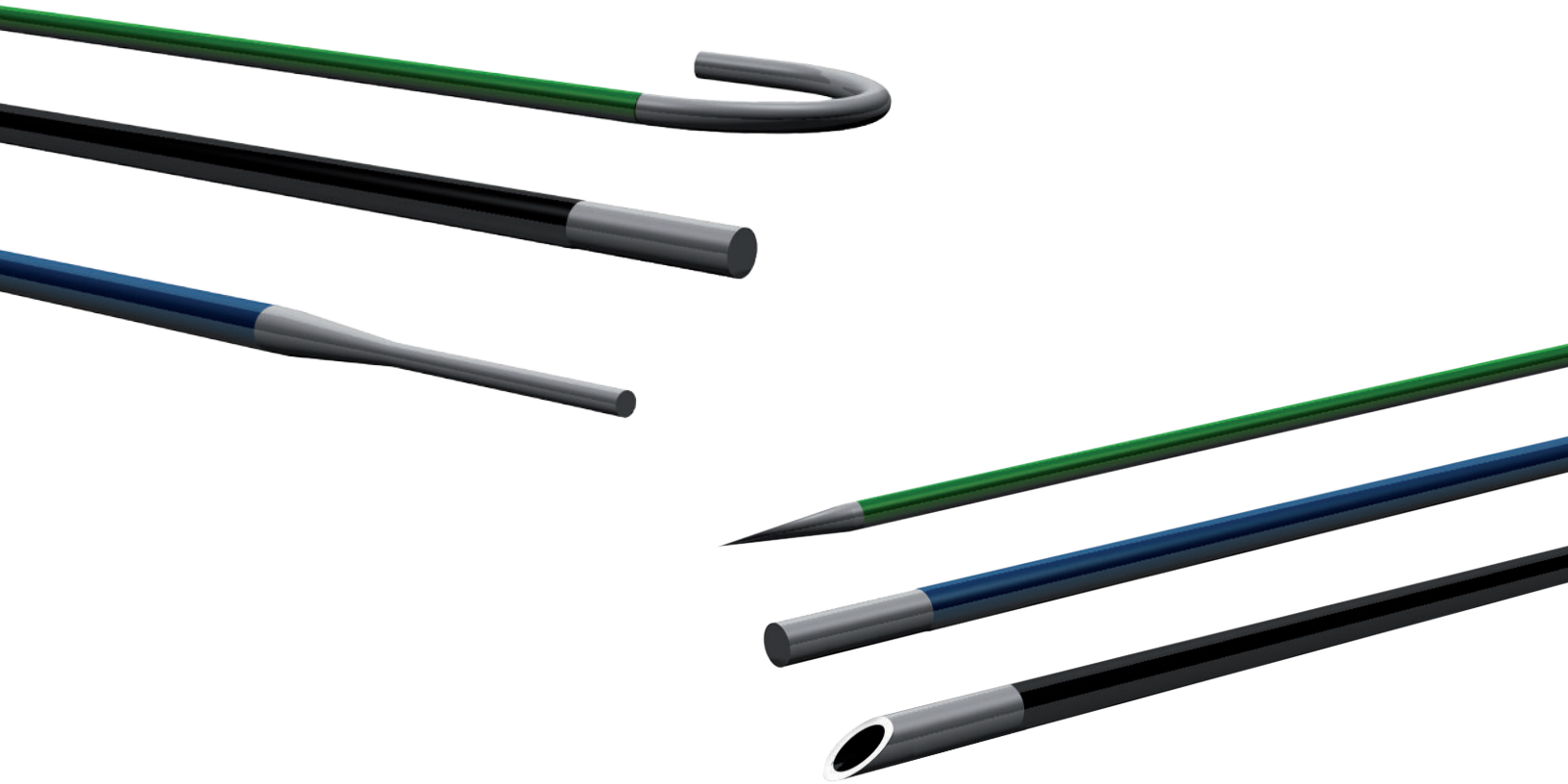




# COATINGS



LEADER IN COATED WIRE MANUFACTURING

# MERIT COATINGS - THE SUPERIOR COATINGS PARTNER

Merit Medical Systems has been a pioneer in providing best-in-class coating solutions, providing a lubricious, thin and robust coating layer with a smooth surface finish through our Reel-To-Reel and Optimized Heat Treatment processes. Our coated products meet design engineers' toughest tolerance & manufacturing challenges in numerous catheter and guidewire development applications and products.



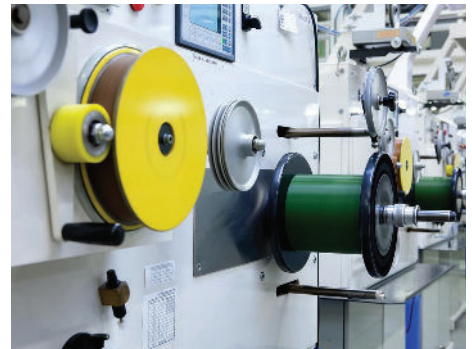
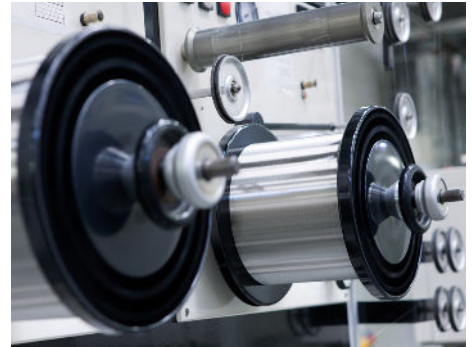
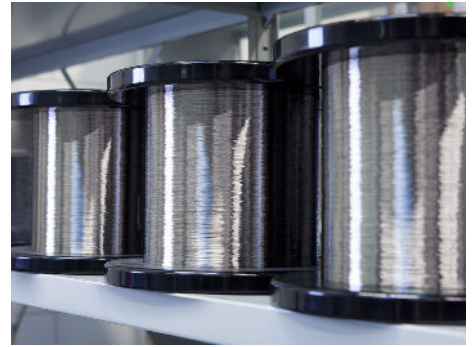
## ADVANCED TECHNOLOGY IS THE DIFFERENCE

Merit Coatings division employs various spools of bare wire such as, stainless steel, nitinol, tungsten and copper in their reel-to-reel manufacturing process. The **Reel-To-Reel** process stabilizes the bare wire through controlled tension which significantly reduces the vibration to the wire and eliminates the driving force. The wire is then processed through an ultrasonic cleaning process to remove impurities that may cause defects in the coating as it is applied over the metal wire.

The bonding between the PTFE material and bare metals is greatly enhanced when starting with the purest and cleanest contact surface as possible. It also allows for the PTFE material to be applied consistently even and smooth over the wire reducing cracking, chipping, and clumping of the PTFE material as it is cured.

Selected PTFE is then applied and bonded to the clean wire through a process known as **Optimized Heat Treatment** (OHT) which is an oven plus PTFE coating application. OHT offers advantages not found in other applications like spray coating and dip coating. OHT allows the coating to be sintered over the material causing it to fuse into a solid but porous mass which increases the adhesion properties.

Applying coatings to long, continuous lengths of wires before they are cut, coiled, or finished—makes it possible to achieve higher levels of consistency, precision, and extreme tolerances. This process allows Merit Coating to produce large quantities of coated wire for further processing.

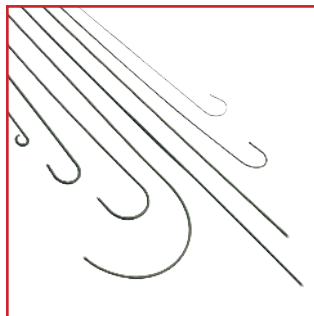


## ADVANCED TECHNOLOGY = SUPERIOR RESULTS

- Continuous coating process ensures consistent diameters and tighter tolerances and prevents cracking and flaking
- PTFE coatings result in a one-to-one torque
- Additional oils are not needed during the coiling process with our LubriSkin™ coating, which acts like lubricant
- Recently upgraded technology produces higher-quality coiling services
- Superior in-house manufacturing services available for core wire including single taper, multiple taper, grinding, rounded ends
- Bulk coating process ensures guidewire components are consistently coated from one to the next



Coils



Guidewire



ECG Needle



Stone Retrieval Device



## SPECIFICATIONS

### Bare Wire Materials / Diameter

- Stainless steel - 0.038mm - 1.0mm (0.0015" - 0.039")
- Nitinol - 0.038mm - 1.0mm (0.0015" - 0.039")
- Copper - 0.254mm - 1.4mm (0.010" - 0.055")

### Other Materials Upon Request

- Titanium
- Tungsten
- Iridium Alloy
- SS304V 35N LT®\*
- SS304V SLT®\*

### Coating Thickness

- Wires: 2 microns thickness per side to 20 microns thickness per side (0.00008" - 0.0008")
- Tubes: 4 microns thickness per side to 10 microns thickness per side (0.00016" - 0.0004")

### Coating Options, Thicknesses

- PFOA-free PTFE LubriSkin™, DuraBond™, DuraSkin™, and HardSkin™
- For wire diameter  $\leq$  0.254mm, 2 $\mu$ m - 7 $\mu$ m (.00008" - .0003") per side
- For wire diameter  $\geq$  0.254mm, 4 $\mu$ m - 10 $\mu$ m (0.00016" - 0.0004") per side
- Other thicknesses on request

## EXPANDING VENLO'S FUTURE

Merit Coatings is responding to the required need for guidewires and PTFE coated products by investing in additional Reel-To-Reel manufacturing lines to match the needed demand for guidewires in the fields of cardiovascular, neurovascular, and peripheral vascular. Merit Coatings is expanding into the field of Discrete Coatings, a process where a guidewire or mandrel can be coated in a specific area. Merit's investment into this new state of the art coatings equipment will help meet the ever changing needs of the coatings market.



### VENLO, NETHERLANDS

- Component manufacturer of guidewire
- Continuous Reel-To-Reel coating process
- Focus on process development
- New Discrete Coating process coming on-line
- Manufactures enough coated wire to circle around the earth more than 5 times in a year