

**SAURER.**



**Open, close.**

**Temco Texturing Units FTS525M**



**Saurer provides high quality market leading components used for the production of filament yarns and synthetic fibres and have a wide application across various industries.**

**Saurer prides itself on the breadth and quality of its offering, providing under the product range Temco all the components required to improve the quality in melt spinning, texturing, twisting and covering. Saurer provides a full end-to-end solution of components for yarn production that include bearings, air jets, texturing discs, texturing cots & aprons and twist stoppers.**

## Highlights

- **Open/close system**
- **Highest process speeds**
- **Simple and fast changeover of S/Z yarn twist directions**
- **Low vibration at high yarn take-off speeds**



## Texturing unit FTS525M open/close

**The Temco FTS525M is a motor-driven single unit. Due to its pivoting open/close mechanism and the integrated threading device, even critical yarns can be threaded safely and quickly even at the highest process speeds.**

**Yarn tension peaks are significantly lower when threading as opposed to a fixed center unit, resulting in significantly reduced numbers of yarn breaks during threading.**

Another significant advantage of this unit series is the simple and fast changeover of S/Z yarn twist directions. Dismantling of the discs and their spacers is not necessary for this changeover. Unit head and motor are in line and connected by means of a coupling without intermediate drive. The bearing shaft diameters of 14.45 mm are highly rigid. This, together with an additional damping, guarantees low vibration even at high yarn take-off speeds. The accurate construction ensures a precise fit of the integrated, high-speed bearings and friction discs, which is a prerequisite for high yarn uniformity on the machine.

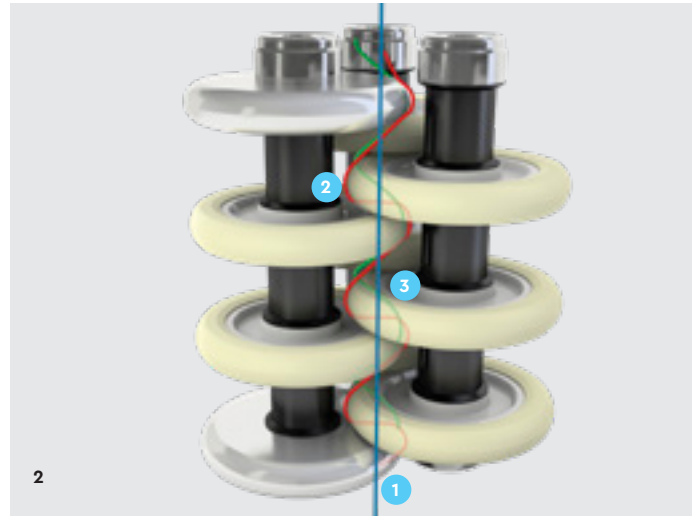
The texturing discs are attached to the LAG bearing shaft via a slide fit and are secured with a spring cap with a defined pressure force. This construction, together with the open design of the units, enables a rapid disc change.

The cover of the toothed belts prevents contamination and ensures a long belt-life.

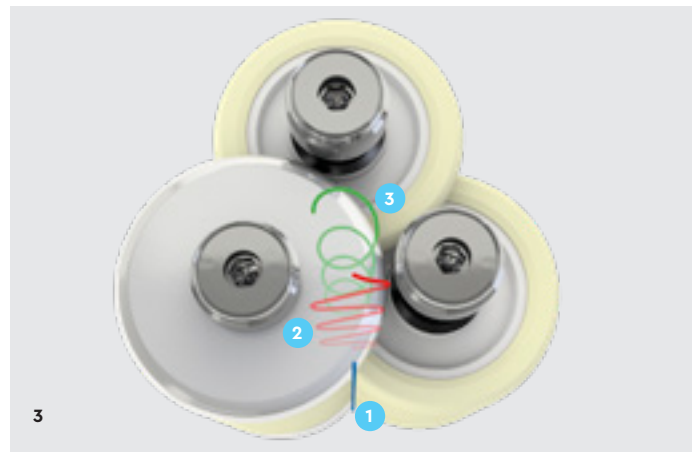


1

- 1 The yarn is positioned for the threading process
- 2 Using threading tines of a gate system, the yarn must be pressed across the area where the disc overlap is highest. Here, the tension peaks are at their highest, leading to a possibility of yarn breaks:
  - a) The yarn is in a vertical position to the disc profile and is not influenced



2



3

- by force components from the rotating disc but is transported inwardly.
- b) The yarn is unstable within the threading area between 1 and 2 due to conflict in yarn transport directions between the left hand and right hand disc stacks.
- 3 The yarn is stable in the texturing unit center

## Open/close system

The design of the open/close unit in particular increases texturing machine efficiencies. The possibility to open the unit significantly reduces adverse effects on yarn tension during threading and the possibility of resulting yarn breaks are minimised, even for low count microfilament yarns.

### Threading process at the open/close unit

Using the incorporated threading mechanism, the yarn is threaded into the centre of the unit without excessive tension. As highlighted in the comparison, yarn tension peaks are significantly lower when closing the unit compared to a fix centre unit.

For microfilament yarns in particular, this gentle method of threading results in significantly lower yarn breaks at positional start-up and consequently a marked reduction in time to thread the entire machine. Moreover, during the process, there is no threading gate, which restricts handling or vision of the yarn path in the open/close unit.

1 Threading process at an open/close unit

2 Threading process at a fix center unit, side view

3 Threading process at a fix center unit, top view

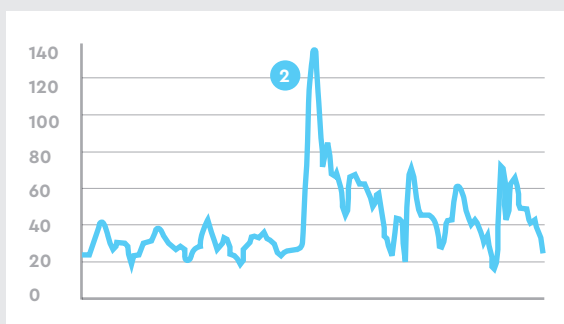
# Technical characteristics

## Specifications

- Disc diameter 52 up to 53.5 mm
- Disc thickness 9 mm
- Max. disc combination 1-8-1
- Shaft diameter 14.45 mm
- Minimum pitch 110 mm
- Yarn entry and exit guides: snap-in
- Axial distance 37 mm
- Diabolo spacers
- Fitting caps with defined pressure force
- Drive (to the motor): coupling

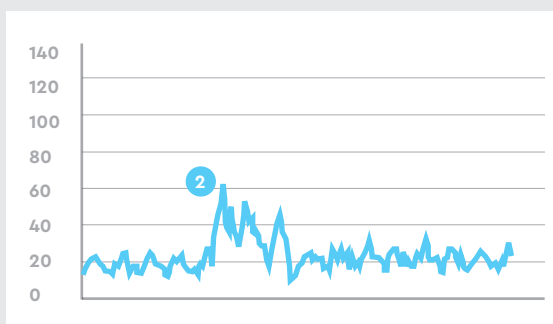
### Yarn tension variation with fix center unit

in cN



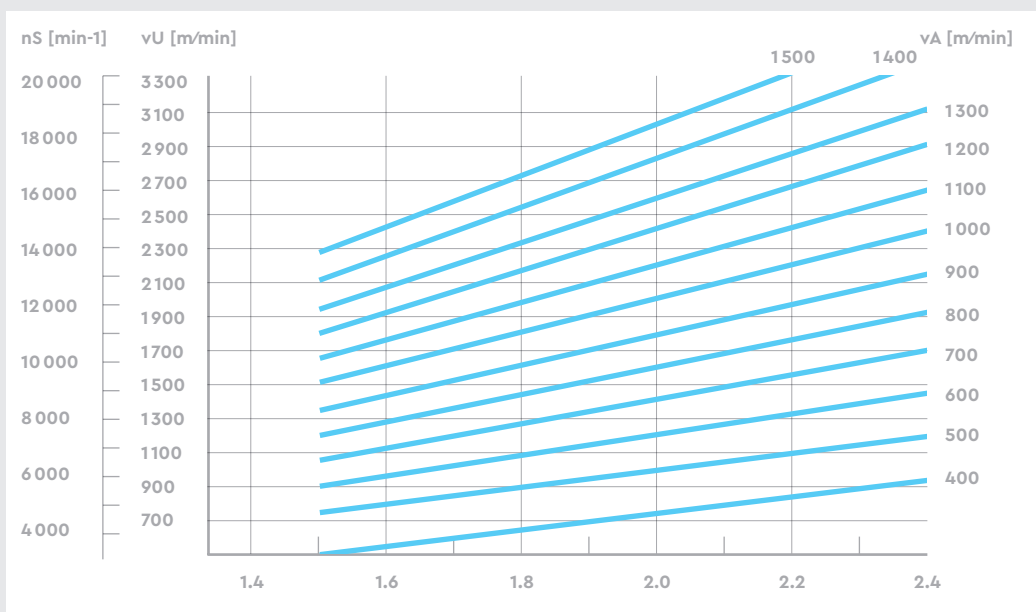
### Yarn tension variation with open/close unit

in cN



### Yarn running speeds compared to the disc circumferential speeds

in D/Y



Yarn running speeds  $V_A$  [m/min] and disc speeds  $n_s$  [ $\text{min}^{-1}$ ] in dependence on D/Y:

Friction discs 52mm diameter  
 $V_U$  = Disc circumferential speeds [m/min]

$V_A$  = Thread delivery speeds [m/min]  
 $n_s$  = Disc speeds [ $\text{min}^{-1}$ ]

Saurer Technologies GmbH & Co. KG  
Engineered Bearing Solutions  
Fuldaer Str. 19  
97762 Hammelburg  
Germany  
T +49 9732 87 0  
F +49 9732 87 310  
sales.bearings@saurer.com

Saurer (JiangSu) Textile Machinery  
Company Limited  
Shanghai Branch Company  
36F, Tower B, The HQ  
No. 100 Zunyi Road  
Shanghai 200051  
P.R. China  
T +86 21 22262500  
F +86 21 22262512  
**saurer.com**