Wire & Cable Machinery GmbH
with Mathiasen Machinery, Inc. USA
machine-engineering for wire and cable industries
Mathiasen Machinery, Inc. is the South, Central and North American sales agent for WiCa

visit us online www.mathiasen-machinery.com
or write us mmi@mathiasen-machinery.com
about us

Introduction

We are an innovative, nationally as well as internationally orientated company and we are best known for our individuality and flexibility. Our developments base on long-year experience in the wire- and cable industries.

We are specialised in the following fields:

Wire ropes  
Cable  
Fibre optic

Our mission is to satisfy customers, continually improve quality, ensure positive growth, take responsibility for technological leadership in process engineering, design, manufacturing, implementation and service for our global customers.

Since we began business operation, the company has set standards in optimizing existing designs of stranding and extrusion processes not only for the cable industry, but also for very specialized applications for other industries.
product range

Overview

Complete cable and steel rope wire lines
Stranding Lines and Machines
Extrusion lines and Extruder
Cooling Troughs
Take-up’s / Pay-off’s / Respooler
Caterpillars and Capstans
Dancer and Accumulators
Binding Heads
Line Control

Additionally, we offer:

Service before, during, after Sales:

Start-up of Lines
Maintenance
Trouble Shooting
Teleservice and Customersupport
Consultation during Process-Engineering
Training programmes

We are at your disposal concerning solutions of special orders and special machines.
product range

Complete Lines

Stranding lines
SZ lines
Skip Stranders

Drum Twister
Rewinding line 1
Rewinding line 2

Automotive line
Extrusion line

Photos of preselected lines
product range

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Rewinding line 1

Automotive line
Extrusion line
Photos of preselected lines

Rewinding line 2
product range

Complete Lines

Stranding lines
SZ lines
Skip Stranders

Drum Twister
Rewinding line 1
Rewinding line 2

Automotive line
Extrusion line

Photos of preselected lines
product range

Complete Lines

Stranding lines
SZ lines
Skip Stranders

Drum Twister
Rewinding line 1
Rewinding line 2

Foam Skin line
Extrusion line

Photos of preselected lines

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**SZ - Stranding Machine**

Serves for the stranding of fiber optic cables, copper telephone cables, data cables, control cables and power cables.

WiCa’s SZ Strander has a superior design which allows it to flawlessly produce multi-stranded products. The stranding process can function either in a stand-alone function or can have an extrusion process incorporated in tandem for additional flexibility in production. WiCa’s design allows independent and complete control of each axis and thereby produces a perfect product.

**Versions**

**SZ - Strander Technology**
- Machine contains up to 15 individual positions.
- Increased machine longevity with minimal moving mechanical parts.
- Improved operation with increased visibility of product during production.

**SZ - Special features**
- High production rate line speed
- No back-twist of spools required
- Low-friction, low-tension stranding
- Easily achieves longer production lengths with WiCa’s design
- Efficiently integrated into existing lines
- Programmable to various sine and trapeze stranding models

**SZ - Single Position Advantage**
- Modular system: simple addition and removal of additional positions.
- Allows for optimal adaption to the customer product.
- Achieves the optimal reverse direction parameters.
- Reduces impact loads as low as possible through optimization critical geometries.

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**SZ - Stranding**

**SZ - Screening**
Steel Bow Stranding Machine

The steel bow strander is available for a bobbin range of 200mm to 1600mm with different bobbin numbers. The Skip Strander consists of solid welded frame and is completely closed.

The stranding rotor is built up from rotating hubs carrying the rotor parts (steel bows). These bows form the sinusoidal pathway for the wires from the individual reels to the stranding point.

Versions

- solid welded steel frame
- Monitoring of the bobbin closures by means of light beam
- wire break monitoring for all sectors
- disc brakes - pneumatically operated
- The machine is controlled by a PLC-control, which is located in the main cabinet together with the drive-converters, power-supply, fuses etc.
- Operation board which displays all necessary data: speed, line speed, laylength, production length etc.

Technical Data

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</thead>
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<td></td>
</tr>
<tr>
<td>max. rotation speed</td>
<td>5,000</td>
<td>rpm</td>
</tr>
</tbody>
</table>
Tubular Stranding Machine

serves for the stranding of steel, copper and aluminium wires as well as for insulated cores.

The tubular stranding machine is designed to accept DIN bobbins (46395 and 46397) with a range of 200mm to 630mm but **customer tailored versions** can also be used. The strander is available in different bobbin numbers.

**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>200 – 630</th>
<th>mm</th>
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</thead>
<tbody>
<tr>
<td>reels</td>
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<tr>
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<td>on demand</td>
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<tr>
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<td>2.800</td>
<td>rpm</td>
</tr>
</tbody>
</table>

**Versions**

The Tubular Stranding Machine consists of **bearing stands made of welded steel**. The tube is stored in a central bearing.

The cradles are **welded of steel and are held in completely closed ball bearings.**

Drums carried in pintles, both sides operating with compressed air.

The **cradle-swing protection** controlled by special sensors.

Brake System at Cradle:
- mechanical brake with diameter compensation
- mechanical- or electrical hysteresis brake with diameter compensation
- tension or torque regulation with electrical drive. Load cell at cradle or stranding point. Controllable with the main terminal in real time.
**product range**

Single Twist Bunching Machine

**Single-twist-bunching-machine**

is used for cable stranding, with 100% backtwist for twisting non-ferrous products like PVC, PE, PA, PUR, Hyrtel and LAN, cable category 6.

The machine is designed to accept DIN bobbins (46395 and 46397) from 500mm to 1600mm.

**Versions**

Solid welding construction

one frame for the stranding rotor – one frame with a traversing bobbin drive

Rotor and bobbin drive are frequency-controlled AC-motors.

*Traverser drive:*

three-phase AC-servo motor

The installed elevating platform for inserting the bobbin is controlled electrically.

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 1</th>
<th>Value 2</th>
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</thead>
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</tr>
<tr>
<td>max. rotation speed</td>
<td>1,000 rpm</td>
<td></td>
</tr>
</tbody>
</table>
Double Twist Stranding Line

The machine consists of a welded housing, the stranding rotor and the pneumatically operated pintles. Drives for stranding rotor and bobbin. The bobbin is loaded by means of electrically controlled lifting device.

Machines up to 1000mm reel size are equipped with a double capstan with additional drive, smaller machines are directly winding the cable on the reel without the need of a capstan.

Technical Data

<table>
<thead>
<tr>
<th>Reels</th>
<th>500 – 1,000</th>
<th>mm</th>
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</thead>
<tbody>
<tr>
<td>Max. Twists</td>
<td>6,000</td>
<td>tpm</td>
</tr>
</tbody>
</table>

Versions

- Welded housing
- The traversing unit is built up from a roll-ring gearing - infinitely variable step adjustment
- The lay-length control is built up from a digital electronic shaft.
- Lifting device - hydraulic
- The machine is controlled by a PLC-control, which is located in the main cabinet together with the drive-converters, power-supply, fuses etc.
- Operation board which displays all necessary data: speed, line speed, laylength, production length etc.
**Product Range**

**Planetary Stranding Machine**

Is used for stranding with **0-100 % backtwist**. Especially designed for stranding control cables and optical fiber cables as well as armouring steel and copper wires with backtwist.

The cradles are welded of steel and are held in completely closed ball bearings.

Spool size from 200mm up to 1000mm.

**Technical Data**

<p>| | | |</p>
<table>
<thead>
<tr>
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</thead>
<tbody>
<tr>
<td>reels</td>
<td>400 – 1,000</td>
<td>mm</td>
</tr>
<tr>
<td>reel numbers</td>
<td>on demand</td>
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</tr>
<tr>
<td>max. rotation speed</td>
<td>120</td>
<td>rpm</td>
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</tbody>
</table>

**Versions**

The Planetary Strander is adapted to the customers depending and can be built with hard-paper rollers or with two bearing stands.

The cradles are welded of steel and are held in completely closed ball bearings.

Drums carried in pinnles, both sides operating with an mechanical mechanisms.

Brake System at Cradle:

- mechanical brake with diameter compensation
- mechanical- or electrical hysterese brake with diameter compensation
- tension or torque regulation with electrical drive. Load cell at cradle or stranding point. Controllable with the main terminal in real time.
**Drum Twister**

serves for the stranding of steel, copper and aluminium wires as well as for insulated cores. Drum twister are mainly used for **power cables**.

Drum Twister can be used as pay-off or take-up with different spool sizes up to 2200mm.

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**Technical Data**

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<tr>
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</thead>
<tbody>
<tr>
<td>reels</td>
<td>200 – 2,200</td>
<td>mm</td>
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<tr>
<td>max. rotation speed</td>
<td>100</td>
<td>rpm</td>
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</table>

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**Versions**

The Tubular Stranding Machine consists of **bearing stands made of welded steel**. The tube is stored in a central bearing.

*The cradles are welded of steel and are held in completely closed ball bearings.*

Drums carried in pintles, both sides operating with compressed air

The **cradle-swing protection** controlled by special sensors.

Brake System at Cradle:
- mechanical brake with diameter compensation
- mechanical- or electrical hysterese brake with diameter compensation
- tension or torque regulation with electrical drive. Load cell at cradle or stranding point. Controllable with the main terminal in real time.
**Product Range**

**Respooler Unit**

Our various rewinding systems are designed according to customer requirements and they are used for rewinding different types of cables such as insulated wires, fibre optical cables, power cables...

The rewinding systems consist either of several single machines (take-up and pay-off) or are designed as a complete compact machine.

The respooler unit can be constructed with an dancer-control system, meter counter unit, measuring devices and so.

The machine can be designed for spools up to 3.000mm.

**Versions**

design of rewinding line according to customer request
solid frame construction
most modern technic used
on request fully reversible, automatic return after error detected from an measuring unit
Tension control with dancer: tension with weights on dancer arm or via pneumatic cylinder on touch panel adjustable
Tension control without dancer: Tension via torque of the drive in Newton on touch panel adjustable
**Dual Flyer Pay-off**

Distinguish itself by *robust construction* and *easy handling*.

The wire guiding funnel for the UAB 630 is made of *casting iron*, for the bigger machines of *sheet steel* with antinoise rotating.

Spool size from 630mm up to 1000mm.

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**Versions**

- Wire guiding funnel made of casting steel or sheet steel
- Reel carriages can be alternatively equipped with hydraulic or electric lifting device
- Fixed flyerring or driven flyerring with pole-changeable AC motor
- *Brake*: hysteresis brake or frequency-controlled AC motor

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**Technical Data**

<table>
<thead>
<tr>
<th>reels</th>
<th>630 – 1,000 mm</th>
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<tbody>
<tr>
<td>tension</td>
<td>on demand</td>
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</tbody>
</table>


**Pay-off with dancer**

especially developed for *glass-fibre tubes*, with a very compact design.

The pay-offs are constructed with an integrated dancer-accumulator *for lowest tensions*.

The winders are designed to accept DIN bobbins with a range of 500mm to 1250mm but *customer tailored versions* can be used.

---

**Versions**

Solid welding construction
Drums carried in pintles with individual and common adjustment – vertical or horizontal.
Safety cage according to German law for prevention of accidents or customers special requirements
Dancer especially for glass-fibre tubes with very low tensions

**bobbin drive:**
three-phase AC-helical-bevel gearbox motor

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**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>500 – 1,250</th>
<th>mm</th>
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<td><strong>reels</strong></td>
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<td><strong>Tension</strong></td>
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<td>N</td>
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<tr>
<td><strong>max. line speed</strong></td>
<td></td>
<td>on demand</td>
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</tbody>
</table>
Product Range

PAY-OFF: Driving Pay-off

Driving Pay-off

serves for the stranding of torsion-free cores with 0% - 110% backtwist.

With this kind of design we can reach speeds up to 1000rpm and Tension.

It is available in units of 4 pieces, 2 pieces or separately.

The driving pay-off is designed to accept DIN bobbins (46395 and 46397) with 500mm or 630mm.

Technical Data

<table>
<thead>
<tr>
<th></th>
<th>reels</th>
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<th>tension</th>
<th>max. rotation speed</th>
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<tbody>
<tr>
<td></td>
<td>500 - 630 mm</td>
<td>0 - 110%</td>
<td>5 - 100</td>
<td>1,000 rpm</td>
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</table>

Versions

- solid frame construction
- complete driven bobbin unit with swinging construction for easy loading and unloading the bobbins
- swivelling lifting device is installed.

- rotor drive
  - three-phase AC-servomotor with brake

- bobbin drive
  - three-phase AC-servomotor pneumatic disc brake
  - rotating dancer with tension sensor
product range

PAY-OFF : Driven Tangential Pay-off

**Driven Tangential Pay-off**

available as *single pay-off or double pay-off*

The tangential pay-off is especially suitable for flat line units – as they are dancer controlled and driven.

The tangential pay-off is constructed to increase output as required by demand.

The tangential pay-off is designed to accept DIN bobbins (46395 and 46397).

**Versions**

solid construction made of welded steel with driven bobbin axles and fast closing dancer controlled by weight with jockey pulleys and output pulleys

**bobbin drive**

frequency-controlled three-phase AC-servomotor with helical-bevel gearbox motor – mounted directly on bobbin axles.

A loading crane with a running gear (lengthways and crossways) can be attached on customer’s demand.

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**Technical Data**

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<tbody>
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<td>kg</td>
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<td>tension</td>
<td>on demand</td>
<td></td>
</tr>
<tr>
<td>max. linespeed</td>
<td>on demand</td>
<td></td>
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</tbody>
</table>
product range
PAY-OFF / TAKE-UP : Coil Winder

Coil winder
The winder is constructed to work on the one hand as a coil winder, on the other hand it may be used as a bobbing winder with traverse.
The winding unit is designed to 90° swivelling.

Versions
solid frame construction with a winding disc, which is 90°-swinging and mounted on the driving unit

winding disc drive
three-phase AC-helical-bevel gearbox motor

Traverse
rolling ring drive – swinging (90°), right or left-running

Technical Data

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<th>max. ring diameter</th>
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<tr>
<td>max. linespeed</td>
<td>on demand</td>
<td></td>
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</tbody>
</table>
**Product Range**

**PAY-OFF / TAKE-UP: Arm Winder**

**Arm Winder**

With solid frame construction. The machine can be used as take-ups and pay-offs.

They are used especially in **SZ Stranding lines, Planetary Stranding lines and Rewinding lines**.

The take-ups are designed with traversing or with an integrated traversing unit.

The pay-offs are designed with bobbin drive or with disc brake.

The winders are designed to accept DIN bobbins (46395 and 46397), but **customer tailored versions** can be used.

**Technical Data**

<table>
<thead>
<tr>
<th>Reels</th>
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<td>kg</td>
</tr>
<tr>
<td>Tension</td>
<td>on demand</td>
<td></td>
</tr>
<tr>
<td>Max. linespeed</td>
<td>on demand</td>
<td></td>
</tr>
</tbody>
</table>

**Versions**

Solid welding steel construction

Pintles in arms, which can be adjusted by means of screw jack building block systems

Width adjusting of the pintles by means of spindle and gearbox

Each arm can be moved along a steel tube in order to load various bobbin widths

Ball bearing pintles

Bobbin Drive: By a straight gearbox – driving plate and driving pin mounted directly on the pintle shaft

**Pay-offs:**

Driven bobbin: three-phase AC-gearbox motor

Bobbin without drive: disc brake

**Take-ups:**

Three-phase AC-gearbox motor

Traverser drive: electrical traverser drive or rolling drive
**Box Winder**

with solid frame construction. The **take-ups and pay-offs** are qualified for high-speed winding. They are used especially in **extrusion lines and cable coverings plants**.

The winders are designed to accept DIN bobbins (46395 and 46397), but **customer tailored versions** can be used.

**Versions**

solid welding steel construction

The pintles operate electrically with individual and common adjustment.

The installed elevating platform is driven by a screw jack building block system.

Safety cage according to German law for prevention of accidents or customers special requirements.

**Pay-offs:**

-driven bobbin: three-phase AC-gearbox motor

bobbin without drive: disc brake

**Take-ups:**

three-phase AC-gearbox motor

**Traverser drive:** electrical traverser drive or rolling drive

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**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>400 – 630</th>
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<td></td>
</tr>
<tr>
<td>max. linespeed</td>
<td>on demand</td>
<td></td>
</tr>
</tbody>
</table>
**Portal Winder**

combine the advantage of drum loading and unloading from either side with the advantage of a space saving design.

They can be used as *take-ups and pay-offs* in rewinding lines as well as in every stranding line.

The traversing winders are moving on rails, which lay on the ground.

The winders are designed to accept DIN bobbins (46397 and 46395), but *customer tailored versions* can be used.

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**Versions**

Solid steel profile construction

Drums carried in pintles with individual and common adjustment – vertical or horizontal.

Safety cage according to German law for prevention of accidents or customers special requirements.

**Pay-offs:** disc brake or three-phase AC helical-bevel gearbox motor

Self Movement Unit

**Take-ups:** three-phase AC helical-bevel gearbox motor gearbox

*Traverser drive:* three-phase AC-servo motor

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**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>630 – 3.000</th>
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<tr>
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<td>on demand</td>
<td></td>
</tr>
</tbody>
</table>

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PAY-OFF / TAKE-UP: Hanging Winder

**Hanging Winder**

available as *stationary portal winding stands* for a bobbin diameter up to 3200 mm and a max. bobbin weight up to 25 tons.

The winders are fixed on the ground by a frame; the traversing pintle-arms are moving on rails.

The winders are designed to accept DIN bobbins (46395 and 46397), but *customer tailored versions* can be used.

**Advantage:** bobbins of any size can be loaded directly from ground.

**Versions**

- Solid steel frame construction
- Drums carried in pintles with individual and common adjustment – vertical or horizontal.
- Safety cage according to German law for prevention of accidents or customers special requirements.

**Pay-offs:**
- *driven bobbin:* three-phase AC gearbox motor
- *bobbin without drive:* disc brake

**Take-ups:**
- *Pintle gearbox:* three-phase AC gearbox motor
- *Traverser drive:* three-phase AC-servo motor

**Technical Data**

<table>
<thead>
<tr>
<th></th>
<th>1.600 – 3.000</th>
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<tbody>
<tr>
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<td></td>
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<tr>
<td>tension</td>
<td>on demand</td>
<td></td>
</tr>
<tr>
<td>max. linespeed</td>
<td>on demand</td>
<td></td>
</tr>
</tbody>
</table>
### Extruder for all applications

**Application-tailored extruder** The series comprises machine sizes with screw diameters of 20, 30, 45, 60, 75, 90, 120 and 150 mm. Different versions are available with alternative gear ratios, driving powers and torques so that an optimised specification with maximum efficiency can be offered for a particular application.

**Output capacities** Our Extruder cover an extremely wide range of output capacities. These are from 1,5 kg/h for the production of skin with low speed smooth-bush extruders to over 900 kg/h for the production of HDPE with grooved-bush sheathing extruders.

**Functionality and Design** Optimal functionality and perfect design are central tasks to resolve by our team when they innovate and engineer the machines. The features following from these guiding principles are good accessibility, easy maintenance and minimised floor space requirements.

### Versions and Technical Data

<table>
<thead>
<tr>
<th>Version</th>
<th>Specification</th>
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<tbody>
<tr>
<td>25 D Extruder</td>
<td>Standard</td>
</tr>
<tr>
<td>30 D Extruder</td>
<td>High Output</td>
</tr>
<tr>
<td>Co-Extruder</td>
<td><strong>Series 32</strong></td>
</tr>
</tbody>
</table>

### Auxiliary Extruder Equipment

Screws, Hopperloader, Mixing Station,...
Multipass Cooling Trough

The Multipass Cooling Trough is built according to a modular construction principle enabling later rebuilding and extension.

The product is cooled by spraying and is guided across height adjustable sliding plates.

Versions

- Stainless steel construction
- Modular construction
- Water flow controlled by manually adjusted valves
- Product is repeatedly wrapped around the deflection pulleys under a common housing
- Covering plate is opened/closed by means of helical bevel gearbox. The product is cooled via spray cooling.

Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
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<tr>
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</table>
**Multipass Cooling Trough**

The Multipass Cooling Trough is built according to a modular construction principle enabling later rebuilding and extension.

The product is cooled by spraying and is guided across height adjustable sliding plates.

**Versions**

- Stainless steel construction
- Modular construction
- Water flow controlled by manually adjusted valves
- Product is repeatedly wrapped around the deflection pulleys which are located under two separate housings
- Covering plate is opened/closed by means of helical bevel gearbox. The product is cooled via spray cooling.

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. cable diameter</td>
<td>35 mm</td>
</tr>
<tr>
<td>cooling length</td>
<td>80 m</td>
</tr>
<tr>
<td>construction length</td>
<td>ca. 10 m</td>
</tr>
<tr>
<td>deflection pulley dia.</td>
<td>500 / 630 mm</td>
</tr>
</tbody>
</table>
product range

Cooling Trough

Cooling Trough

The Cooling Trough is built according to a modular construction principle enabling later rebuilding and extension.

The construction includes a straight Cooling Trough and a moveable telescopic Cooling Trough with a circulation tank to cool the product down.

Technical Data

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>max. cable diameter</td>
<td>35</td>
<td>mm</td>
</tr>
<tr>
<td>cooling length</td>
<td>on demand</td>
<td></td>
</tr>
<tr>
<td>construction length</td>
<td>on demand</td>
<td></td>
</tr>
</tbody>
</table>

Versions

Stainless steel construction
modular construction
Water flow controlled by manually adjusted valves

Moveable telescopic Cooling Trough
moving done by hand wheel
Tank with water drain connected with cover and insulation

Heatable circulation tank
200 litres Content
Heating element with 9 kW power
Temperature control system
**product range**

**CAPSTAN : Capstan with dancer**

**Capstan with dancer**

The capstan is constructed with *idler pulleys* and installed *dancer-controls*. It is used preferably in *extrusion lines*.

**Versions**

- solid welding construction with integrated bearing of capstan wheel
- dancer-control
- pressing tape
- input pulleys
- output pulleys
- *capstan wheel drive*
  - three-phase AC-helical-bevel gearbox motor

**Technical Data**

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>wheel diameter</td>
<td>500 – 1,000</td>
<td>mm</td>
</tr>
<tr>
<td>tension</td>
<td>5 - 50</td>
<td>N</td>
</tr>
<tr>
<td>max. line speed</td>
<td>700</td>
<td>m/min</td>
</tr>
</tbody>
</table>

*Wica* 2018
product range
CAPSTAN : Double Wheel Capstan

Double Wheel Capstan

The machine with the simple design is very robust. It is equipped with 2 wheels, which are driven by 1 or 2 motors.

Double wheel capstan is used preferably in stranding lines.

Versions
solid robust welding construction
easy handling
two hardened disc with 7 grooves (Standard)
suitable for high tensile force

On request the 2 motor variant can also be executed redundantly. In case of a failure of a drive, the line can still produce with the second drive.

Technical Data

<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>wheel diameter</td>
<td>500 – 2.500</td>
<td>mm</td>
</tr>
<tr>
<td>max. pulling force</td>
<td>180.000</td>
<td>N</td>
</tr>
<tr>
<td>max. line speed</td>
<td>700</td>
<td>m/min</td>
</tr>
</tbody>
</table>
product range
CAPSTAN : Belt Caterpillar

**Belt Caterpillar**

These caterpillars distinguish itself with robust construction, easy handling and very safe operation.

The number of clamping pulleys ensures you producing with constant tension force and a careful product treatment.

The caterpillar can be used as Thrust or Tractive Unit.

**Versions**

- robust construction and careful product treatment
- No deflection of the product
- easy handling
- pressing and clamping pneumatically
- pressure adjustable infinitely
- adjustable guiding rollers on input and output side
- electrically locked protective hoods
- 2 driving motors (1 motor above belt, 1 motor under belt)

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. cable diameter</td>
<td>130 mm</td>
</tr>
<tr>
<td>max. pulling force</td>
<td>16,000 N</td>
</tr>
<tr>
<td>max. line speed</td>
<td>on demand</td>
</tr>
</tbody>
</table>
**Single or Double Central Cross Binder**

The single binder are designed for locking stranded cables with industrial yarns or narrow tapes with constant tension.

Especially developed for binding telephone cables or glass fibre cables with a core wire.

*The cross binder or double central binder is constructed for SZ Stranding lines. The advantage of this binder is, that it binds both yarns right after the SZ.*

<table>
<thead>
<tr>
<th>Technical Data</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>bore diameter</td>
<td>75 / 95</td>
<td>mm</td>
</tr>
<tr>
<td>outside diameter</td>
<td>250 / 280</td>
<td>mm</td>
</tr>
<tr>
<td>tension</td>
<td>3 - 30</td>
<td>N</td>
</tr>
<tr>
<td>max. rotation speed</td>
<td>4.000</td>
<td>rpm</td>
</tr>
</tbody>
</table>

**Versions**

- robust construction
- high operation speed
- the required **binding pull** is kept **constant** through the whole diameter. (Diameter control with dynamic frictional compensation)
- Thread end is controlled by an **optic electronic unit** and thread break is detected by means of a special **Software**.
- The binding head is driven by an frequency regulated three-phase motor.
- The binding head is stopped in case of emergency by a pneumatic disk brake.
Copper-Tape Binder

The Copper-Tape Binder is designed for the sheathing of shielded cables with copper material. To wrap around with copper has the advantage that the shield is tied and at the same time electrically connected by the copper strip.

This binder is mostly used in shielding systems.

Technical Data

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>reel diameter</td>
<td>500 / 630</td>
<td>mm</td>
</tr>
<tr>
<td>reel bore</td>
<td>127</td>
<td>mm</td>
</tr>
<tr>
<td>tension</td>
<td>on demand</td>
<td></td>
</tr>
<tr>
<td>max. rotation speed</td>
<td>1,200</td>
<td>rpm</td>
</tr>
</tbody>
</table>

Versions

The Copper-Tape consists of a solid welded design. This solid frame contains the bearing unit of the main cantilever shaft, which takes up the reel and the flyer unit. The reel is driven by a friction disc.

The flyer consist a disc, guiding rods and a ring. There are adjustable rollers, which guide the tape to the binding point.

The Binder can be used in S or Z direction to ensure a direct binding at the stranding point.

The tension control of the material is done via direct motor load control of the reel drive with compensation of the reel diameter.

Contact free proximity switch for tape end and tape break.

A quick stop in case of an emergency-stop is done by a pneumatically operated disc brake.
Central-Tape Binder

The Central-Tape Binder is constructed for the bonding resp. the covering of cables with different materials such as foils of plastic, tapes of aluminium, tapes of copper or paper.

The central taping head design has the advantage that very high speeds can be reached.

Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>tape diameter</td>
<td>500 / 600</td>
<td>mm</td>
</tr>
<tr>
<td>tape hole</td>
<td>76 / 95</td>
<td>mm</td>
</tr>
<tr>
<td>tension</td>
<td></td>
<td>on demand</td>
</tr>
<tr>
<td>max. rotation speed</td>
<td>2,000</td>
<td>rpm</td>
</tr>
</tbody>
</table>

Versions

The tape reel is taken up on an overhung shaft, the driving is made by an expanding holding sleeve.

The plate with the guiding rollers is driven by a frequency regulated three-phase motor. The tension of the tape is regulated by a hysteresis brake with diameter compensation or a cord brake with a spring.

In case of "EMERGENCY STOP" the taping head is stopped by a pneumatic disc-brake, which also works as "stay" brake. For the placing of the taping head there is no basis necessary, the machine has to be fixed by special dowels. The taping head is maintenance-free, all antifriction-bearings are lubricated for lifespan. Once a year, in case of single shift operation, all brake linings and the cord of the mechanical brake should be checked.
Tangential-Tape Binder

The Tangential-Tape Binder is constructed for the bonding, resp. the covering of cables with different materials such as foils of plastic, tapes of aluminium, tapes of copper and paper.

The great advantage of this machine is that two coils can be used. When using the same materials the double linespeed can be reached.

The binder is ideally suited for tapping of water block tapes.

Technical Data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value 1</th>
<th>Value 2</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>tape diameter</td>
<td>500</td>
<td>600</td>
<td>mm</td>
</tr>
<tr>
<td>tape hole</td>
<td>76</td>
<td>95</td>
<td>mm</td>
</tr>
<tr>
<td>tension</td>
<td>on demand</td>
<td></td>
<td></td>
</tr>
<tr>
<td>max. rotation speed</td>
<td>800</td>
<td></td>
<td>rpm</td>
</tr>
</tbody>
</table>

Versions

- robust construction
- high operation speed
- The tapes are decelerated by two separate hysteresis brakes
- Constant tape tension independently of hobbin diameter and rotating speed
- Tape break alarm included
- Easy threading
- The rotor is driven by a frequency-controlled three-phase AC motor
- The rotor disc is stopped in case of emergency by a pneumatic disc brake
**Product Range**

**Kevlar Binding Head**

**Kevlar Binding-head**

Especially developed for binding **telephone cables** or **glass-fibre cables** with a kevlar cable.

The kevlar binding head is constructed for various **cops on customer's demand**.

**Versions**

Solid welded gearbox housing with a frame, on which the bearing housing and the protective hoods are mounted.

The cops are decelerated by a hysteresis brake.

The rotor is driven by a frequency-controlled three-phase AC-gearbox motor.

The rotor disc is stopped in case of emergency by a pneumatic disc brake.

**Technical Data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. number of cops</td>
<td>24</td>
</tr>
<tr>
<td>Max. cops diameter</td>
<td>280 mm</td>
</tr>
<tr>
<td>Tension range</td>
<td>1.5 - 30 N</td>
</tr>
<tr>
<td>Max. rotation speed</td>
<td>300 rpm</td>
</tr>
</tbody>
</table>