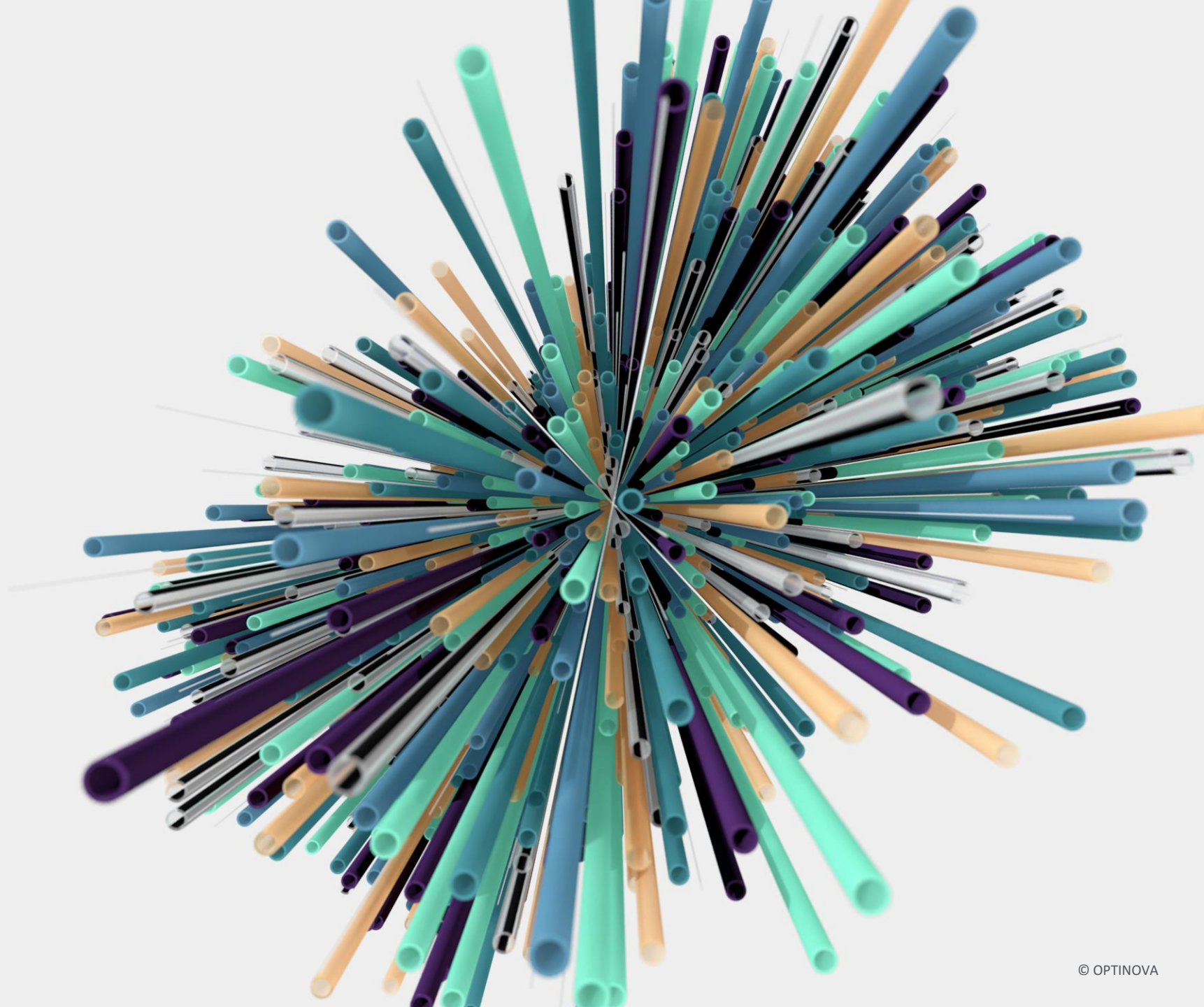




Intro to Optinova Extrusions

April 7, 2025



Optinova in numbers

Over 750

employees globally

More than 500

customers across 35 countries

Over 50 years

in the polymer extrusion industry

Over 80 million

meters of advanced tubing per year

More than 200

manufacturing lines combined globally

**Cleanroom
Extrusion**

plants on 3 continents

Cleanroom Extrusion on 3 Continents



Optinova Godby
Åland, Finland
8200 m2

ISO
13485
certified

ISO
9001
certified



Optinova Jomala
Åland, Finland
3300 m2

ISO
14001
certified

ISO
13485
certified

ISO
9001
certified



Optinova Valley Forge
Pennsylvania, USA
8800 m2

ISO
13485
certified

ISO
9001
certified

IATF
16949
certified



Optinova Thailand
Chonburi, Thailand
9360 m2

ISO
14001
certified

ISO
13485
certified

ISO
9001
certified

Did you know that Optinova has **doubled capacity** in some areas in just two years?

Optinova Centers of Excellence

Thailand

Etched OD Liners **(CoE)**
 Zebra HS **(CoE)**
 PTFE IV **(CoE)**
 ePTFE **(CoE)**
 PTFE multi-lumen **(CoE)**
 FEP HS 1.3:1 **(CoE)**
 PTFE HS 2:1 / 4:1 **(CoE)**
TDB: Convoluted PTFE tubing (CoE)

Godby

FEP HS 1.6:1 **(CoE)**
 Braided shafts **(CoE)**
 PTFE Flared **(CoE)**
 FEP IV **(CoE)**
 TPU IV **(CoE)**
 Non-FP medical melt **(CoE)**
(CRM leads, inserter tubes, two-layers etc)

Jomala

Industrial FP melt **(CoE)**
 PEEK **(CoE)**
 Co-extruded (Dual-layer) **(CoE)**
 PVdF tube **(CoE)**
 FEP Heatshrink water expanded **(CoE)**
 PTFE Industrial tube **(CoE)**
 FEP and PFA recycling **(CoE)**
TBD: Industrial non-FP melt (CoE)

Valley Forge

PTFE Industrial small dim
 • long runs, high volume **(CoE)**
 • **Filled liner**
 • **PTFE over wire**
 FEP HS 1.3:1 expansion
 • long runs, high volume **(CoE)**
 Dual-shrink **(CoE)**

Extrusion hardware, supply chain control and scaling

Quality

- Optimized for ISO 13485 & cleanroom operations
- Top level components and design for maximum process capability

Scalability

- Broad partner network for builds and components

Digital

- Standard data output
- Possibility to integrate with IT systems like MES and BI

Capabilities

- Melt extrusion lines, medical quality 15-50mm
- PTFE Liner lines, including etching
- PTFE Extrusion lines
- FEP HS, PTFE HS, Zebra HS
- Automated robot cells for high-speed sec ops



Our capabilities cover a range of medical applications

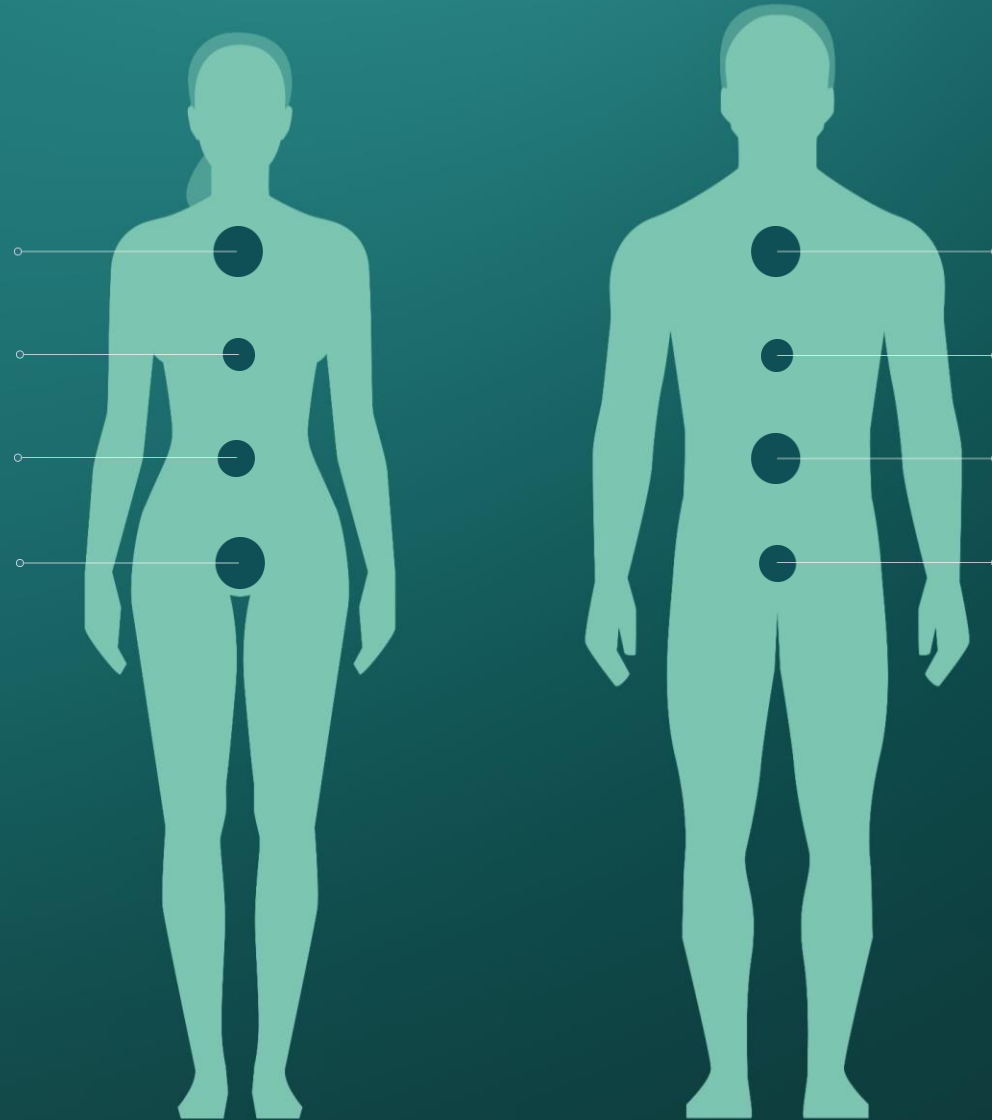
Neurovascular

Endoscopy

Gastroenterology

Gynaecology

Lab and analytics



Infusion technology

Cardiovascular

- EP
- CRM
- Structural heart
- Peripheral vascular

Urology

Extrusion Capabilities



Did you know?

We extrude a wide variety of different tubing types:

FEP Heat Shrink & Dual Wall Heat Shrink

Antistatic Tubing in PTFE & PFA

Beadings / Monofilaments

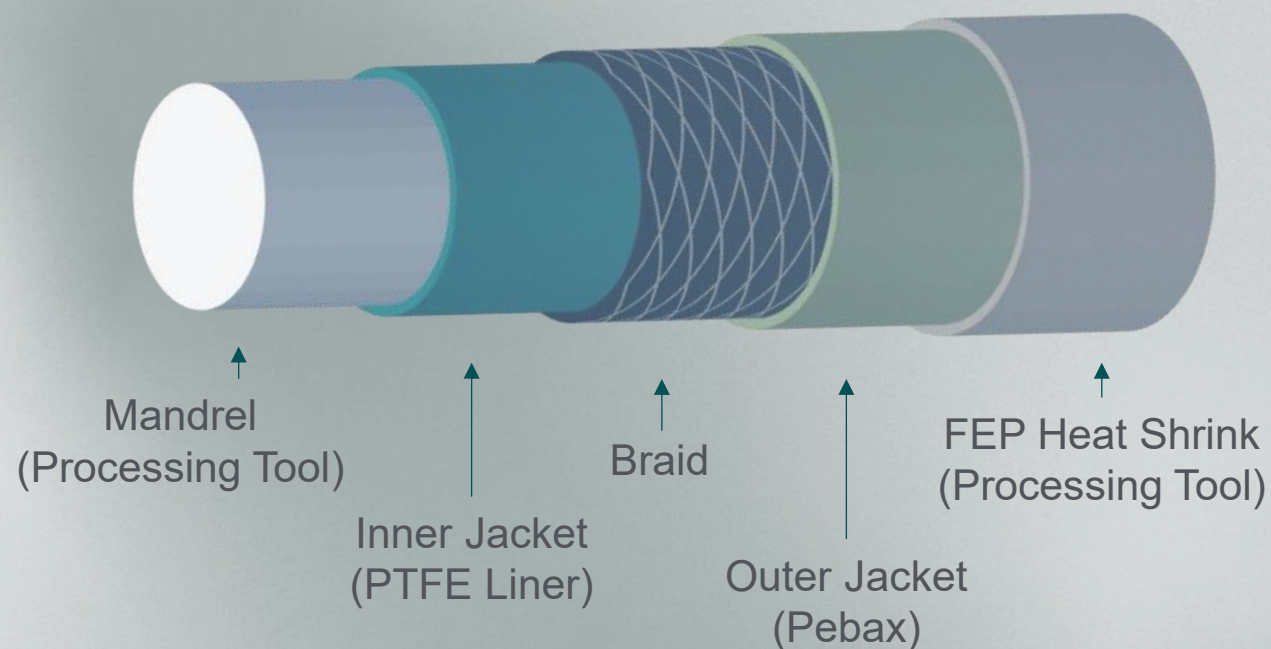
Etched PTFE Liners

ePTFE Tubing & Profiles

PTFE, FEP & PFA Fluoropolymer

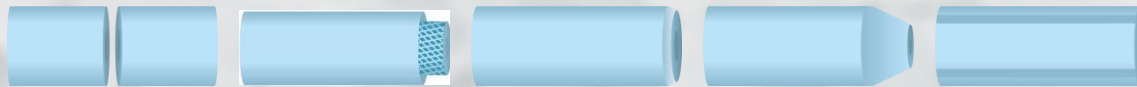
Single-, Multi-Lumen & Co-Extrusions

Basic Design Elements of Interventional Delivery Devices



A range of sec-ops add value to your customized solution

We will design and when possible, automate sec-ops to fully customize the solutions to your need.



WELDING

PEBAX-BRAID-PEBAX

CHAMFERING

TAPERING

STRIPED



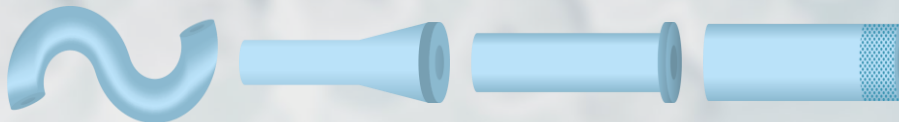
SPIRAL FORMING

SPIRAL CUT

SKIVING

RING MARKING

HOLE PUNCHING



FORMING/FABRICATION

FLARING

FLANGING

ETCHING

Did you know that...

Nearly all our product are custom-made and unique to each customer?

The Optinova Innovation Process

We start our collaboration with your team by mapping your requirements, needs and challenges.

Customer needs



Discovery and design

With close input from your team, we craft a solution proposal and delivery plan.



We provide design proposals and physical samples for your evaluation.

Prototype



Evaluation

Our polymer and extrusion engineers support your evaluation process and deliver quick iterations based on your feedback for final refinement.



We deliver validated products for commercial production for your final approval.

Verification and validation



Scaled production

Close collaboration to execute on the agreed plan to scale capacity and meet your commercial growth plan.



Designed
for you

