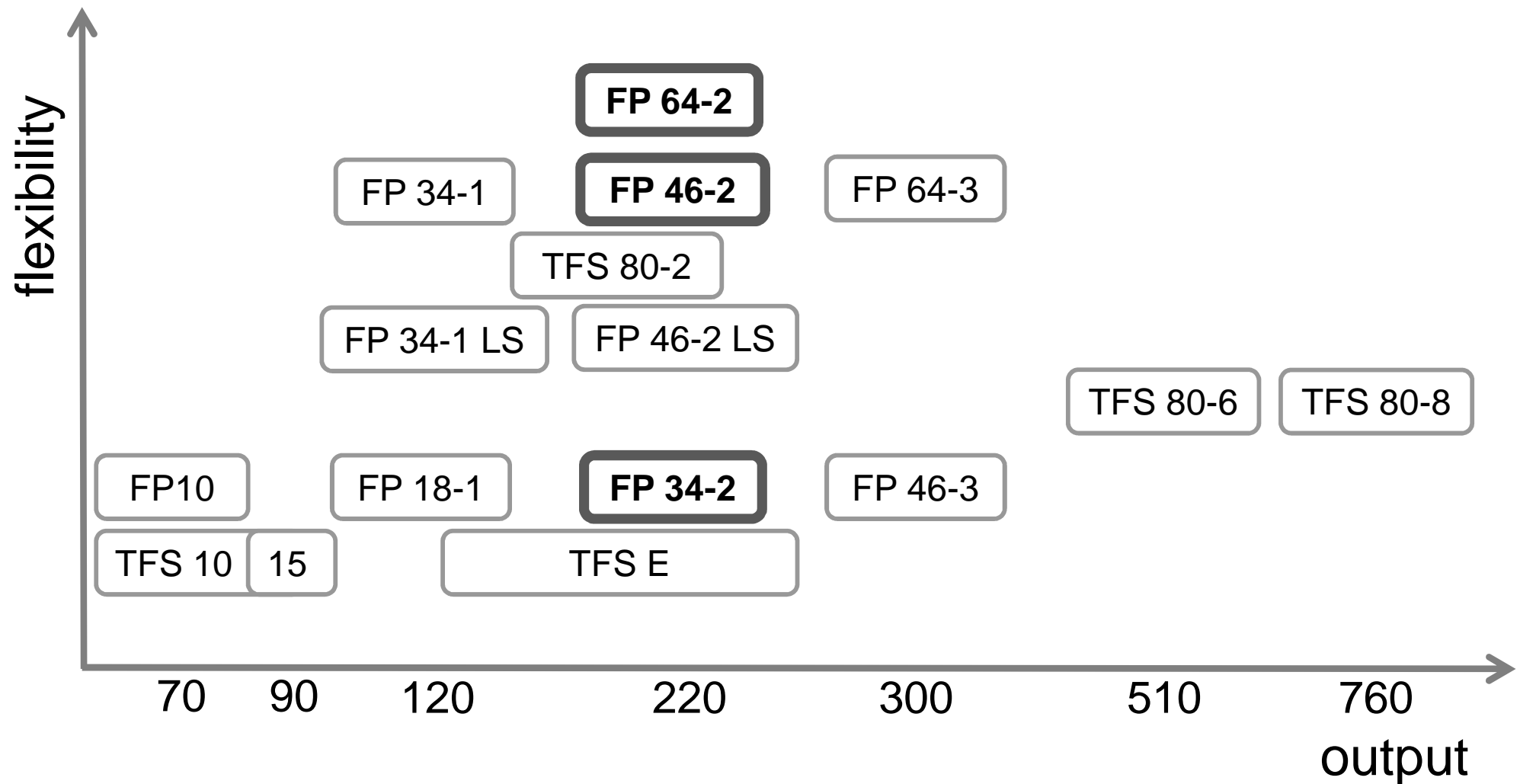


FP Double Head (34-2 & 46-2)

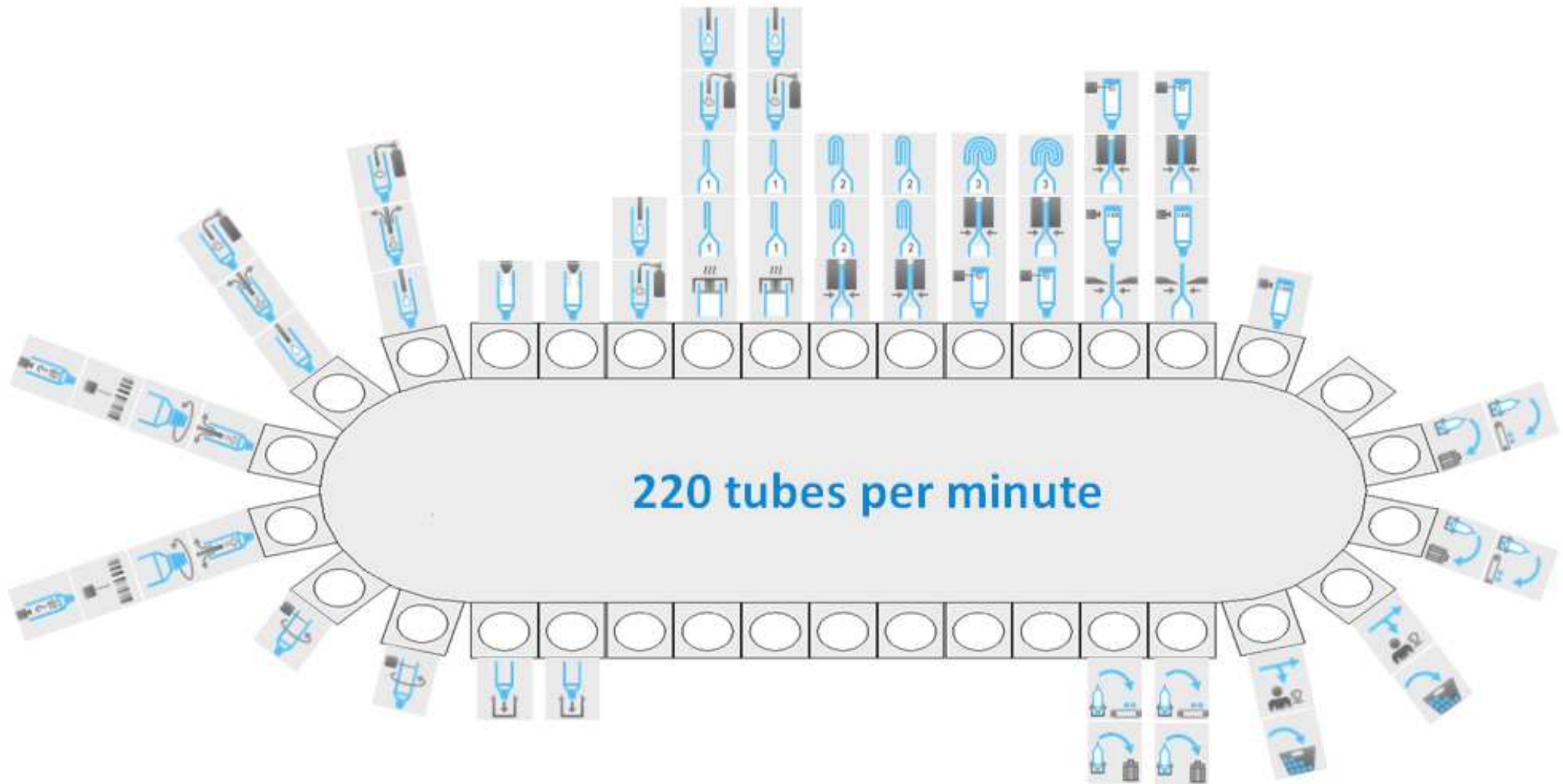


IWK Verpackungstechnik GmbH
Lorenzstraße 6
D – 76297 Stutensee
Phone: +49 7244 968-0
www.iwk.de

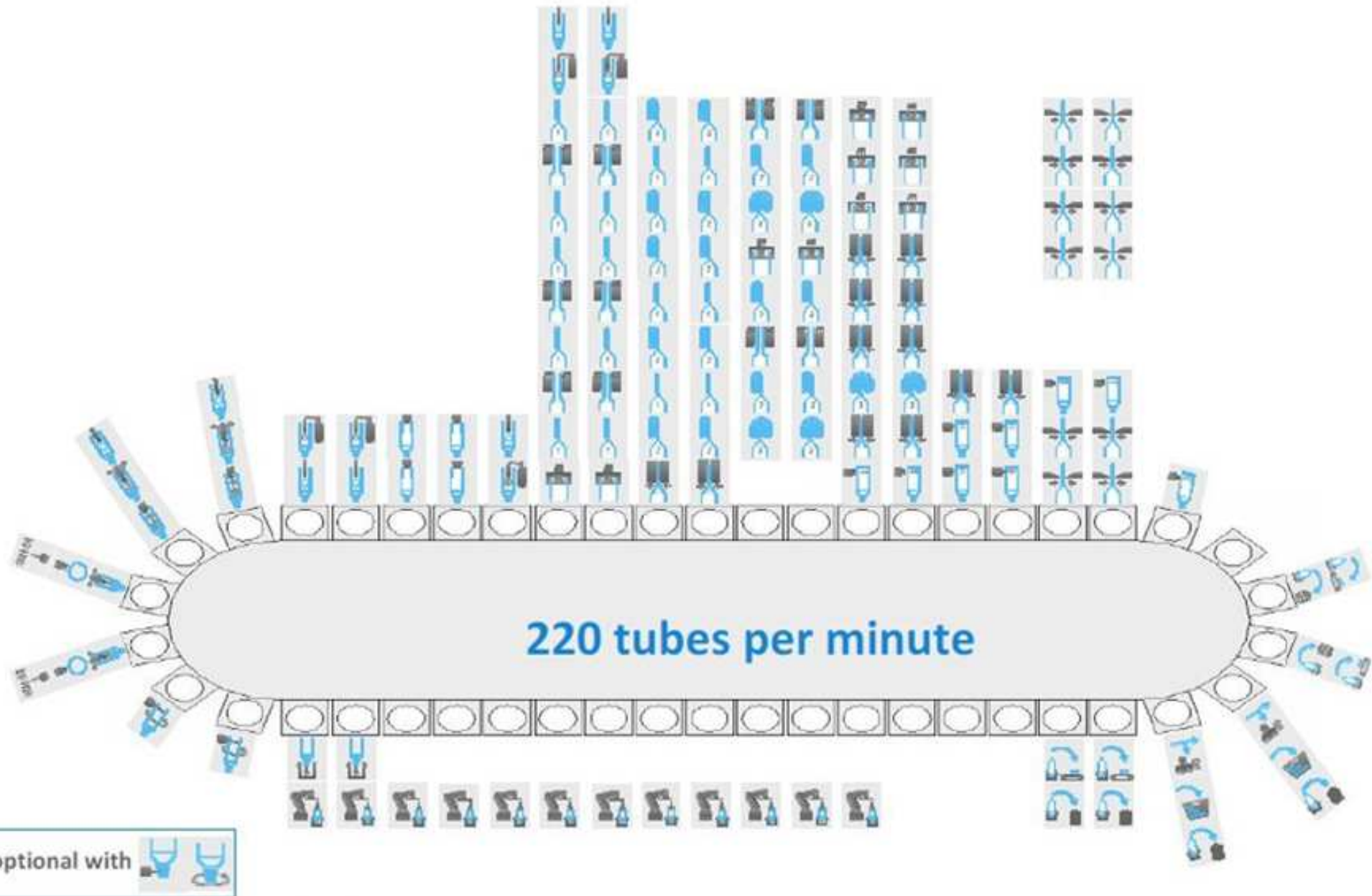
„An efficient and economical tube filling system at an attractive price“



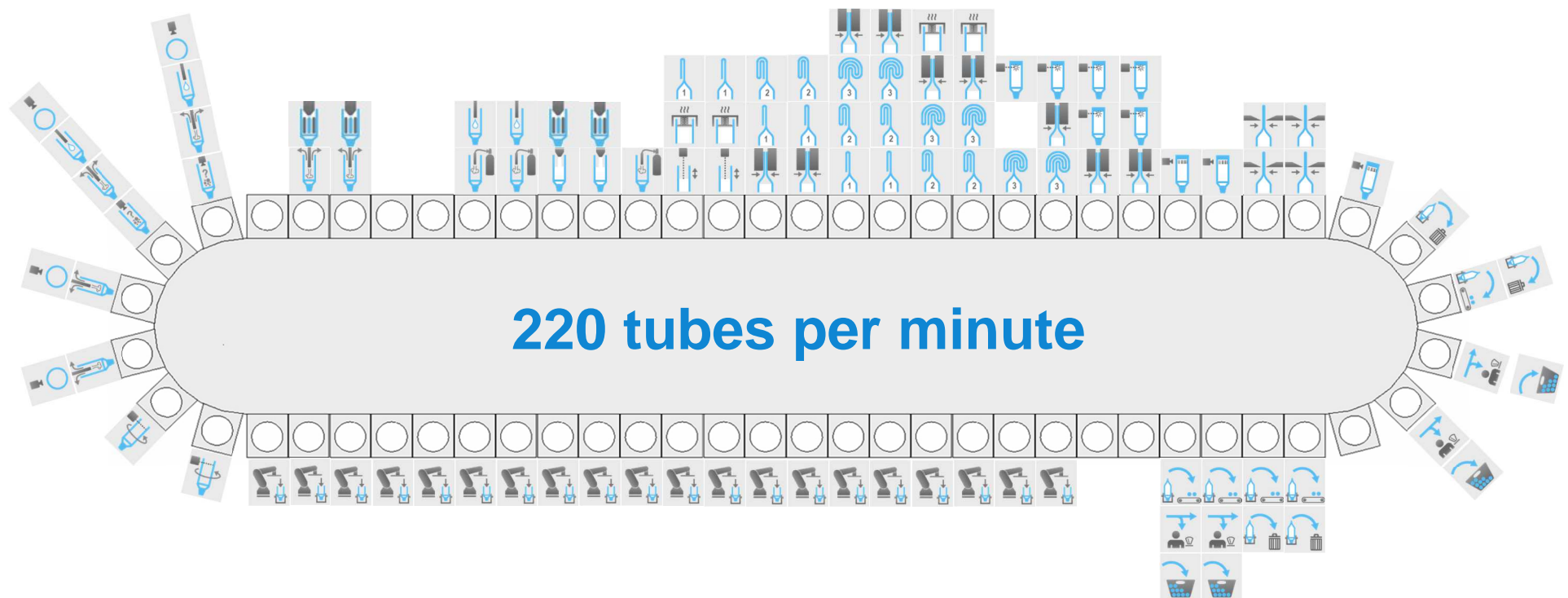
Concept FP 34-2



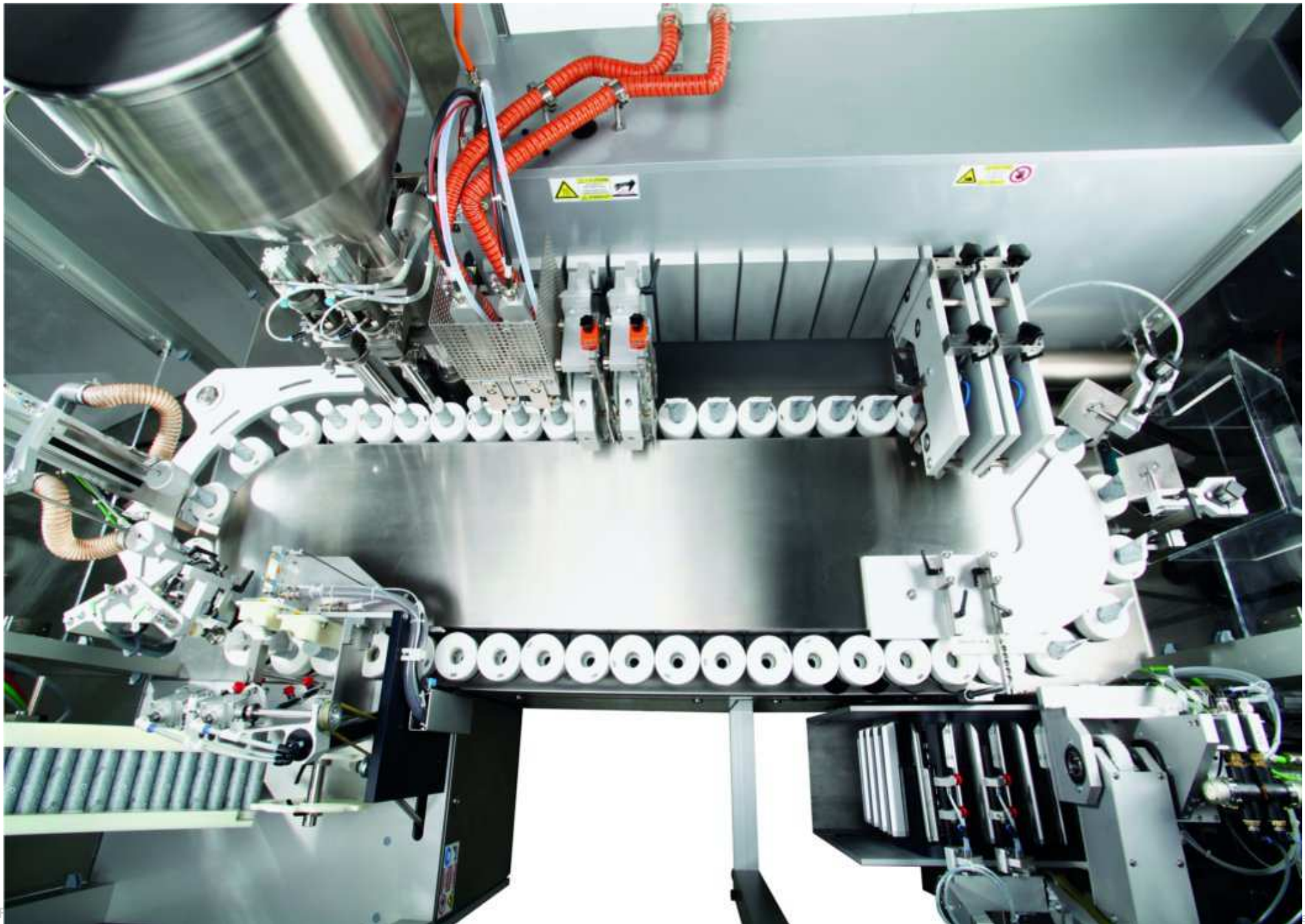
Concept FP 46-2



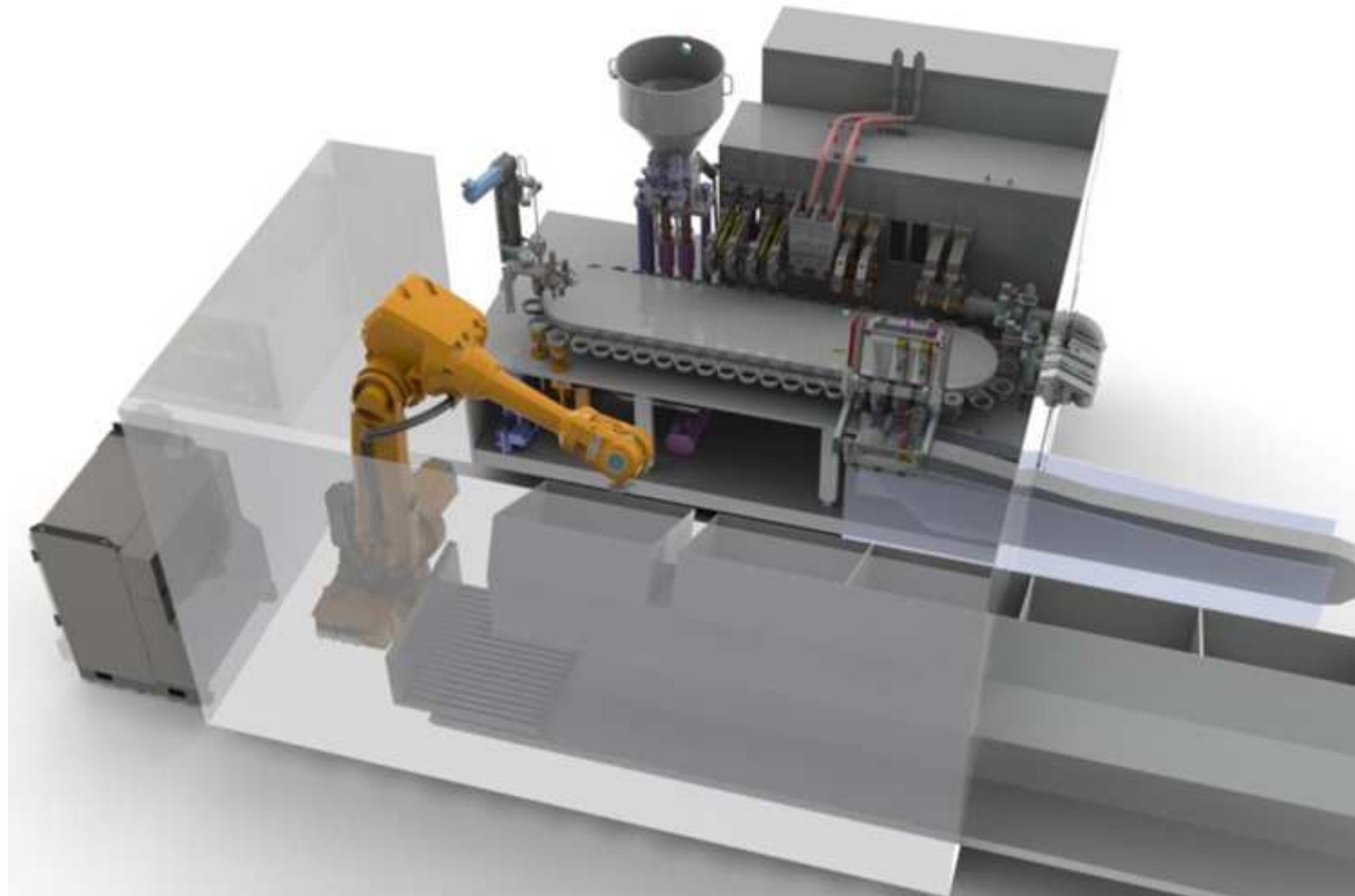
Concept FP 64-2



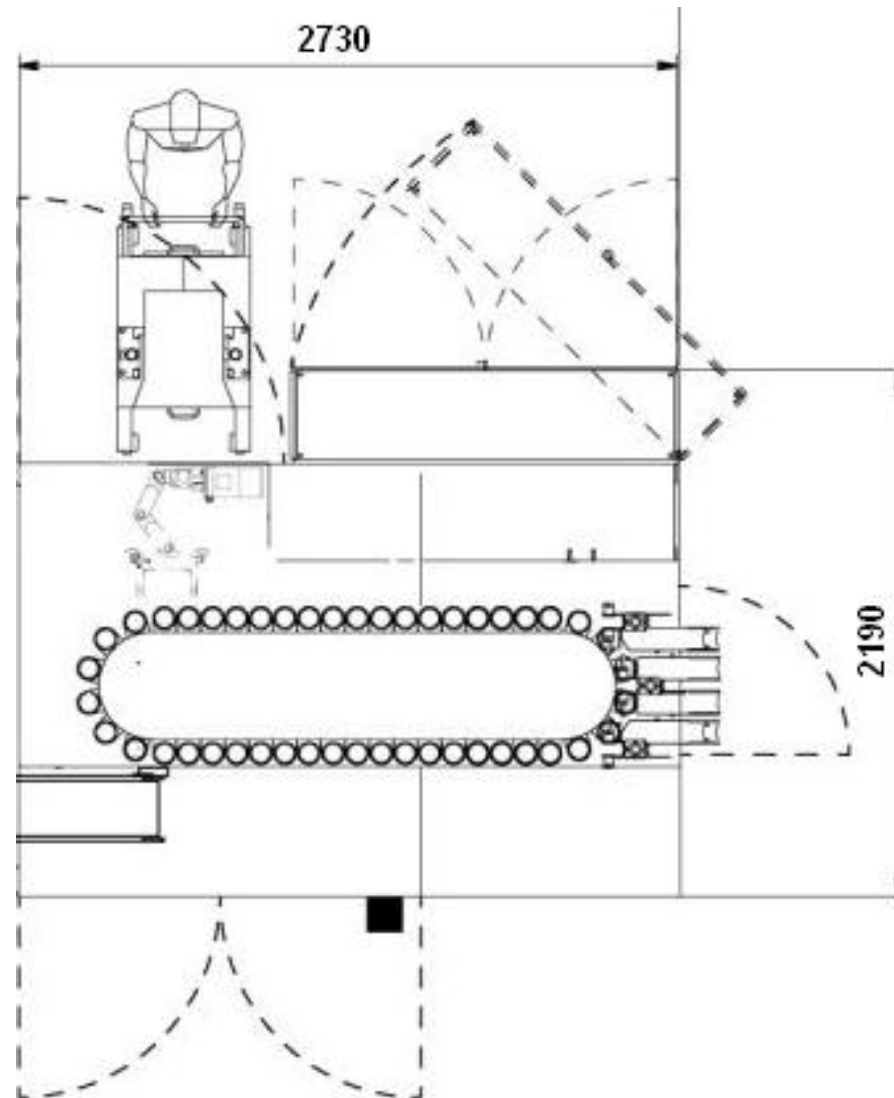
Station overview



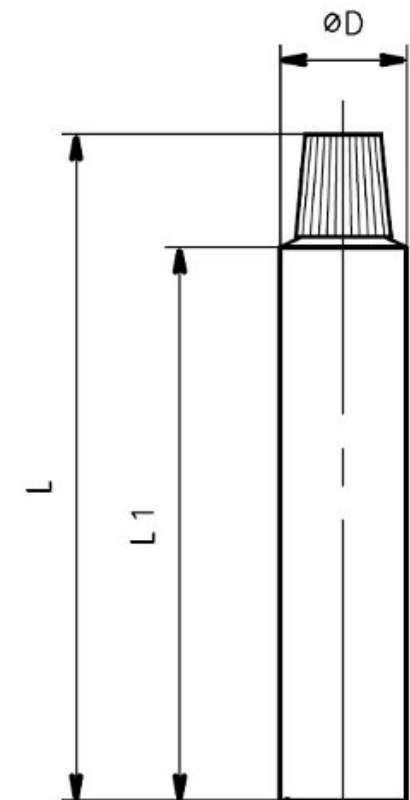
FP 46-2 (with robot tube inserting)



Footprint FP 46-2



- Performance
 - up to 220 tubes/min
- Tube diameter (D) - plastic/laminate tube
Ø 10-52 mm
- Tube diameter (D) - metal tube
Ø 10-52 mm
- Tube length with cap (L)
60-250 mm
- Tube coat length (L1) - plastic/laminate tube
50-230 mm
- Tube coat length (L1) - metal tube (double fold)
50-230 mm
- Tube coat length (L1) - metal tube (triple fold)
56-230 mm
- Tube coat length (L1) - metal tube (saddle fold)
62-230 mm
- Filling volume
1,5-350 ml





- no stretching of the belts
- enables a high degree of positioning precision



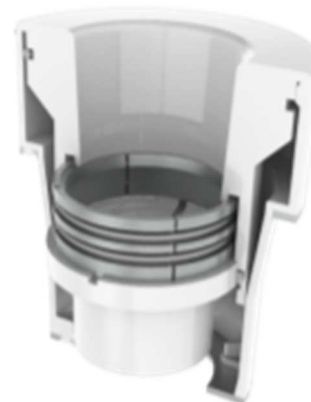
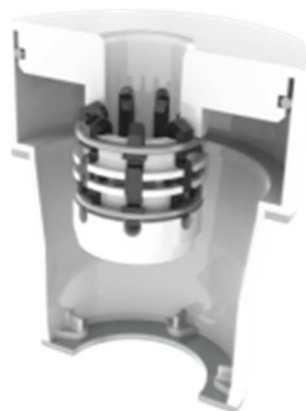
- cast chain links
- mounted in precision needle bearings
- servo-motor drive with high-precision planetary gear drive



Tube holders depend on tube length and diameter

For plastic tubes up to Ø52 mm, which clear dents by the tubes' elastic force. With tilting segments

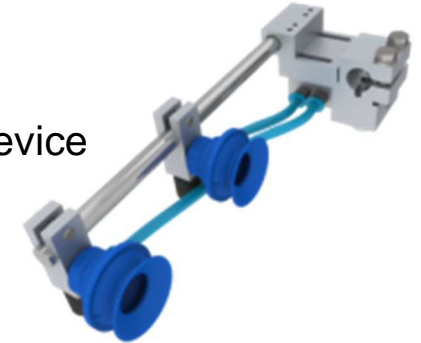
For metal and laminate tubes up to Ø52 mm. With 4-part metal-clamping segments.



Tube inserting



Suction device



Size parts

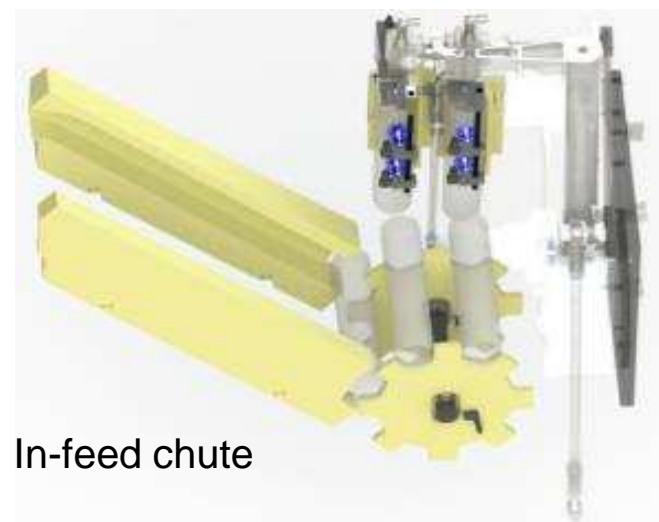


Insertion rail*



Pusher cone

In-feed chute



* also depends on tube length



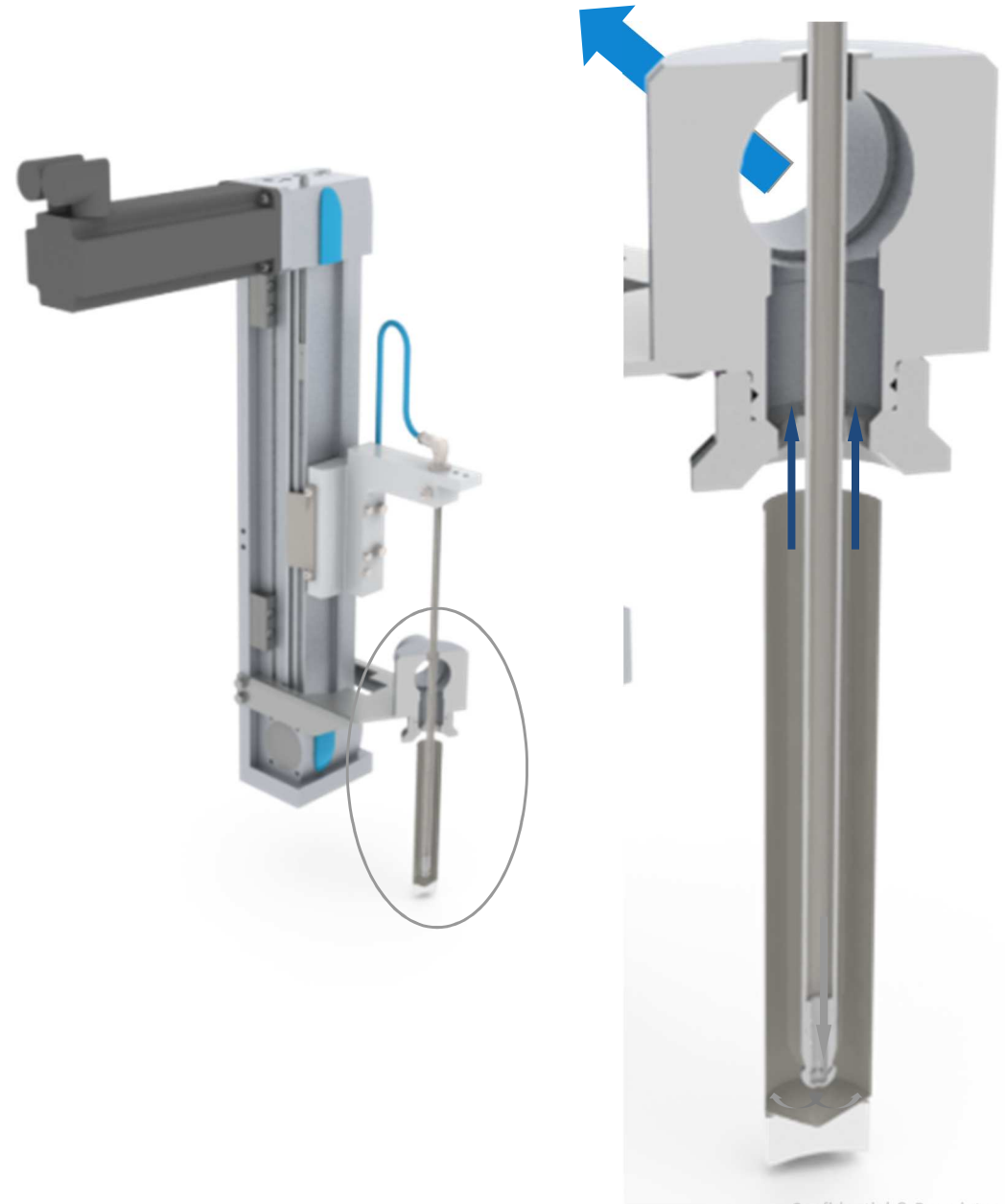
Size part



Centering cone print registration depends on tube diameter



Tube dedusting



servo driven lifter and dosing piston

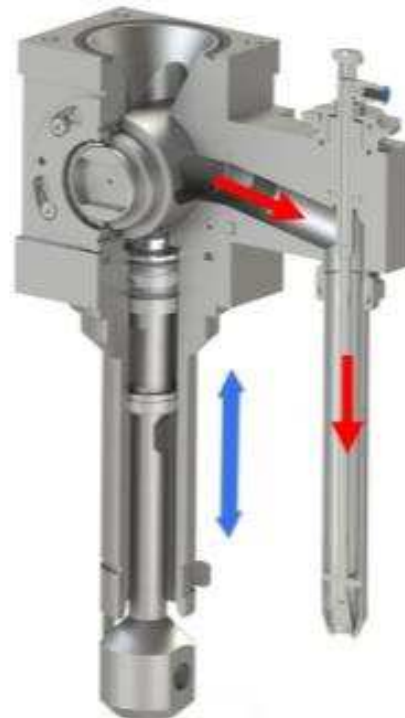
Stable design of filling frame

➤ high filling accuracy

almost tool-free changing of wet parts

changing of wet parts on block (option)

optimal accessibility



stream-optimized

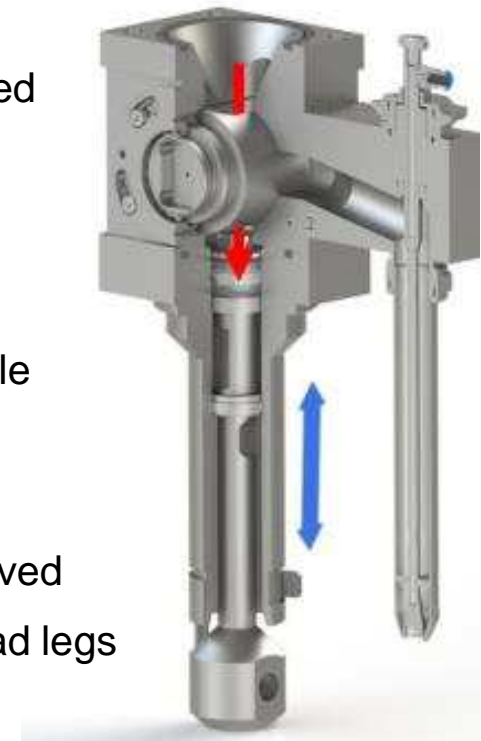
➤ low shearing

easy to clean

easily accessible

■ FDA-approved

■ Limited dead legs



Product-contact format parts

Dosing piston depends on filling volume



Filling pipe depends on tube diameter



mass = 3.13 kg
filling pipe suspension



mass = 1.64 kg
rotary valve



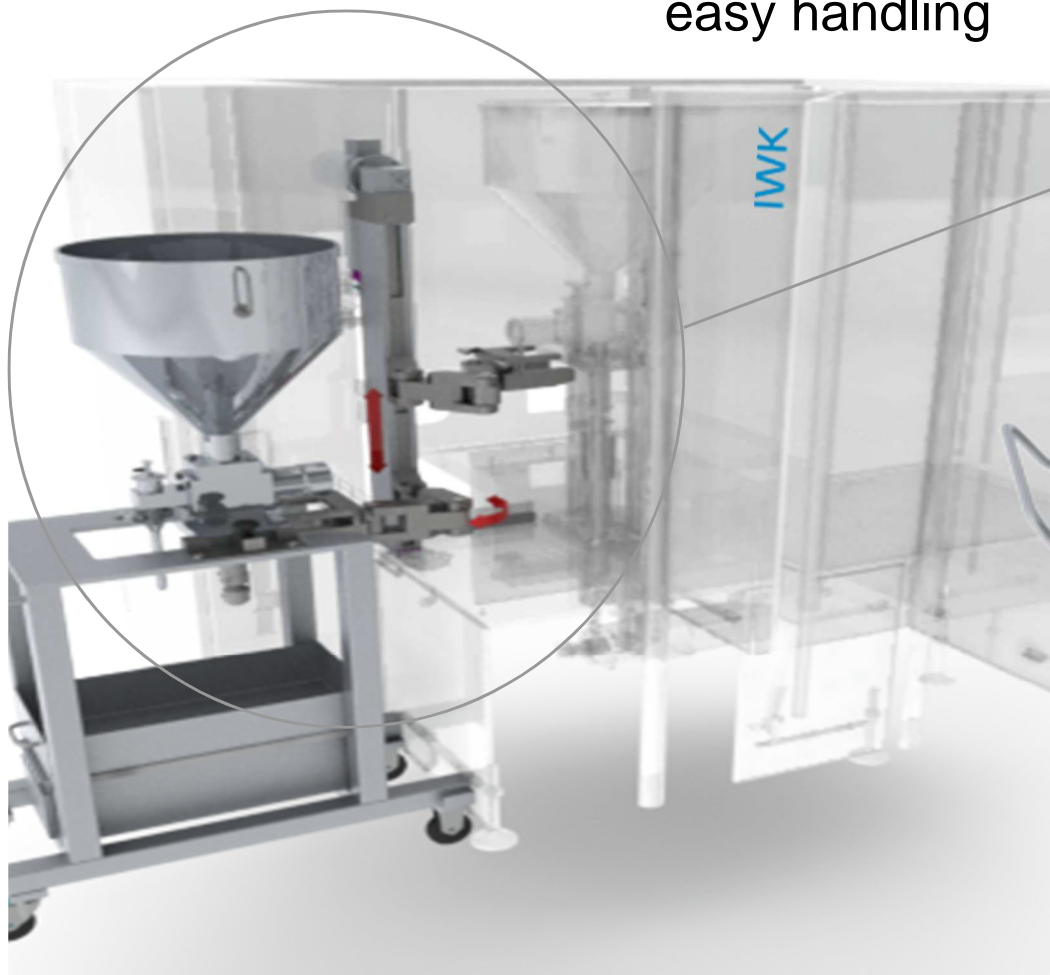
mass = 6.8 kg
rotary valve housing

Change of rotary valve housing and of filling pipe suspension is only required when changing the volume \neq 15 ml

Lifting device application with trolley of product-contact parts

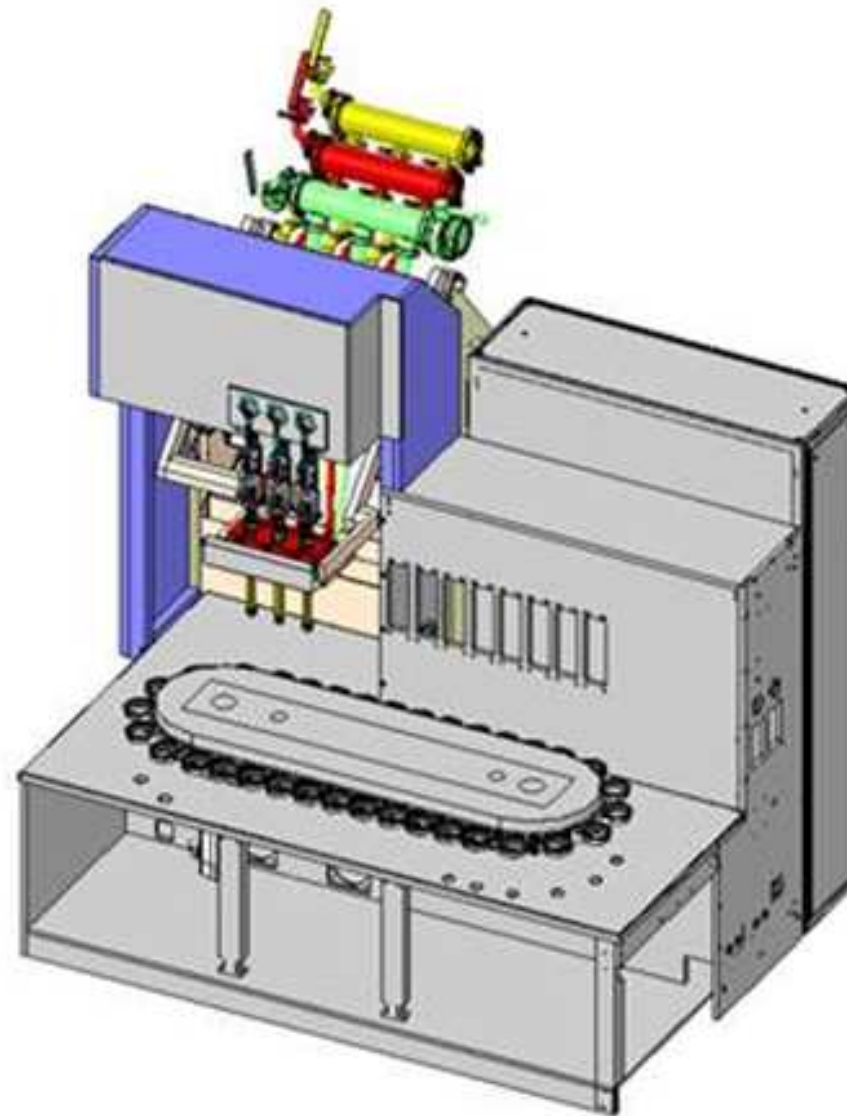
Optimal changing device

easy handling



maximum loading weight: 200 kg
(existing safety factor: $s > 3$)

single-color dosing only



FP Double & Triple Head

Double-/ triple-fold



Saddle-fold

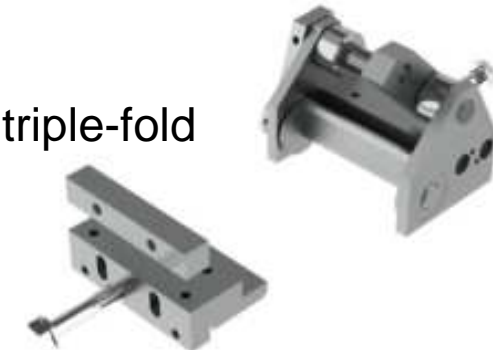


Folding tools

double-fold



triple-fold

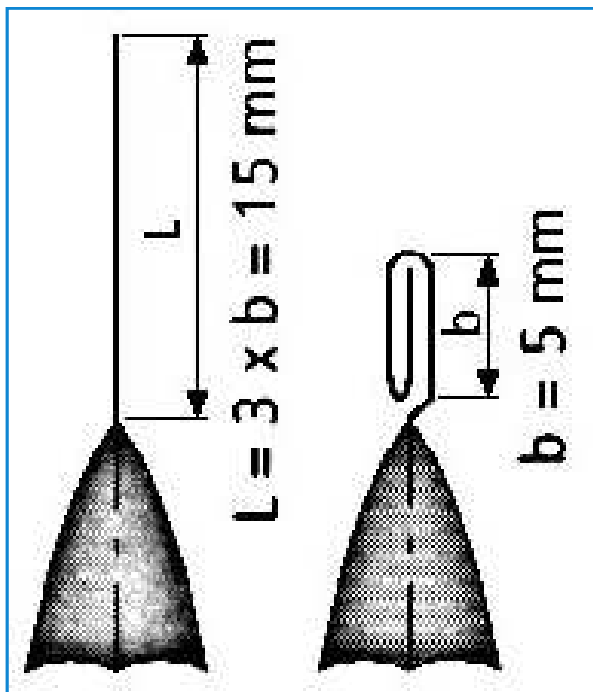


saddle-fold

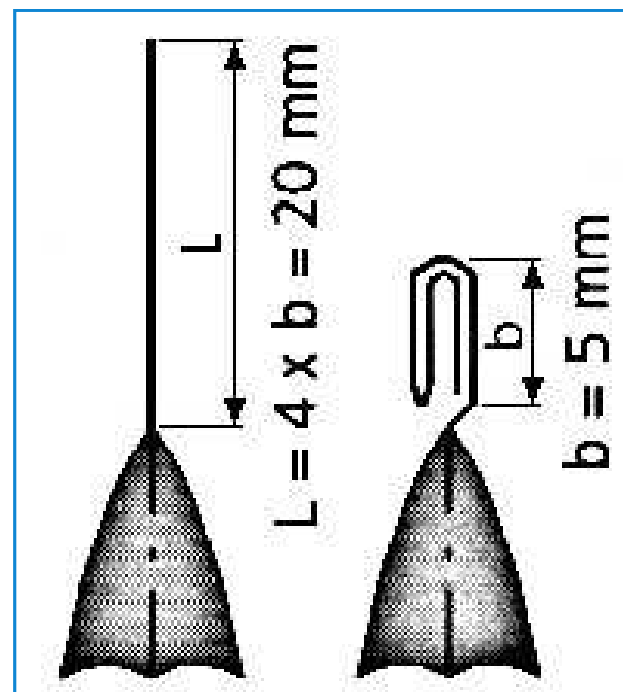


We do not use lubricated guides above the tube (cGMP!)

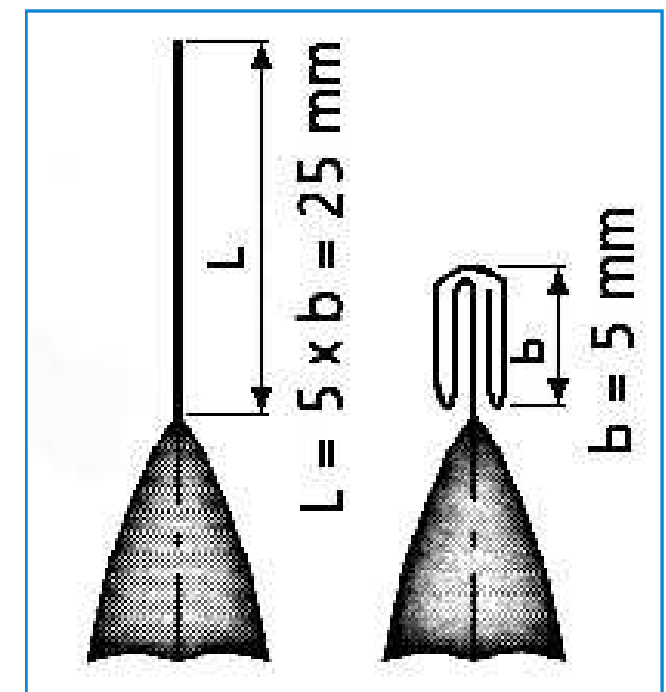
Folds folding width 5mm



double-fold



triple-fold



saddle fold

Hot Air-closing

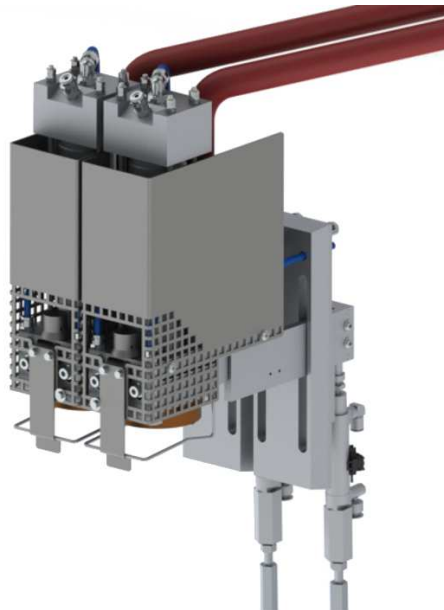
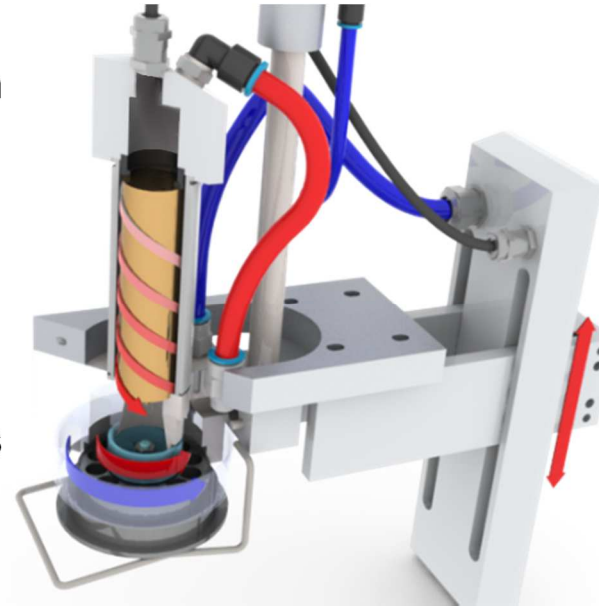
robust design

high performance heating element

energy-efficient pre-Heating (without water)

servo drive as an option for contour welds

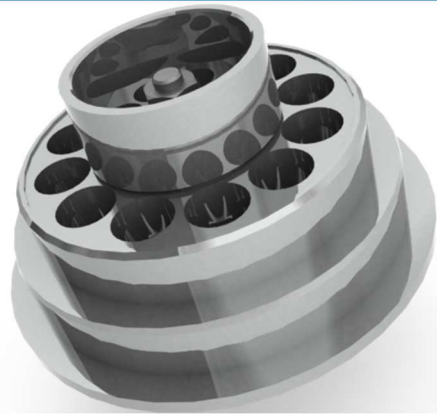
change over without tools



Format Parts

Hot-Air tool

Hot-air tool
depends on
tube diameter



maximum sealing height for contour sealing is 40 mm



Contour seal - ARC



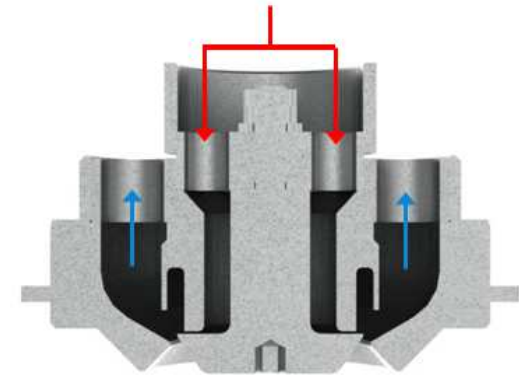
Contour seal - Wave



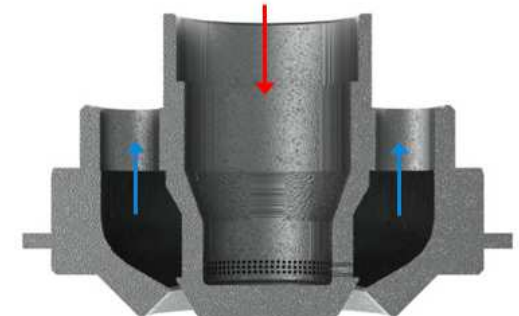
Contour seal - Step



Hot-air tool with slot



Hot-air tool with holes

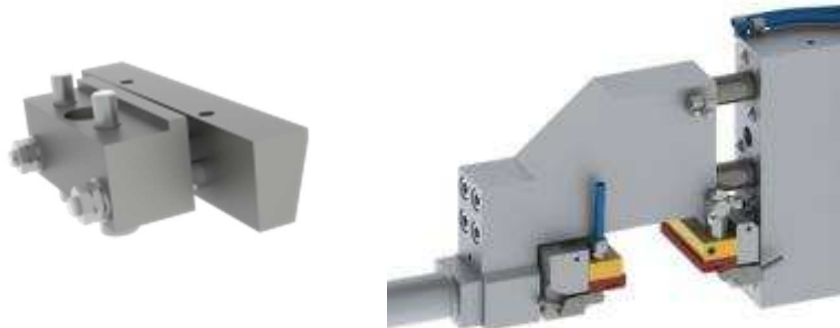




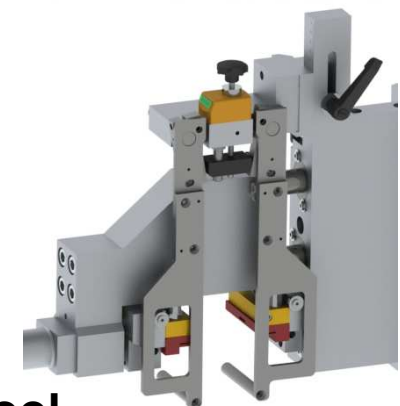
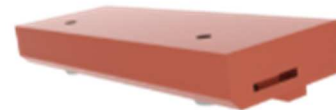
- change over without tools**
- robust mechanical design**
- cam driven**
- compact design**
- pressure adjustment:
continuously variable**



**pre-forming tool as size part
depend on tube diameter and length**



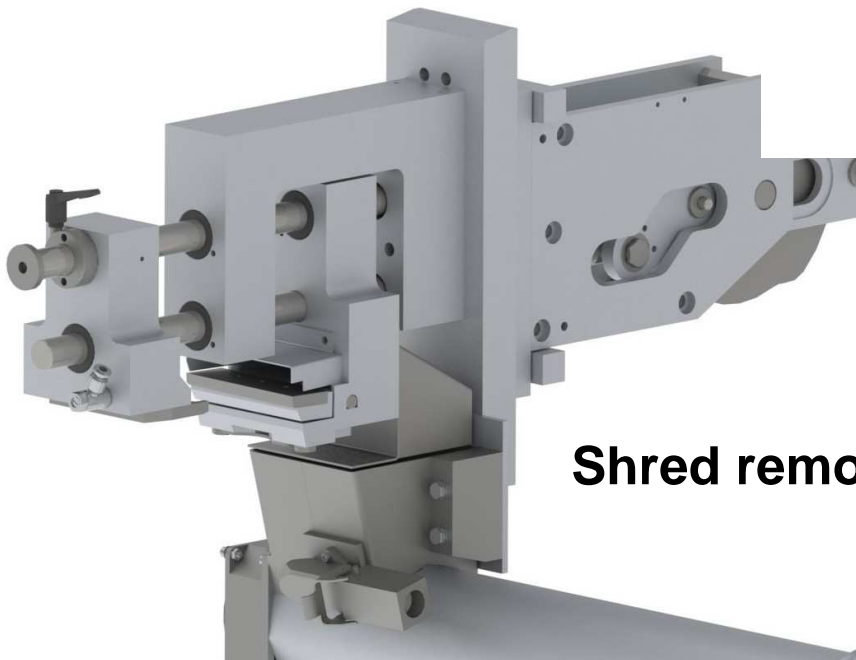
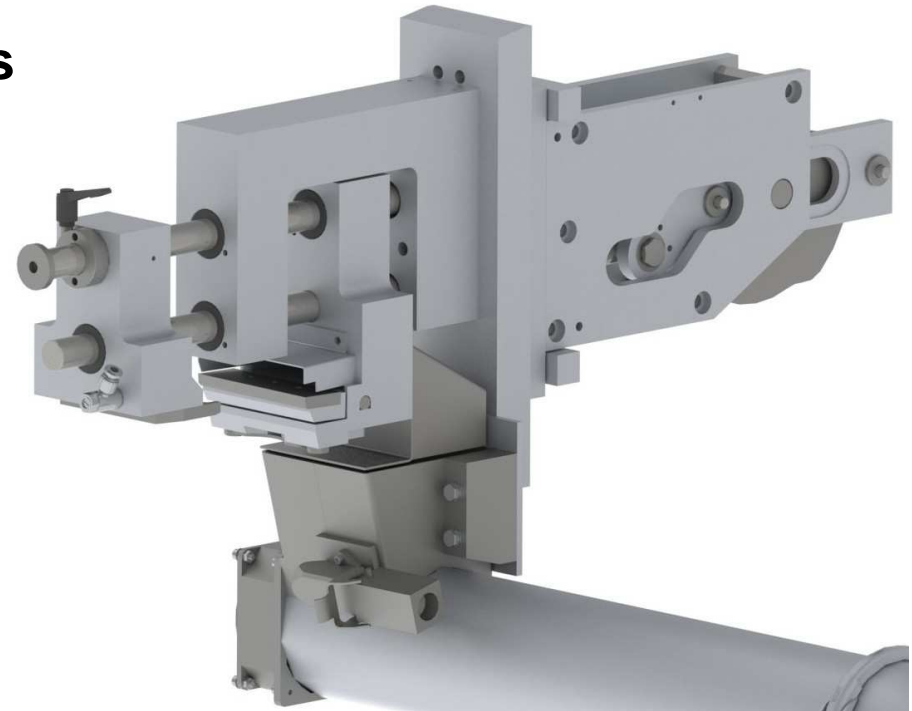
Chilled pressing jaws depend on tube
fold embossing image



adjustable pre-forming tool

Trimming station for straight cut

- double-sided driven shear blades**
- robust mechanics**
- compact design**
- cam driven**
- shear blades made of powder-metallurgical structure**



Shred removal

Punching station



**double-sided driven
punching tool**

**tool-free exchange
of punching tools**



robust mechanics

cam driven

compact design

FP Double Head

**Direct
discharge
into**

SC5

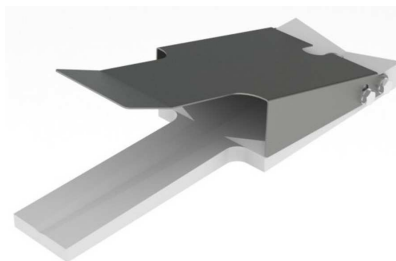
SC4



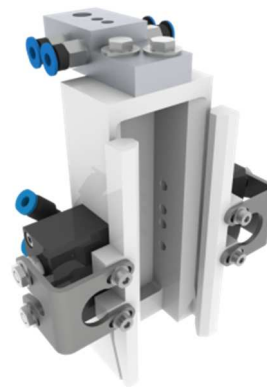
- high reproducibility
- high positioning accuracy
- high repetition accuracy

[see simulation](#)

Size parts



Tube flipper



Brace



Suction cups holder

Main functions servo driven

- Print registration
- Lifter filling and dosing piston
- Rotary valve (option)
- Lowering Hot Air (option)
- Transport, main shaft

Height adjustment of transport system is motor-driven

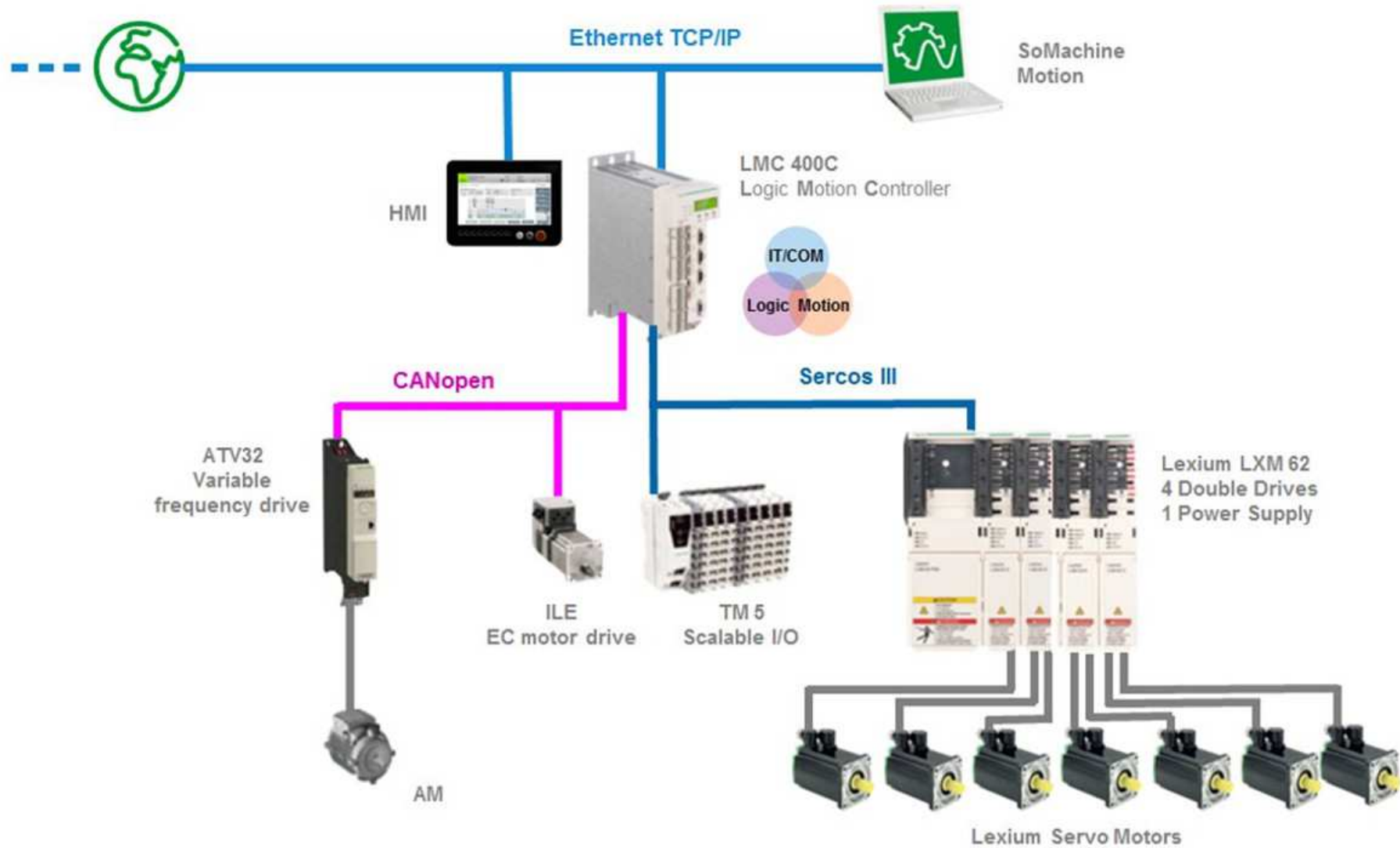
- high processing reliability
- high accuracy
- highest flexibility, because of
- fast change over
- fast running in



Drive concept – FP Double Head



Function	Basic machine	Standard	Option
Tube Transport	X	Servo Drive	
Main Shaft	X	Servo Drive	
Tube Infeed	X	Servo Drive	
Print Registration – Tube Turning	X	Servo Drive	
Print Registration – Tube Lifting	X	Closed Cam	
Tube Dedusting		Servo Drive	
Dosing Piston	X	Servo Drive	
Dosing – Tube Lifting	X	Servo Drive	
Rotary Valve	X	Closed Cam	Servo Drive
Shut-off Valve	X	Pneumatic	
Folding Tools		Closed Cam	
Hot-Air – Diving		Closed Cam	Servo Drive
Press	X	Closed Cam	
Trimm / Punch		Closed Cam	
Tube Discharge	X	Closed Cam	
Tube Lifting – Cartoner Transfer		Servo Drive	



HMI concept 5,7" Touch Panel

Intuitive and ergonomic user interface

Display of all relevant process parameters

Fast & comfortable change over

Counting of good/faulty tubes

Tele-service via Internet

User profiles



HMI concept (Optional) 15,4" Touch Panel

Industrial PC with diagnose/report functionality

All standard functions

History / statistic of messages

Charge protocol

21 CFR Part 11 conform (audit trail)

All functionality for user administration





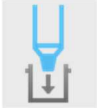


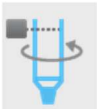


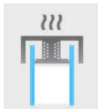
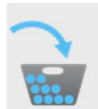
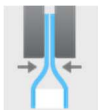






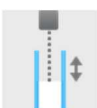




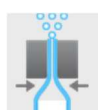



- Storage boxes for size parts
- Storage boxes for product-contact format parts



- Code scanning at print registration
- Monitoring by camera:
 - Tube edge
 - Particles
 - Tube cap presence
- Different hoppers, Accumulation cylinder (Level monitoring)
- Product contact format parts change on block
- Rotary lobe pump for CIP
- Gas purging, Droplet dosing
- Heated pressing jaws for metal tubes
- Labeling (Embossing, Laser-, Ink-jet-printing)
- Automatic central lubrication
- and more

- Outstanding transparency & accessibility
- Innovative solutions
- Customized solutions
- High flexibility
- Tool-free change over
- Ergonomic operating concept

Pictograms Overview

	tube infeed		saddle fold		tube discharge
	print registration/ code scanning		heated pressing jaw		IPC-discharge
	dedusting		hot-air		bulk ware discharge
	drip dosing		press		particle monitoring
	gas purging		trimming cutters punching		roundness monitoring
	filling		laser labeling Inkjet labeling		cap monitoring
	tube fill level monitoring		code monitoring		code reading
	folding 1		cap tightener		air expeller
	folding 2		faulty tube discharge		Robot tube infeed system

Thank you for your attention!

