

SAURER.



Crystal clear.

GlassTwister





Saurer Twisting Solutions is continually setting new milestones in the production of twisting and cabling machines.

We combine innovative technology with decades of experience so that you can react reliably and confidently to the demands of an ever-changing market with our machines.

Our entrepreneurial and pioneering spirit is the driving force for further developments and innovations – for your future as well!

Contents

4

Features and benefits

5

GlassTwister

6

Drive concepts

7

Cross section

10

Spindle and ring rail control

11

Yarn balloon guide drive

12

Basket

13

Capstan

14

Technical and textile data

Features and benefits

- Intuitive control at the central touch screen**
- Single-motor spindle drive**
- Single-motor synchronous drives of the creel baskets**
- Pneumatic brake for the twisting spindle and creel baskets**
- Weight compensation of the ring rail unit by spring assemblies**
- Freely selectable package building for optimum further processing**
- High degree of security, with CE certification**



GlassTwister

The GlassTwister is well established in the market, it is an innovative high-performance ring twisting machine for twisted glass and basalt glass filament bobbins and multi-layer yarns. The GlassTwister offers an optimum level of variability and flexibility.

Together with a range of services oriented toward customer needs, we offer an attractive overall package – from project planning to the service warranty and supply of original parts.

Twisting the individual filaments in parallel alignment on the GlassTwister generates the highest yarn integrity. This is essential for the highest quality during further processing. The yarn cops of the GlassTwister used as bobbins in particular guarantee a perfect sequential behaviour at maximum feed-in speeds of more than 900m/min.



Drive concepts

Creel basket, twisting spindle, yarn balloon guide (VGT8), ring rail

The modern drive concept combines high quality and established technology. It offers impressively high functionality:

- Precise synchronous drives with a variation from set point < 0.3 %
- Single-motor twisting spindle drives
- Central ring rail drive
- Separate yarn balloon guide drive (VGT8)
- New inverter technology
- Twisting spindle motor and creel basket motor are protected against overheating

The optimised design offers a wide range of benefits for operating and maintenance personnel:

- Robust creel basket with single motor drive and pneumatic tensioning device
- Central adjustment of all drive motors
- Individual control of the separate twisting spindle positions
- Comfortable placement height 1845 mm
- Low noise level thanks to direct drives

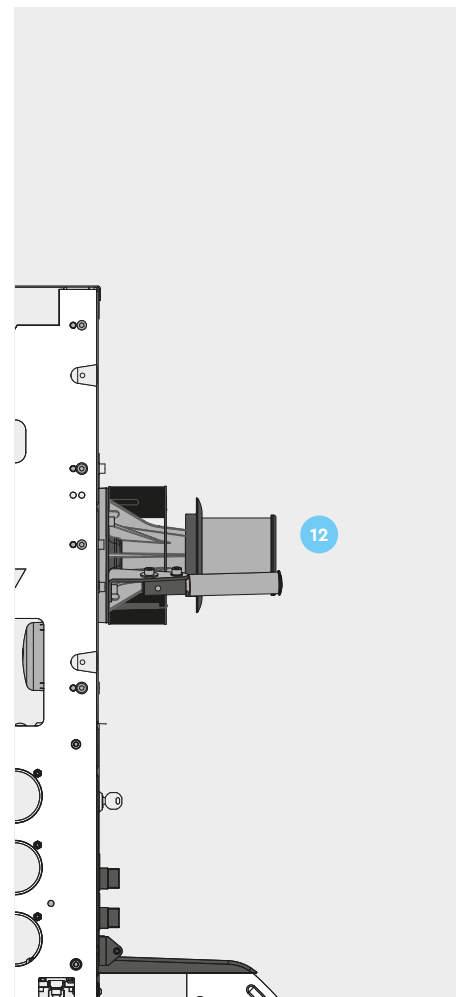
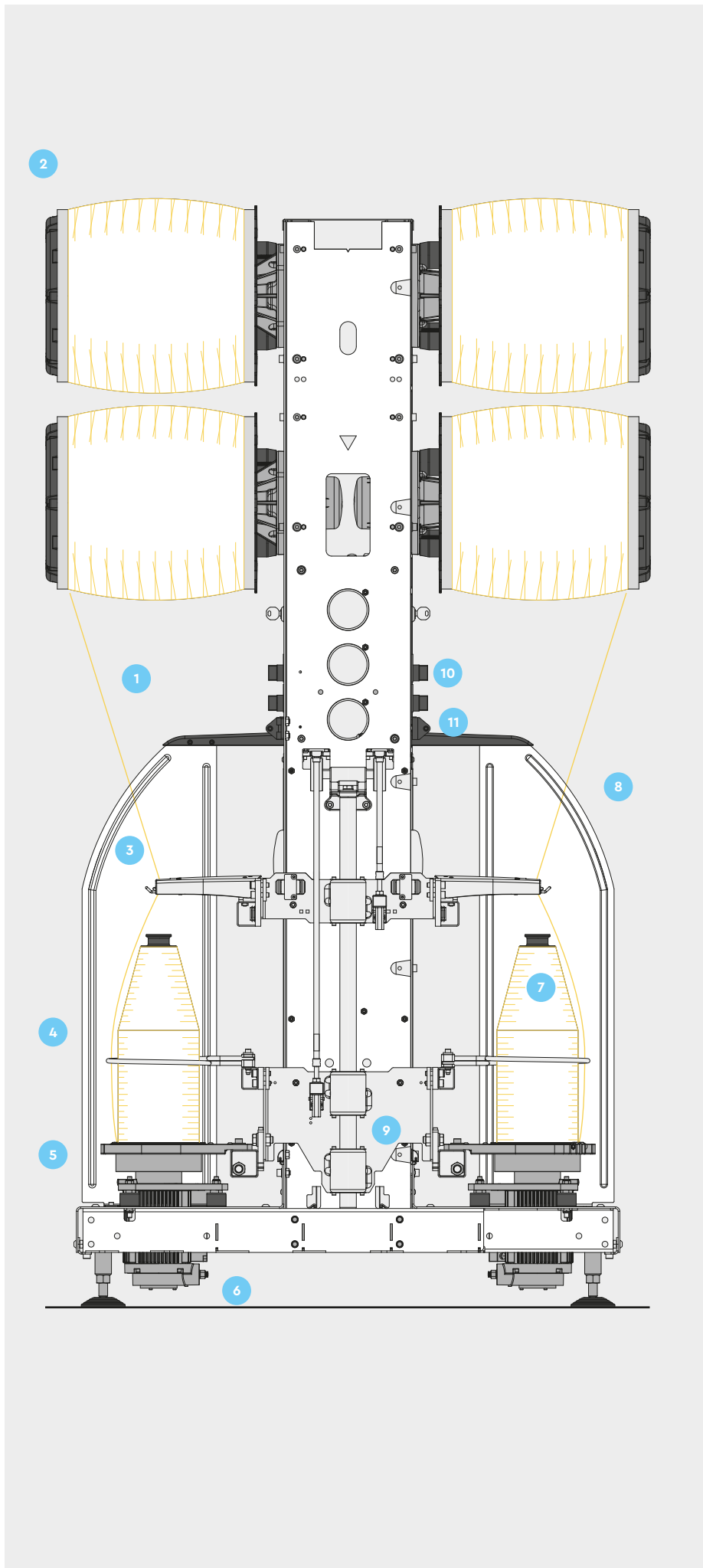
Touch panel

The self-explanatory user interface on the touch panel permits quick and straightforward setting of parameters such as:

- Speed of creel basket motors
- Speed of twisting spindle motors
- Ring rail speed
- Package building
- Hot air dryer (optional)
 - Temperature
 - Air volume

The straightforward machine controls permit for instance the implementation of customer-specific yarn bobbin formats.

Up to 500 sets of job parameters can be saved as job options and called up as required.



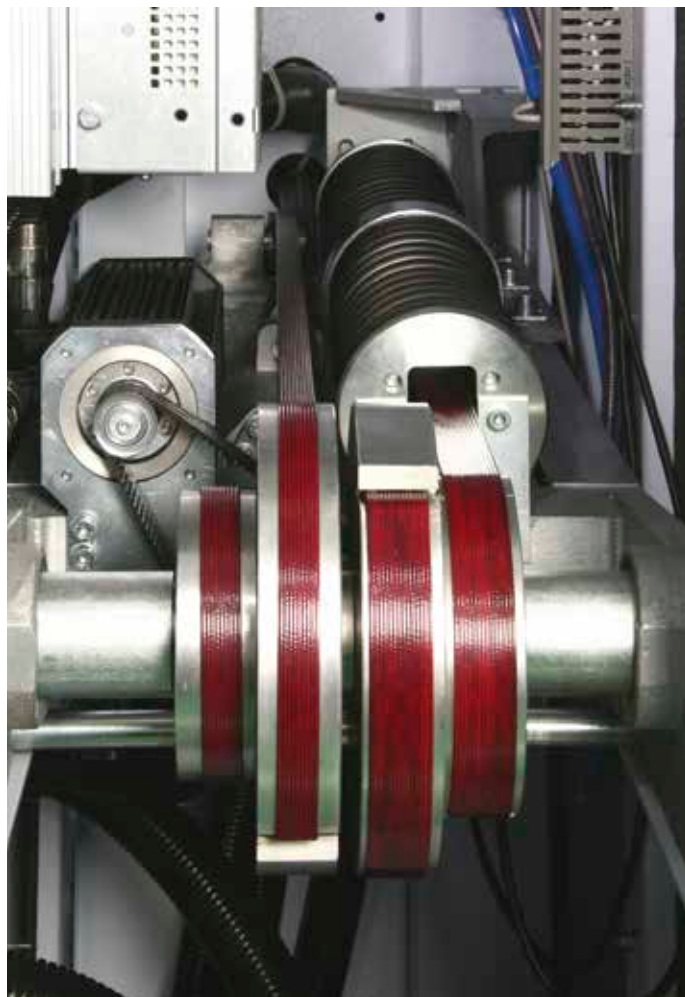
- 1 Yarn path
- 2 Basket
- 3 Yarn sensor with yarn guide
- 4 Yarn balloon ring
- 5 Twisting ring with ring traveller
- 6 Motor spindle
- 7 Take-up package
- 8 Separator
- 9 Ring rail
- 10 Start/stop of spindle position
- 11 Emergency rip cord
- 12 Capstan (alternative)

GlassTwister - Exceptionally good.●





- **Process-oriented controls**
- **Simple operation**
- **Maintenance-friendly design**
- **Intelligent software**
- **Proven technology**



Spindle and ring rail control

Twisting spindle

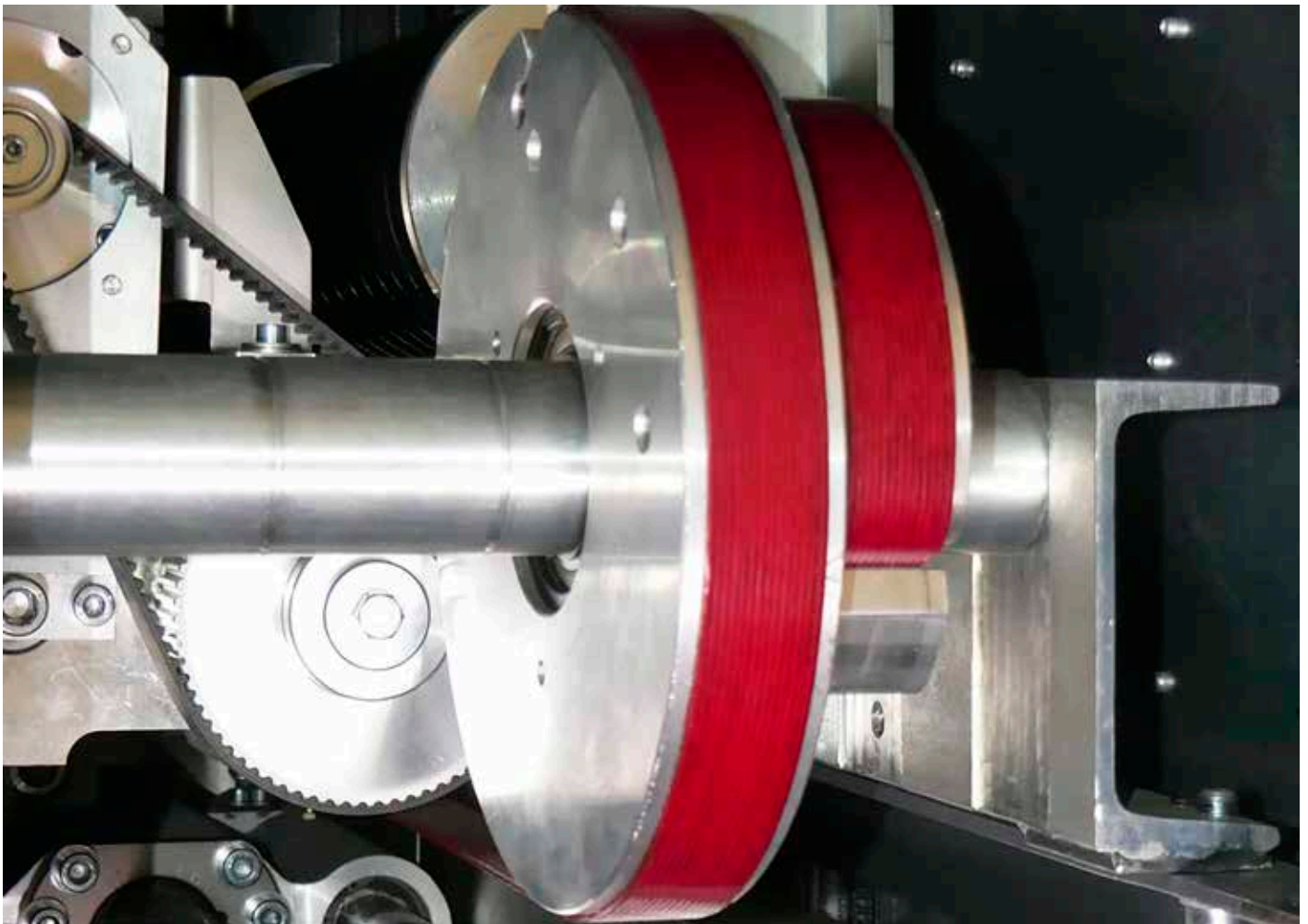
The provision of separate motorised drives for the Twisting spindles offers a range of advantages:

- Speed range 1500 rpm to 9 000 rpm
- Speed accuracy +/- 0.3 %
- Spindle motor control via a central frequency inverter for all the twisting spindle motors
- Spindle motors with system control via CAN bus
- Overheating protection
- Pneumatic spindle brake
- Process-optimised yarn guidance with yarn balloon guide and balloon limiter ring
- Bearings lubricated for life

Precise ring rail control

Thanks to the weight compensation effect of the spring assemblies and the associated low requirement for movement of masses in the ring rail system, the GlassTwister achieves vibration-free movement of the entire ring rail. This ensures highly precise positioning of the yarn on the take-up package.

- Positioning accuracy 0.01mm thanks to high-resolution encoder technology
- Variable package building
- Optimum unwinding characteristics of the take-up packages produced for follow-on processes



Yarn balloon guide drive (VGT8)

The GlassTwister VGT8 offers the option of a separate drive for the yarn balloon guide unit. This generates an optimised yarn balloon.

The decoupled movements of the yarn balloon guide and ring rail generate entirely new opportunities for optimisation of the yarn balloon shape and material deposit pattern.

Your advantages:

- Optimised yarn balloon
- Defined yarn deposit on the take-up package
- Optimised efficiency
- Flexible use of different types of tubes
- More twisting spindles within the same space
- Improved productivity/unit of floor area
- Proven drive technology



Basket

New design

The new design and optimised drives of the basket units allows a balance take up tension of all twisting positions.

Your advantages:

- Enclosed assembly, for protection against dirt
- Integral stop for reproducible positioning of the feed package relative to the basket
- Simple handling
- Optimised running
- Optimum fixing of the feed packages thanks to the new strip design of the basket

The 2-row arrangement of the baskets permits a maximum number of spinning positions within the smallest possible space.



Capstan

Alternative material infeed

By means of external material supply via side creels and capstan, the GlassTwister is able to process a very wide range of multi-filament and mono-filament materials.

These include materials such as basalt glass, PA, PES, CV, aramide, PVA, Dyneema, PE/PP and many more.

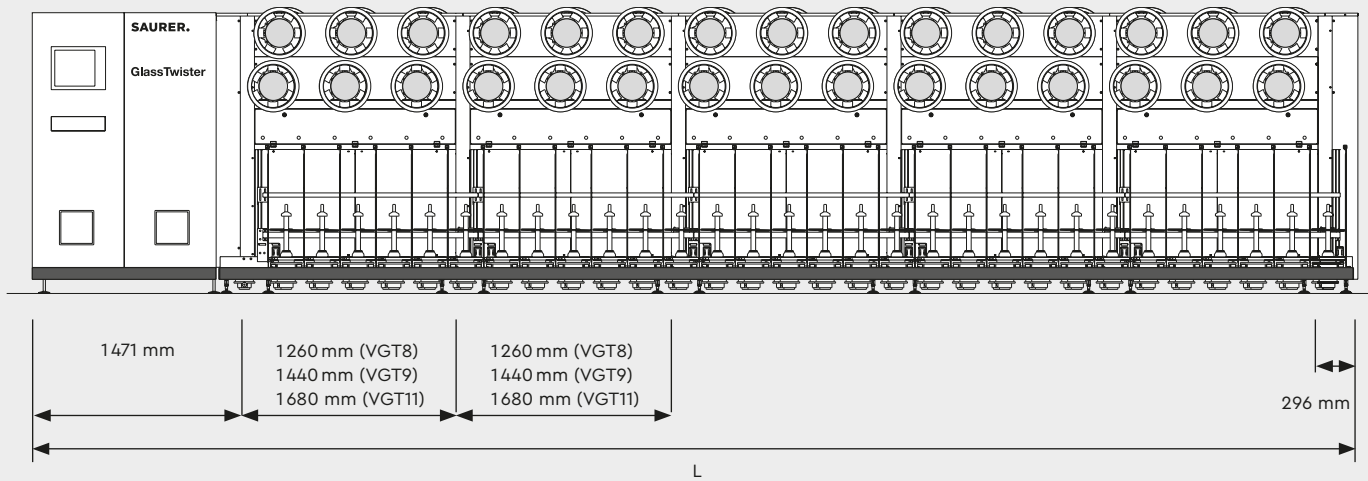
The arrangement of the yarn elements permits clear yarn guidance.

This reduces the occurrence of peaks in the yarn tension, resulting in a uniform yarn path.

Additional advantages:

- Hard chrome capstan surfaces
 - Long life
 - Gentle to the yarn
- 2-roller design to monitor the length
- Compensation for difference in length
- Thermal monitoring of the drive motor
- Pneumatic braking system
- Material-dependent yarn guide elements

Technical and textile data



Technical and textile data

GlassTwister		VGT 8	VGT 9	VGT 11
Spindle gauge	mm	210	240	280
Number of spindles		max. 168	max. 144	max. 120
Number of sections		max. 14	max. 12	max. 10
Spindles per section		12	12	12
Count range	tex	1.5 – 11	5.5 – 68	11 – 544
Twist range	t/m	10 – 250	10 – 250	15 – 250
Direction of twist		S/Z	S/Z	S/Z
Spindle speed	rpm	1500 – 9 000	3 000 – 8 000	3 000 – 8 000
Creel basket speed	rpm	50 – 375	50 – 375	50 – 375
Ring rail speed	rpm	0.1 – 4	0.1 – 4.0	0.1 – 4.0
Winding traverse	mm	380	420	420
Ring diameter	mm	127 (other values on request)	165 (other values on request)	216 (other values on request)
Ring height	mm	3.8	6.3/4.8	6.3/9.5/16.7
Spindle yarn weight	kg	max. 5	max. 8	max. 12
Creel yarn weight	kg	max. 11	max. 11	max. 11
Creel diameter	mm	340	340	360
Creel basket inner diameter	mm	300	300	300
Creel basket length	mm	350	350	350

Additional devices: Bobbin adapters, remote diagnosis system, drying systems as hot air or infra-red

Number of spindles			24	36	48	60	72	84	96
Machine length	VGT 8	mm	4 272	5 532	6 792	8 052	9 312	10 572	11 832
Machine length	VGT 9	mm	4 632	6 072	7 512	8 952	10 392	11 832	13 272
Machine length	VGT 11	mm	5 112	6 792	8 472	10 152	11 832	13 512	15 192
Machine weight	VGT 8	N	22 300	27 900	33 500	39 100	44 700	50 300	55 900
Machine weight	VGT 9	N	20 300	26 200	32 100	38 000	43 900	49 800	55 700
Machine weight	VGT 11	N	22 100	28 900	35 700	42 500	49 300	56 100	62 900

Number of spindles			108	120	132	144	156	168
Machine length	VGT 8	mm	13 092	14 352	15 612	16 872	18 132	19 392
Machine length	VGT 9	mm	14 712	16 152	17 592	19 032	–	–
Machine length	VGT 11	mm	16 872	18 552	20 232	21 912	–	–
Machine weight	VGT 8	N	61 500	67 100	72 700	78 300	83 900	89 500
Machine weight	VGT 9	N	61 600	67 500	73 400	79 300	–	–
Machine weight	VGT 11	N	69 700	76 500	83 300	90 100	–	–

Note: Specifications without protection rails and drying units (length and weight data vary depending on the version)

General note:

Research and development do not stand still. This can mean that one or another statement about our products is superseded by technical progress. The illustrations have been selected according to informative aspects. They can also contain optional additional equipment that is not included in the standard scope of delivery. Our technical details in the offer and order confirmation are decisive for the binding machine design.

Saurer Technologies GmbH & Co. KG
Twisting Solutions
Weeserweg 60
47804 Krefeld
Germany
T +49 2151 717 01
sales.twisting@saurer.com

Saurer Technologies GmbH & Co. KG
Twisting Solutions
Leonhardstrasse 19
87437 Kempten
Germany
T +49 831 688 0
sales.twisting@saurer.com

Saurer Hong Kong
Machinery Co. Ltd.
Room 2803-5, 28/f, The Center
99 Queen's Road Central
Central
Hong Kong
T +852 2866 0308
jackson.ye@saurer.com

Saurer (Jiangsu)
Textile Machinery Co., Ltd.
Shanghai Branch Company
36F, Tower B, The HQ, 100 Zunyi Road
200051 Shanghai
China
T +86 21 2226 2578
TWI.SH.CN@saurer.com

Saurer (Jiangsu)
Textile Machinery Co., Ltd.
No.9, Chang Yang Street
Suzhou Industrial Park, 215024
Jiangsu Province
China
T +86 512 8188 5688
info.TWI.CN@saurer.com

Saurer Inc.
8801 South Boulevard
Charlotte, NC 28273
USA
T +1 704 916 42 72
Twisting.USA@saurer.com
saurer.com