



***REG/ASS H.T.***

**Excellence Center  
for carbon fibre composite rollers**



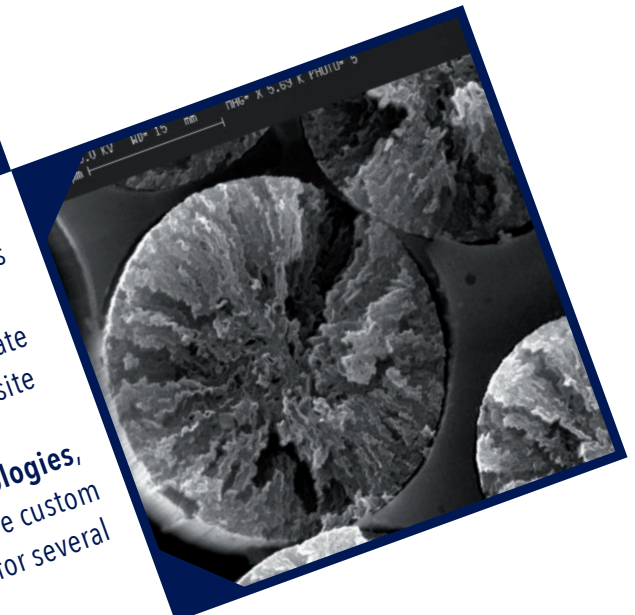
Engineers, chemists and technicians in a continuous search for advanced solutions to fulfil customers' requirements.

# technology

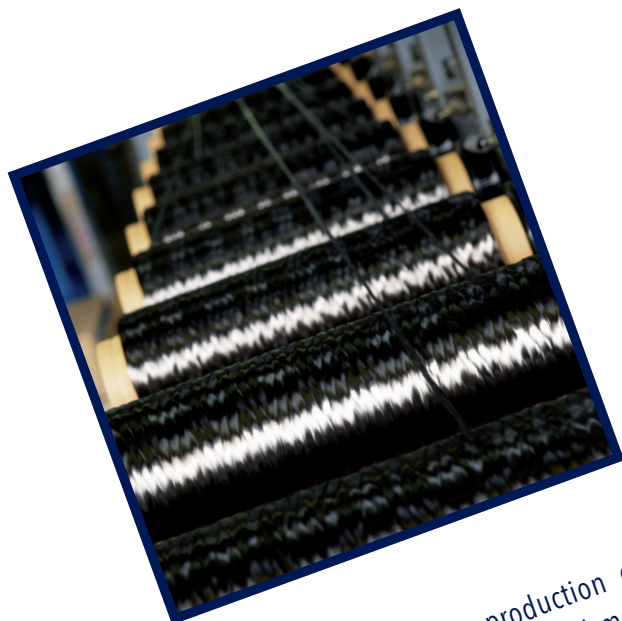


Reglass uses only the best carbon fibres on the market, and a proprietary impregnation process for an accurate and precise control of the composite properties.

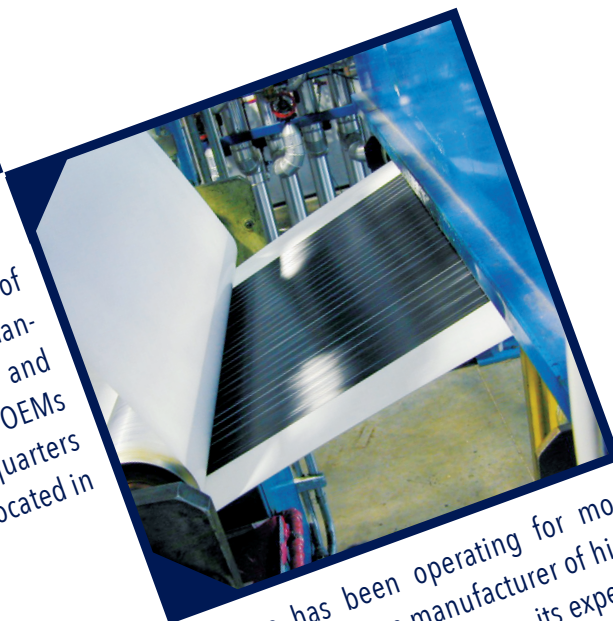
Thanks to its **exclusive technologies**, Reglass is able to manufacture custom carbon composite products for several industrial applications.







Reglass is a leader in production of high-end carbon fibre rollers and mandrels, and a first-choice supplier and partner for the most renowned OEMs worldwide. The Company headquarters and manufacturing plants are located in Minerbio (BO, Italy).



Reglass has been operating for more than 45 years as a manufacturer of high-end carbon fibre composites, its expertise and cutting edge technologies and processes resulted in the deposit of 22 patents.



# the Company



# Flexographic printing mandrels

Reglass produces high end printing mandrels to be used in flexographic printing machines: a standard process for printing packaging films, corrugated cardboard, labels, and tissue paper, among others. Each printing machine may adopt custom carbon fibre rollers in order to increase printing precision and production rate.

## Features

Reglass produces carbon composite sleeve mandrels with the best available performances.

- Diameter up to 420 mm
- Length up to 6 m
- Best mechanical properties on the market
- CE certified

## Technology

Thanks to the in-house impregnation process, Reglass mandrels have superior performances.

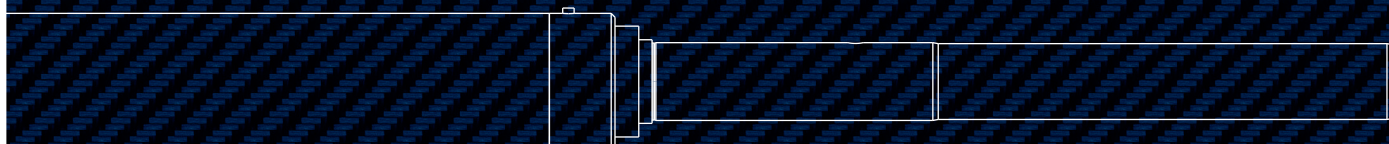
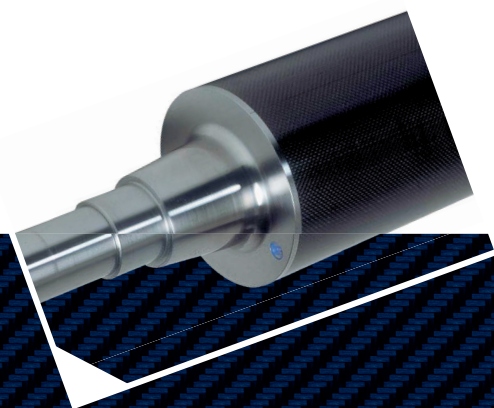
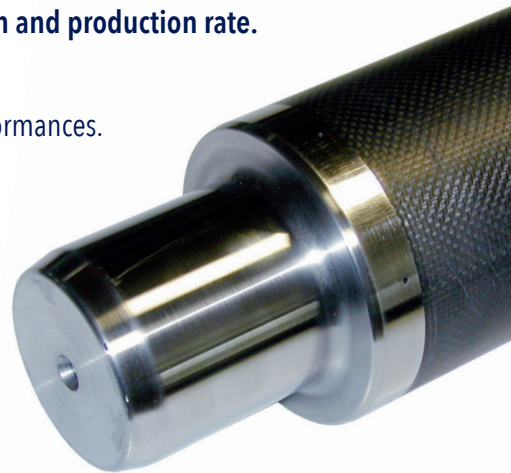
- Exclusive carbon/metal junction to guarantee a firm, stable and durable connection
- Longitudinal elastic modulus up to 350 GPa
- Tightest tolerances on the market

Reglass can provide test certificates based on a 3D measuring machine in controlled temperature lab.

## Advantages

Carbon fibre mandrels guarantee the following advantages in terms of printing performances when compared with steel mandrels.

- Increased printing precision
- Higher productivity
- Higher printing speed
- Better vibrational behaviour





# Rollers for the converting industry

Thanks to its technology, Reglass produces carbon composite rollers with the maximum possible lightness for application on converting machines in several industrial segments, such as tissue paper, plastic film, non-woven materials.

## Our offer

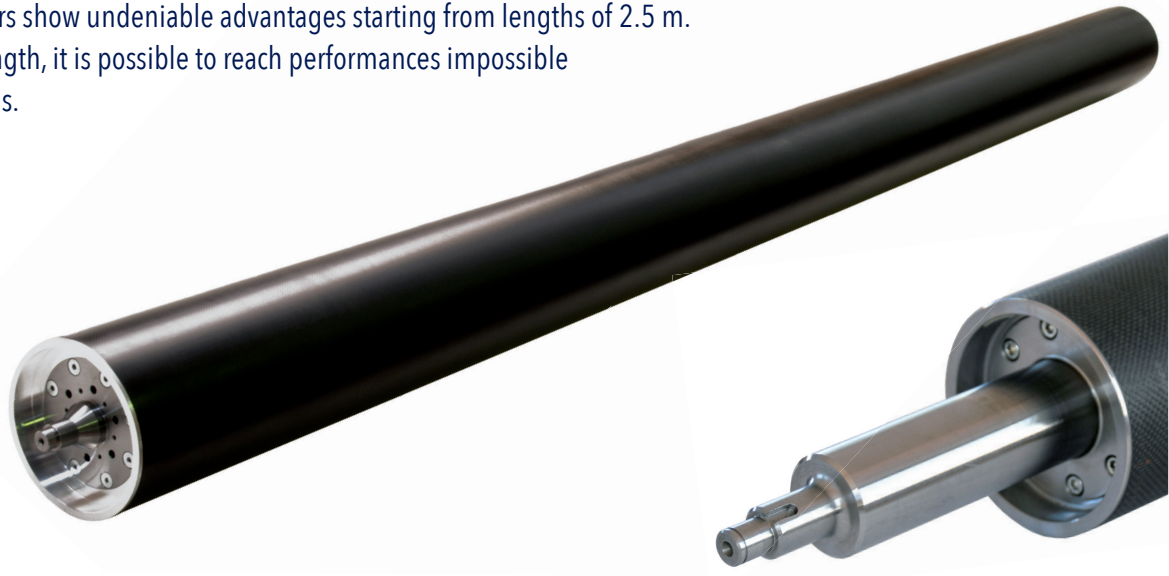
Reglass can offer a wide variety of high-end rollers with diameters up to 420 mm and 6 m in length.

Reglass rollers allow an increase of the critical rotational speed of 30% at least with respect of steel or aluminium rollers.

It is therefore possible to increase the machine productivity to fulfil the requirements of the most renowned OEMs.

Carbon composite rollers show undeniable advantages starting from lengths of 2.5 m.

Increasing the roller length, it is possible to reach performances impossible using different materials.



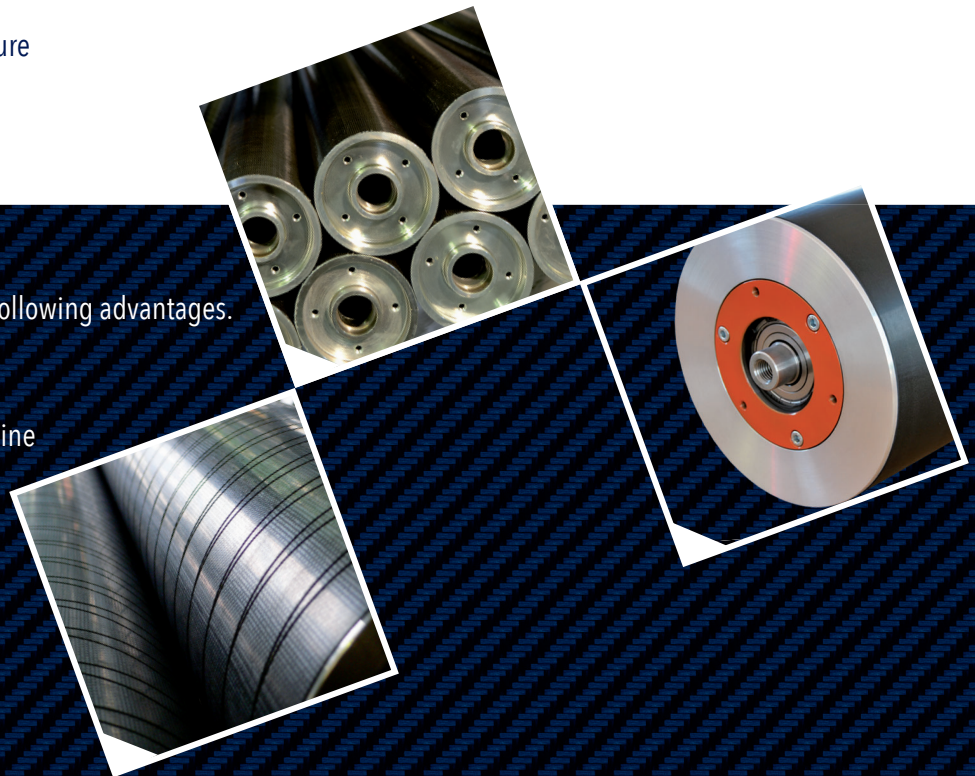
## Characteristics

- Low weight and possible reduction of the number of drives
- Increased precision when used as load-cell rollers
- Better aerodynamic behaviour
- Smaller load on the machine structure
- Smaller load on bearings
- Excellent precision

## Advantages

Carbon fibre mandrels guarantee the following advantages.

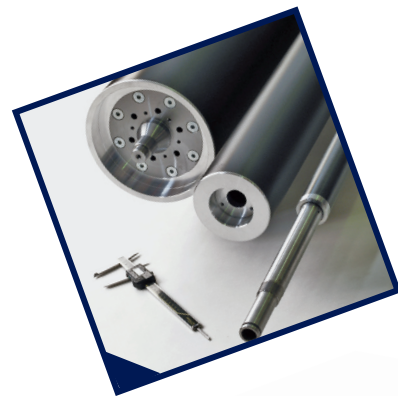
- Higher working speed
- Faster machine startup
- Increased compactness of the machine
- Increased productivity





# Other applications

Reglass manufactures high end tubular products in several industrial segments. Each product is developed, designed and realized according to customer specifications, in order to maximize the performances of composite material.



## Other carbon fibre roller applications

- Rollers for newspaper printing
- Rollers for rotogravure printing
- Rollers for paper mill industry
- Rollers for plastic extrusion plants

## Advantages

- Low weight
- Low inertia
- High stiffness
- High critical speeds
- Less energy consumption



## Other application of tubular composite carbon fibre products

### Industrial segments

- Automotive
- Naval
- Aerospace
- High-load / high-performances mechanical applications
- High-precision mechanical applications

### Products

- Carbon fibre composite expansion shafts
- Power transmission shafts
- CNC machine structural components

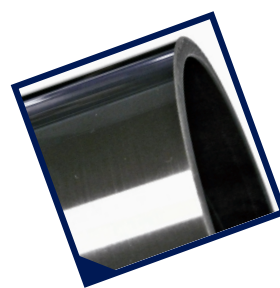
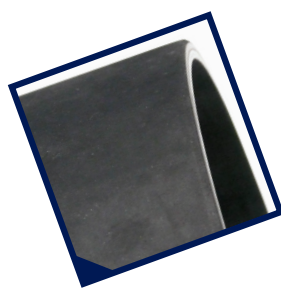
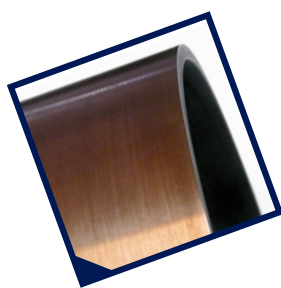
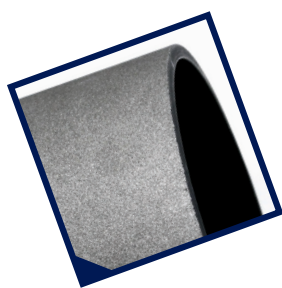




# Coatings

Reglass products are also available with several functional coatings.

- **Functionalized epoxy coatings:** a number of epoxy-based coatings with several functional fillers to achieve different superficial properties (electrical conductivity, low attrition, increased wear resistance).
- **Tungsten carbide coatings:** high hardness and wear resistance are the main characteristics of tungsten-carbide based coatings. Available with several roughness values, also with additional anti-stick coating.
- **Ceramic coating:** excellent hardness value, low values of superficial roughness may be realized. Ideal for abrasive materials or in case of really low attrition requirements.
- **Elastomeric coatings:** Reglass rollers can be coated with several types of EPDM and polyurethanic coatings, according to customer specifications.
- **Metallic coatings:** for rotogravure rollers, or in case of high thermal/electric conductivity requirements. Several materials (copper, chrome, steel -chrome) and superficial finishing available.



| Code   | Description          | Hardness    | Roughness [Ra, µm] | Characteristics                                 |
|--------|----------------------|-------------|--------------------|---|
| RA0728 | Alumina gelcoat      | 85-90 ShD   | 0.6-3.2            | Wear resistance                                 |
| RA0741 | Quartz gelcoat       | 85-90 ShD   | 0.6-3.2            | Wear resistance                                 |
| RA0740 | Teflon gelcoat       | 80-85 ShD   | 0.6-3.2            | Low friction, chemical stability                |
| RG608  | Conductive gelcoat   | 80-85 ShD   | 0.6-3.2            | Chemical stability, electrical conductivity     |
| RG604  | Low friction gelcoat | 80-85 ShD   | 0.6-3.2            | Low friction, wear resistant, antistatic        |
| RG3165 | EPDM                 | 60-95 ShA   | -                  | Increased grip                                  |
| RG3155 | PU                   |             |                    | Increased grip                                  |
| RG1014 | TC Ra 4              | 72 HR       | 4-6                | Wear resistance, grip                           |
| RG1016 | TC Ra 6              | 72 HRc      | 6-9                | Wear resistance, grip                           |
| RG1098 | TC Ra 12             | 72 HRc      | 10-15              | Wear resistance, grip                           |
| RG1099 | TC Ra 20             | 72 HRc      | 16-22              | Wear resistance, grip                           |
| RG1114 | TC Ra 4+AS           | 72 HRc      | 4-6                | Wear resistance, grip, antisticking properties  |
| RG1116 | TC Ra 6 +AS          | 72 HRc      | 5-7                | Wear resistance, grip, antisticking properties  |
| RG1198 | TC Ra 12+AS          | 72 HRc      | 8-12               | Wear resistance, grip, antisticking properties  |
| RG1199 | TC Ra 20+AS          | 72 HRc      | 12-20              | Wear resistance, grip, antisticking properties  |
| RG1415 | Ceramic coating      | 900-1000 Hv | 0.4-1.2            | Chemical stability, low friction, high hardness |





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