

Carbon fibre mandrels and idle rollers



high longevity



humidity
resistant



manual
handling



mechanical
resistance



quality
certified

Carbon fibre mandrels and idle rollers are designed for reduced weight and high critical/natural speed as well for a minimized deflection to the applied load; they are available with aluminum or steel inserts according OEM's specs. Lightweight, low-rotational or translational inertia allow faster speeds, reduced vibration, increased bearing lifetime, decreased waste and improved quality of the final products. Better performance than traditional steel mandrel particularly when wide web widths, heavy loads, and faster speeds are needed.

CFKP tube offers numerous advantages compared to steel:

- Massive weight reduction up to 70% lighter than steel
- Adjustable damping
- Very high rigidity or soft if you like

- High thermal stability and thus no deformations in the vicinity of heat sources
- Resonance frequency following your requirements
- Corrosion and chemical resistant roller body
- Very high fatigue strength

Carbon fiber tubes can be coated with most of the same materials that metal rollers can be coated with. Many standard coatings are available like tungsten carbide, chromium, elastomer, polyurethane, but please ask if you need a specific type of coating.

Contact our technical office for any special request.

structure

Carbon steel, alloy or stainless steel journals mated with high modulus carbon fibre tubes designed to meet the load and deflection requirements specified by the OEM drawings. The pneumatic mandrels include a special closed chamber compressed air distribution circuit. A number of different surface coatings are available on request for the carbon tube and journals.

specifications

Carbon fibre tube	Carbon fibre quality and angle of positioning depending by external diameter, lenght and max accepted deflection to the applied load
Journals raw material	Carbon steel Alloy steel Satinless steel
Compressed air for mounting sleeve	Pressure: 12-20 [Bar] 174 - 290 [PSI] - Delivery rate: 10 [NI/min]
Machining tolerance	High precision ground outer finish (Ra 0.8). Parallelism and coaxiality tolerance < 0.01 [mm]
Surface finishes	The carbon fibre tube is available with a choice of different surface finishes, including uncoated (carbon fibre and epoxy resin), high thickness chrome coating, tungsten carbide etc., according to OEM requirements
DIN ISO 1940-1 S balance quality grade	Standard G6.3 at 1000 rpm
Available accessories	Tempered bearing guide bushings
	The characteristics of the mandrel or roller supplied are compliant with the drawing and design specifications defined by the manufacturer of the machine.

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