



manufacturing solutions for optical fiber and fiber optic cables

ROSENDAHL NEXTROM. tailor-made in europe

rosendahlnextrom.com/fiber





your partner
for leading
fiber production
technology



At Rosendahl Nextrom,
each piece of machinery
is tailor-made in Europe
according to your specific needs.

Specializing in fiber optic
technology for almost half
a century, we put great
emphasis on research and
the continuous development
of the right technologies.

key expertise includes

- » Fabrication of high-purity optical glass preforms
- » Drawing & proof-testing of optical fibers
- » Application of UV-curable acrylates on fibers
- » Producing high-quality fiber optic cables

achieve perfection in telecom preform production

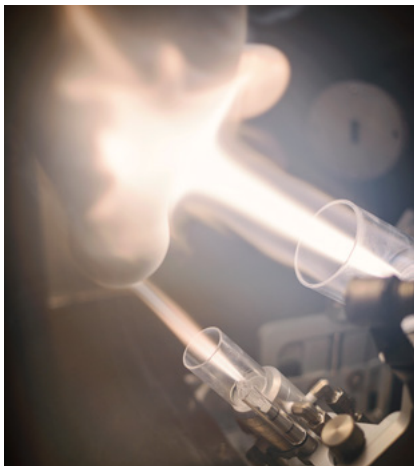
Nextrom offers two complementing process steps in manufacturing first-rate optical telecom preforms to draw the highest of quality optical fibers.

- » **VAD** process empowers you to create robust and flawless preforms and core structures.
- » **Vapor Deposition OVD** – cladding is more than just a protective layer; it is the envelope that ensures the effective confinement and transmission of light within the core.





with our tailor-made equipment
you can maximize your production
output from start to finish.



vad production

OFC 04C Core Deposition System

OFC 08C Core Sintering System

OFC 09C Core Degassing System

OFC 15 Glass Working Lathe

OFC 17C Core Stretching System

ovd production

OFC 05L Clad Deposition System

OFC 08L Clad Sintering System

OFC 08V Vacuum Sintering System

OFC 09L Clad Degassing System

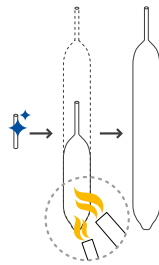
OFC 15 Glass Working Lathe

OFC 19 Tip Forming System



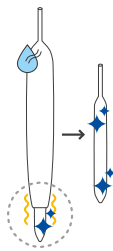
*watch the video of
Nextrom's optical fiber preform factory*

VAD Core Process



1.

Core deposition



2.

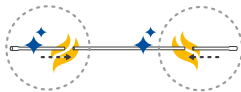
Core Sintering System



3.

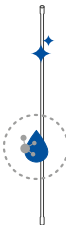
Core Degassing System

OVD Clad Process



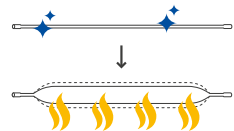
8.

Glass Work -
Handle Welding



9.

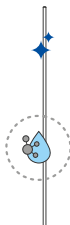
Acid
Washing



10.

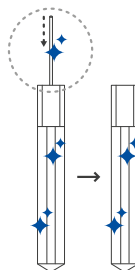
Clad
Deposition

RIC Cladding Process



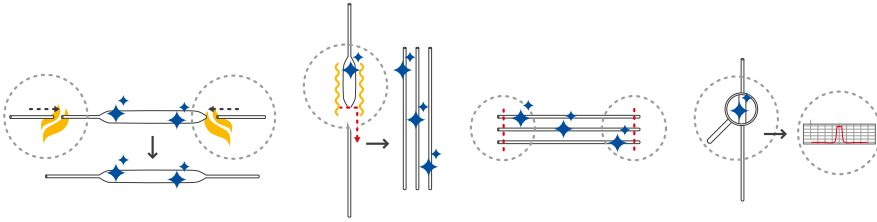
8.

Acid
Washing



9.

RIC Preform
Assembly



4.

Glass Work –
Handle Welding

5.

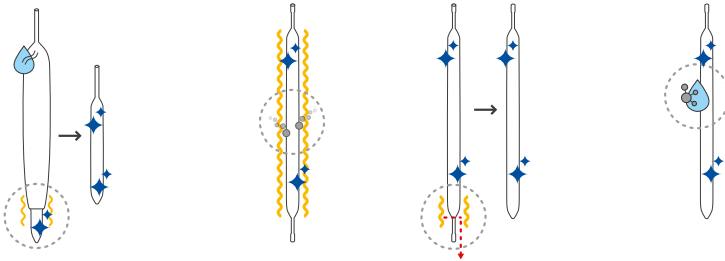
Core
Stretching

6.

Glass
Cutting

7.

Core Rod
Measurement



11.

Clad
Sintering

12.

Clad
Degassing

13.

Tip
Forming

14.

Acid
Washing

did you know ...

how many steps are necessary for one preform?

watch the video of
Nextrom's telecom preform factory



telecom fiber draw

OFC 20 Telecom Fiber Draw Tower is paving the way for a high-speed future. Engineered for optical fiber production with unmatched precision, speed and quality.

- » State-of-the-art user interface, with real-time data and comprehensive control features optimizes performance and minimizes downtime.
- » Recover 90 % of the helium used in the draw process with the helium recovery system,
- » Reduce the energy consumption of the process by 50 % with the Nextrom induction furnace.





flexible construction

- » Furnace solutions for large and small preforms
- » Dynamic iris for preforms with large outer diameter variations
- » Fiber cooling solutions
- » Helium recovery unit
- » Wet-on-wet coating systems
- » Refilling cabinet for coating system
- » Acrylate delivery system
- » Several different diameter measurement gauges
- » Non-contact tension measurement systems
- » A variety of start-up and master capstans
- » Single and dual take-ups
- » Advanced process control and data logging system



a variety of components are available to fulfill different customer requirements



watch the video
of Nextrom's telecom draw



specialty fiber & preform

Nextrom offers a comprehensive range of customizable and cutting-edge manufacturing solutions for a wide range of specialty preforms and optical fibers.

The tower draws preforms of various types using either MCVD (modified chemical vapor deposition technology) or PCVD (plasma chemical vapor deposition technology).

OFC 12 mcvd system

Widely used method for the fabrication of high-quality optical fiber preforms. MCVD results in long lifetime, low cost of ownership, quick set-up, and easily customized solutions.

High purity stainless steel lines ensure no leakage or moisture intrusion and enables the highest possible complexity and quality of optical fiber preform production.

OFC 11 pcvd system

Allows deposition of very thin layers of glass inside the deposition tube. These fine layers enable the production of many different accurate index profile types for the fiber industry.

The PCVD process also allows for higher doping concentrations and significantly higher conversion efficiency compared to other deposition processes.





OFC 20 SF specialty fiber draw tower

Specialty optical fibers are optimized for applications other than signal transmission, such as lasers, sensors, filters, ring resonators, etc.

For such varied applications, there are hundreds of different specialty optical fiber types with many variations in glass composition, core and cladding structures, geometric properties, coatings, and specially tailored optical performance characteristics.

The Nextrom OFC 20 SF Fiber Draw Tower for specialty fiber production is available with different furnaces and precise preform feeding solutions for soft glass, silica, and plastic optical fibers.

OFC 20 SF also enables solutions for cane and capillary tube pulling as well as solutions for micro structured (or HCF – hollow core) fiber drawing.



nextrom puts the
special into specialty
fiber production.

range of fiber types

- » Single-mode
- » Multi-mode
- » Amplifier fiber
- » Bragg fiber
- » Hollow core/Antiresonant
- » Laser fiber
- » Holey fiber
- » Chalcogenide fiber

watch the video of
Nextrom's specialty fiber production



post draw & UV coating

In the fiber optic industry, post draw and UV coating equipment are essential for optical fibers. Post draw equipment tests the fiber strength and conditions the fiber to ensure long term reliability in deployment. These processes are critical for producing high-quality fibers for telecommunications and data transmission.

deuterium treatment

Nextrom's OFC 02 NDS Deuterium Treatment System treats low water peak fibers (ITU-G.652C) with deuterium gas. The properties of the optical fiber remain intact during the fiber's lifetime. The deuterium treatment ensures that OH-related attenuation does not rise during the lifetime of the optical fiber.

proof-testing

To meet the requirements of telecom optical fiber properties, Nextrom offers three different solutions for the proof-testing process of your optical fibers.

- » OFC 30 Proof Testing Line with automatic reel change
- » OFC 35 Proof Testing & Rewinding
- » OFC 55 Coloring & Proof Testing with automatic reel change





coloring of optical fiber

As the fiber count is ever increasing in fiber optic cables, it's important to differentiate your optical fibers by using Nextrom's high-speed and reliable solutions for coloring. Nextrom offers advanced high-speed coloring line OFC 52i along with, OFC 55 Coloring & Proof Testing Line with automatic reel change that combines both coloring and proof-testing processes for faster and for more cost-efficient results. With our Nextrom equipment, you can color all types of fibers. Also solutions for ring marking and upcoating can be added.

mcm multicolor ringmarking

MCM redefines optical fiber identification. By integrating multi-color markings within the coating layer, the system enables line speed exceeding 1600m/min (up to 50% faster than inkjet), offers over 80 unique fiber identifications and reduces attenuation increase by up to 95% compared to conventional ring marking.

ribboning

OFC 21 High Speed Ribbon Line offers advanced cutting edge technology for the ribbon process. High quality ribbons with accurate dimensions and excellent optical properties are manufactured with this advanced, modular system.

rollable ribbons

OFC 23 enables high-density rollable ribbon production for next generation datacom cables. By combining precise bonding control, flexible pattern generation, and dual take-ups, the system supports higher fiber counts and continuous production with higher productivity.

OFC 79 provides rollable ribbon bundling before stranding, accurately grouping ribbons into bundles to enable maximum fiber density in the final cable design.

Together, the systems ensure an efficient, reliable process and high-quality rollable ribbon bundles ready for high-density cable manufacturing.



watch the video of
Nextrom's Post Draw & UV Coating Solutions



fiber optic cable

Nextrom offers the most comprehensive range of production solutions for all types of fiber optic cables imaginable.

We provide fiber optic cable lines that are specifically designed to complement each process step from start, all the way to the desired finished product.

This allows our customers to produce the high-quality fiber optic cables associated to our brand.

Fiber optic cable lines for loose or tight buffering optical fibers as well as tube extrusion for fiber bundles and ribbons to SZ-Stranding of the buffered fibers to be finalized by Jacketing/Sheathing process to create the outermost protection for the optical cables, for all previously mentioned fiber types.



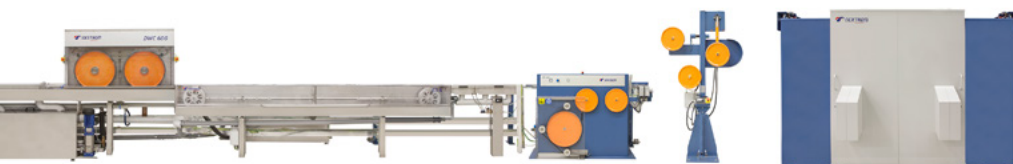
customized production lines for indoor cables

- » **OFC 42** Tight Buffering Line
- » **OFC 43** Premises Cable Extrusion Line



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we can provide you
with the necessary tools
to produce the desired
cable range.



customized production lines for outdoor cables

- » **OFC 40** Secondary Coating Line
- » **OFC 70** SZ-Stranding Line
- » **OFC 60** Jacketing Line

watch the video of
Nextrom's Fiber Optic Cable Production



datacom fiber

Nextrom is at the forefront of production technology for modern data infrastructure. Benefit from technology driven equipment from hollow core fiber to datacenter interconnect cables.

glass working

The glass working lathe produces **ultra-clean hollow-core preforms** with structural precision and material purity. Integrated hydrogen fluoride etching for internal tube cleaning, combined with ultra-high purity gas delivery and controlled burner flame and position, ensures repeatable geometry and precise hollow-core preform fabrication.

specialty fiber draw tower

The specialty draw tower converts hollow-core preforms into **high-performance fibers**. Stable furnace control, precise tension management, and advanced coating systems ensure consistent geometry, excellent concentricity, and reliable production for next-generation datacom and AI-driven network applications.

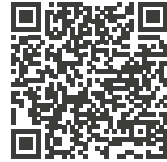
rollable ribbon bundling

The OFC 79 bundles rollable ribbons into **compact, cable-ready cores** for high-density telecom and datacom cables. With flexible helical or longitudinal bundling options and capacity for up to 36 ribbons, the system enables structured bundle formation, optimized fiber density, and efficient high-fiber-count cable production.

sz super bundling

This process combines rollable ribbon bundles into super bundles, **forming ultra-high-fiber-count cable cores** for datacenter interconnect cables (DCI). The controlled stranding process creates a balanced and well-organized cable structure that supports efficient installation and reliable high-capacity connections between datacenters.

find out more on
datacom fiber production



multicolor ringmarking

MCM redefines **fiber identification for datacom cables**. By integrating multi-color markings within the coating layer, we enable line speeds exceeding 1600 m/min (up to 50 % faster than inkjet), offer over 80 unique fiber identifications, and reduce attenuation increase by up to 95 % compared to conventional ring marking.

rollable ribbon

The OFC 23 enables **high-density rollable ribbon production** for next-generation datacom cables. By combining precise bonding control, flexible pattern generation, and dual take-ups, the system supports higher fiber counts and continuous production with higher productivity.



jacketing

The jacketing process applies a protective outer layer to the stranded super-bundle core, transforming it into a **finished datacenter interconnect cable (DCI)**. Controlled extrusion ensures consistent cable diameter, mechanical robustness and structural integrity for reliable high-capacity connections between datacenters.

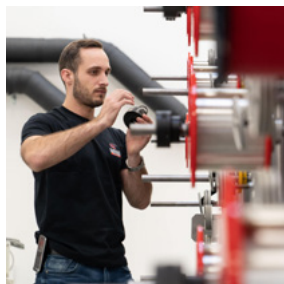
premises cable extrusion

Designed for versatility, the OFC 43 Premises Cable Extrusion Line applies **protective jacketing** to transform optical fibers or rollable ribbons into indoor cables. The system supports standard premises cable constructions as well as high-density designs using rollable ribbon for intra-building and datacenter connectivity.

your lifetime partner

Reliable support is key when working with complex machines. That's why we make it our mission to accompany and support you throughout the whole product lifetime. Our global network of sales and service centers and local partners provide first-class support anywhere in the world.

- » Quick support
- » Remote and online
- » Trainings
- » Line audit & inspection
- » Upgrades



here for you



our sales and service units worldwide



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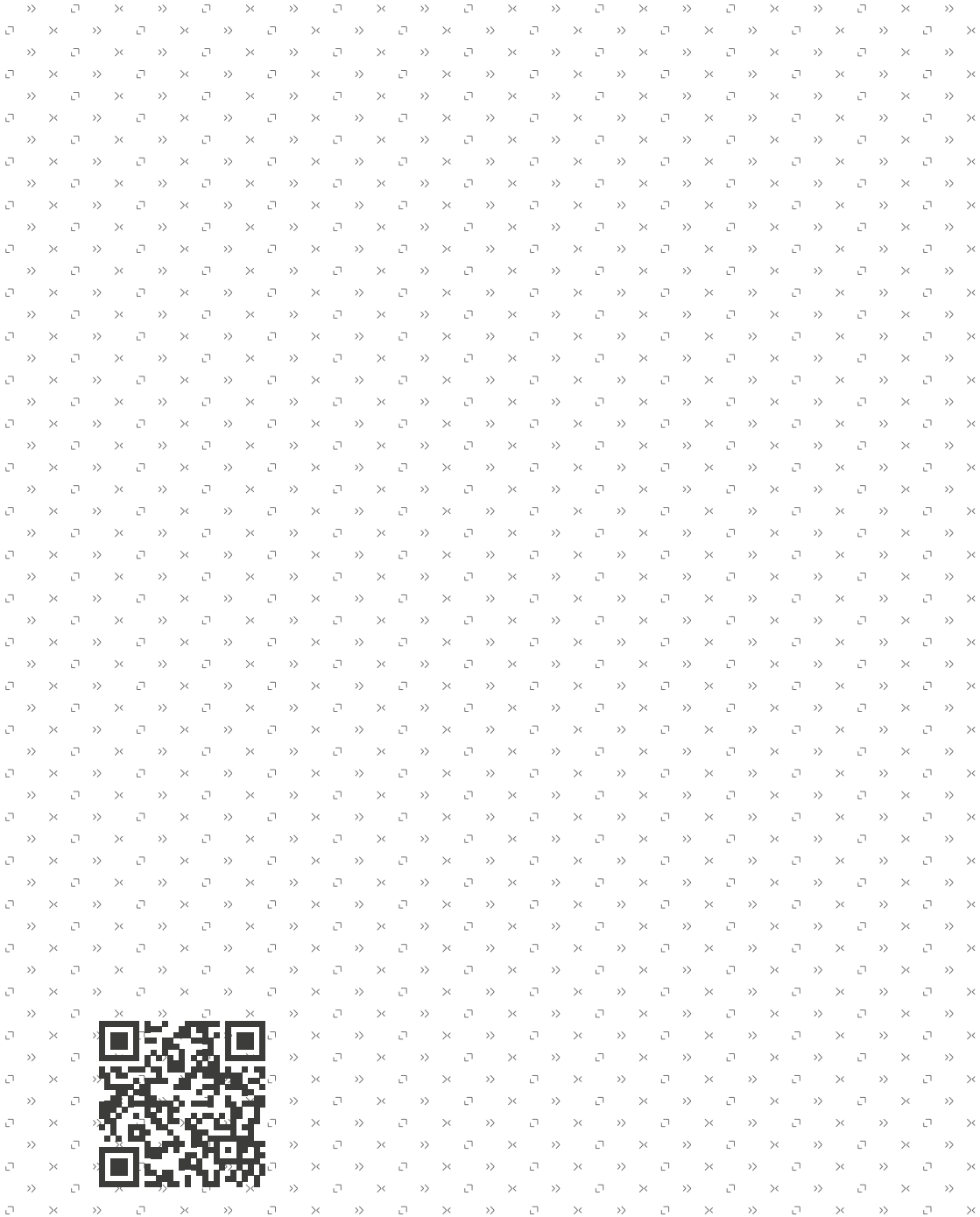
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