

# FLEXTRON

## ELECTROPOLISHED STAINLESS STEEL CORRUGATED HOSES





Electropolished surface at 380x magnification

## High-purity Hoses in Stainless Steel. It's about Know-how.

Ultra-pure gases are used in sensitive processes. Where they are used, high-purity, electropolished tubing systems are the first choice. In order to be able to connect components quickly and flexibly, flexible corrugated hoses are used. Another advantage: Vibrations and misalignments can thus be reduced. This is exactly where Flextron comes into play: based on many years of experience in the semiconductor industry, Dockweiler has developed a process for electropolishing corrugated stainless steel hoses.



- More safety in the production process thanks to maximum absence of particles
- Guaranteed roughness in the flexible range: Ra of  $\leq 0,4 / 0,6 \mu\text{m}$
- Ultron quality: Cleanroom-cleaned and UHP-packed fast and flexible also with individual connections
- Faster release of moisture in the system due to smaller surface area
- High leak tightness:  
Leak rate less than  $1 \times 10^{-9} \text{ mbar} \cdot \text{l/s}$

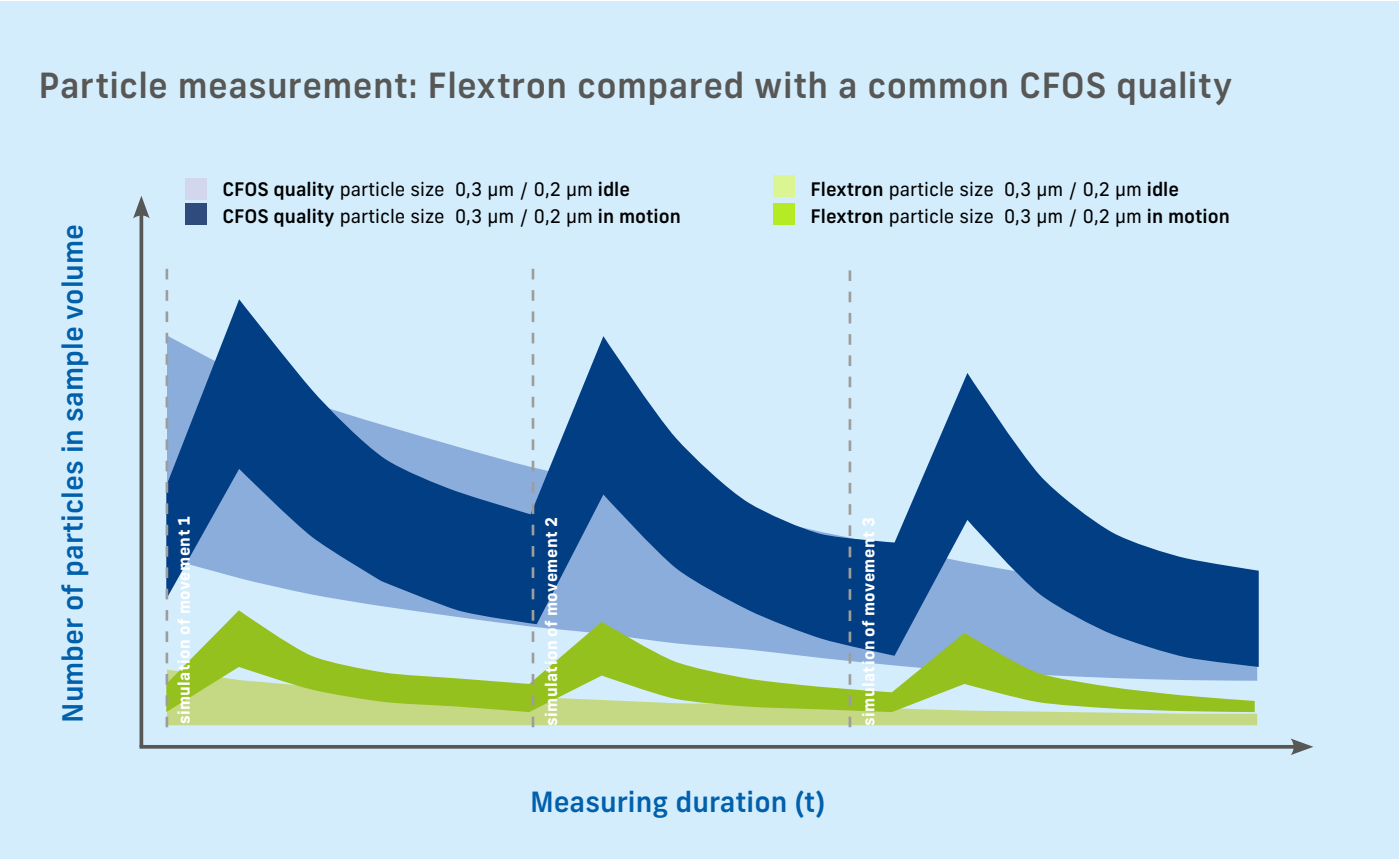
Flextron corrugated hoses in stainless steel:  
Electropolishing ensures an optimal surface  
quality and a roughness of  $\leq 0,4/0,6 \mu\text{m}$



# Flexible Solution in ultron Purity: Flextron.

## High-purity corrugated hoses in Dockweiler quality

Flextron from Dockweiler is manufactured from mechanically corrugated stainless steel tubes. High-quality standard material is stainless steel 1.4404. A stainless steel wire braiding is added for higher pressure resistance. The unique combination of electropolished surface and flexible corrugated hose minimizes the risk of contamination and enables gas transport under full UHP conditions throughout the system.



## Proven in numerous tests: Flextron

Dockweiler Flextron products have undergone extensive testing: bending and continuous stress test according to DIN EN ISO 10380, moisture and particle tests, combined tests, helium leak tests and pressure tests.

The results are impressive: All tests have shown that Flextron delivers almost comparable measurement values as rigid stainless steel tube systems with high-purity surfaces! And in comparison with corrugated hoses cleaned to CFOS level, the purity of Flextron is 2 times higher (see diagram above).



Flextron DN6 with VCR connection



Flextron DN10 with ZeroCon connection



Flextron DN6 with optional wire braiding and welding ends

## Flextron at a Glance:

Features	Variants
Material	1.4404 UNS S31603 (316L)
System lengths (including welding ends)	6", 12", 24" and 36" (up to 60" on request)
Hose diameter	DN 6, DN 10 and DN 20
Hose couplings	1/4", 3/8", 1/2", 3/4", 1"
Surface treatment	Chemically cleaned Electropolished: Ra ≤ 0,4 / 0,6µm
Connections	Welding ends, VCR, ZeroCon, KF / CF flanges and others on request
Wire braiding (optional)	1.4301 UNS S30403 (304L)

## Pressure tests according to DIN EN ISO 10380:

Size	Type	Operating pressure		
DN 6	Non-braided	18 bar	261.07 psi	
	Wire braiding	80 bar	1160.32 psi	
DN 10	Non-braided	8 bar	116.03 psi	
	Wire braiding	80 bar	1160.32 psi	
DN 20	Non-braided	3 bar	43.51 psi	
	Wire braiding	45 bar	652.68 psi	

# Everything from a Single Source. Ultra High Purity from Dockweiler.

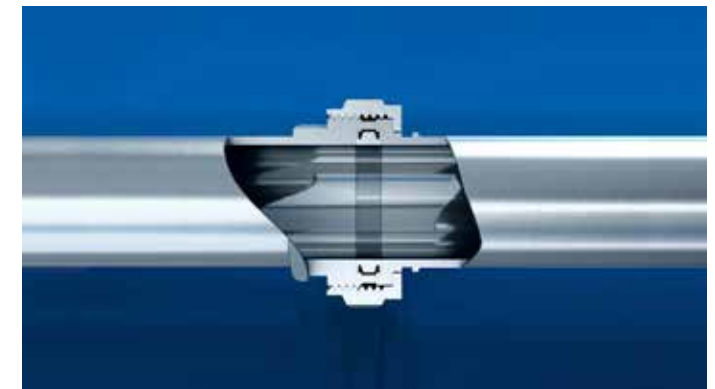
For UHP requirements  
of the semiconductor industry and  
fine chemicals suppliers.

## Advantages at a glance:

- Only with Flextron does a UHP gas system meet the **highest purity requirements** – from the gas tank to the production facilities.
- **Fast and flexible connection** of system components to the ultra-pure gas supply.
- Electropolishing cleans the surface – the **particle generation is reduced to a minimum**.
- The smoothed surface **minimizes** the required **flushing and evacuation time**.
- The electropolished corrugated hose made of stainless steel guarantees a homogeneous passive layer for **optimum corrosion protection**.
- **A wide variety of connection ends** allow installation into the overall system.
- Complete **UHP stainless steel system from a single source**.

## More technical advantages of Flextron:

- **Tightness guaranteed** as with a weld seam: **with ZeroCon connection**.
- **Oscillations** and/or **vibrations** in the system can be **decoupled** with Flextron.
- Optimal for **compensating installation tolerances** as well as **narrow dimensions**.



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