

Machines and services for  
the wire industry

# **schmidt**

Maschinenbau GmbH  
Machines for the wire industry

## TAKE UP SERIES

Advice

Engineering

Design work

Machinery delivery

Commissioning

Training

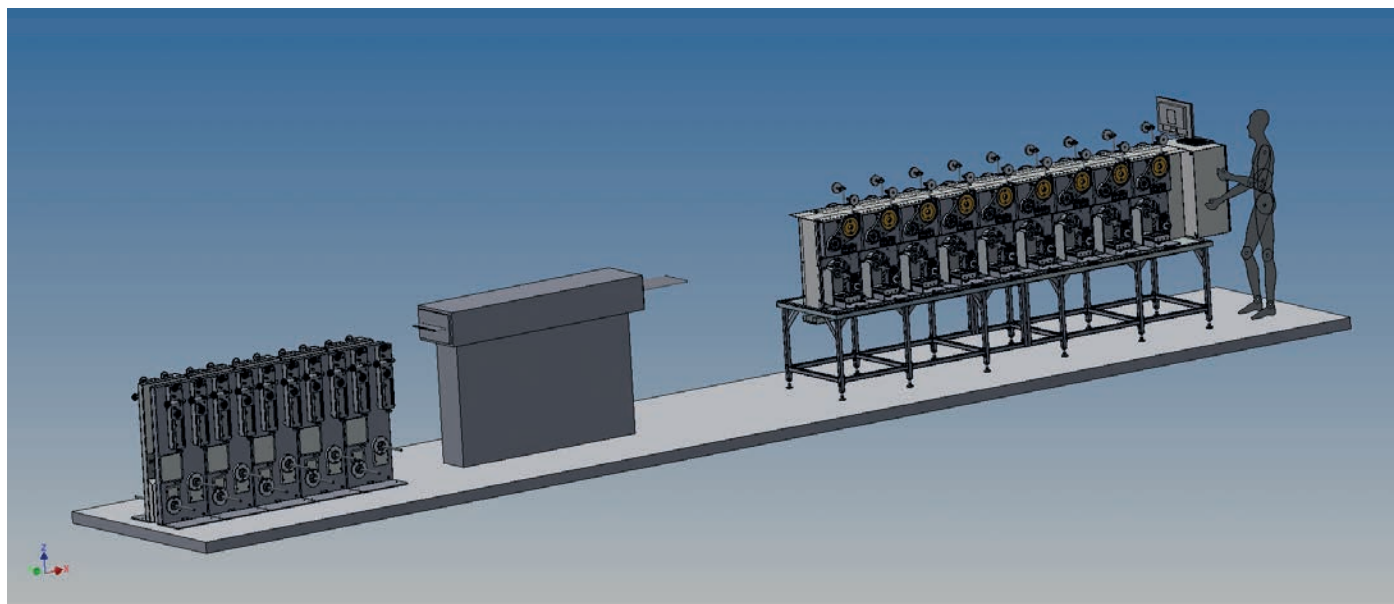


*specialized for  
powerful solutions*

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Maschinenbau GmbH  
Machines for the wire industry

After the drawing process, the wire needs to anneal in order to achieve the requested material properties. Schmidt has developed a wide range of sophisticated state-of-the-art take-ups for this kind of annealing processes. The modular line concept gives the opportunity to define the machine capabilities in accordance to the actual need.



## **FEATURES AND BENEFITS**

- Traversing spool for best spooling results
- Spooling tension measurement and control for supervised quality
- Supervision of all controlled values, with trend feature and historical data
- Modular design, each line comes with its own control and operation panel
- Optimal design with minimal wire bending
- Low energy consumption due to modern stepping motor drives
- Scalable units for different wire ranges

### **Take Up Series SM**

	Wire diameter range	Speed	Spool flange Ø max.	Spool weight max.	Spool shaft Ø	Traverse width	Spooling tension min.	Spooling tension max.
	mm	m/min	mm	kg	mm	mm	cN	cN
SM36	0,01 bis 0,08	300	125	6	16	180	3	30
SM33w	0,03 bis 0,1	200	160	14	16	180	40	400
SM33	0,05 bis 0,12	180	200	25	16	180	90	900
SM33s	0,08 bis 0,6	150	250	40	22	260	750	7500
SM30	0,5 bis 0,8	60	400	90	22	250	500	10000





FINE WIRE TAKE-UP

## Type SM36

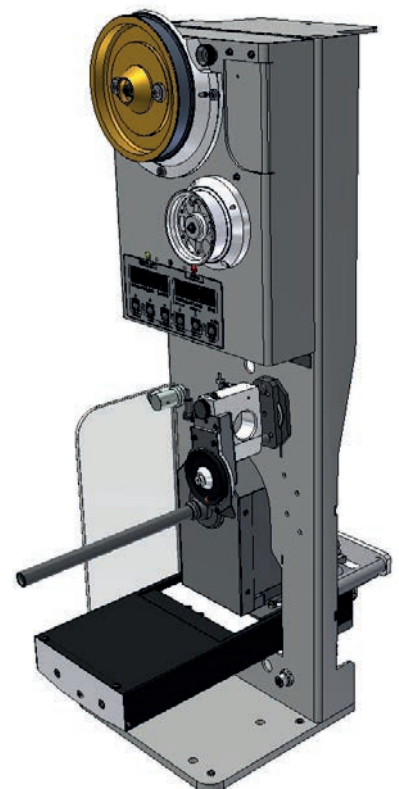
Wire diameter

From **0.01** to **0.08** mm (.0004" to .0032")

### FEATURES AND BENEFITS

Annealing take-up designed for ultra-fine wire 10 µm to 80 µm.  
production speed up to 300 m/min.

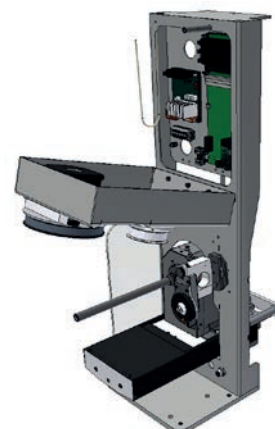
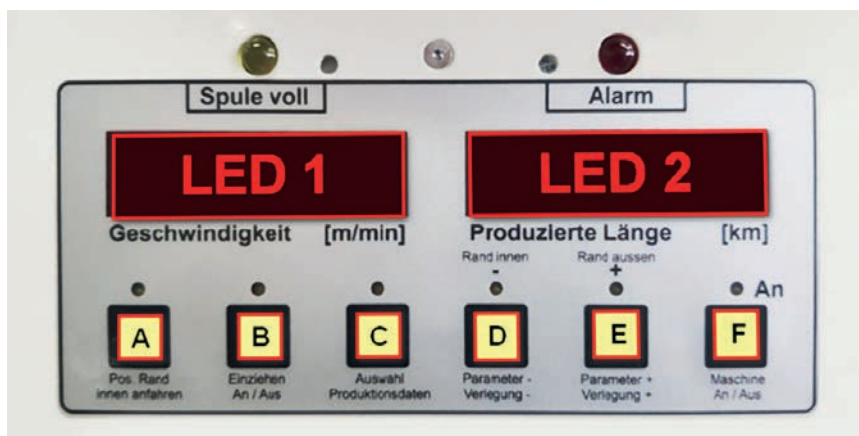
- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley adjustable for easy centring of the spooling
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 16 mm (.63"), spool adapter for spool type HK100 and HK130
- Spooling tension controlled and supervised via tension-measurement device at guiding pulley
- Adjustment of spooling tension by inductive clutch, range 3 – 30 cN
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED



### DESIGN

- All electrical parts easily accessible via front flap
- Use of maintenance free parts only
- Units can be grouped to requested number of lines
- Controller cards accessible by network from central PC with HMI

	Housing width	Capstan Ø	Spreader disc Ø
	mm	mm	mm
SM36	250	135	68



## FINE WIRE TAKE-UP

# Type SM33(w)

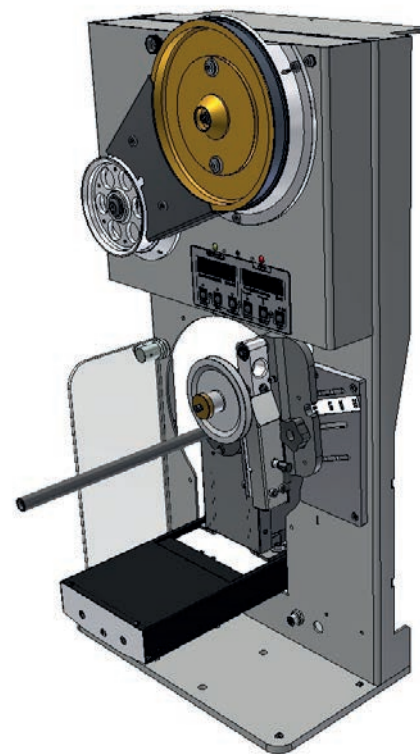
Wire diameter

From 0.03 to 0.12 mm (.0012" to .0047")

## FEATURES AND BENEFITS

Annealing take-up designed for ultra-fine wire 30 µm to 120 µm.  
production speed up to 200 m/min.

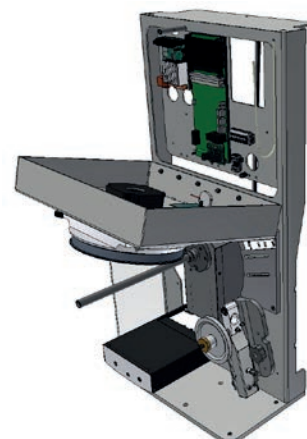
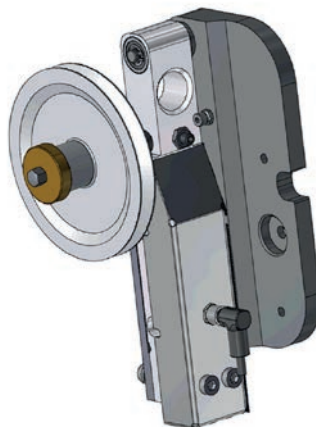
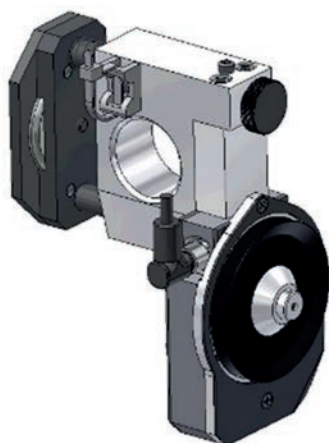
- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley adjustable for easy centring of the spooling
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 16 mm (.63"), spool adapter for spool type up to DIN 160
- Spooling tension controlled and supervised via tension-measurement device at guiding pulley
  - Type SM33 for tension range 90 to 900 cN
  - Type SM33(w) for tension range 40 to 400 cN
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED



## DESIGN

- All electrical parts easily accessible via front flap
- Use of maintenance free parts only
- Units can be grouped to requested number of lines
- Controller cards accessible by network from central PC with HMI

	Housing width	Capstan Ø	Spreader disc Ø
	mm	mm	mm
SM33w	400	191	110
SM33	400	191	110







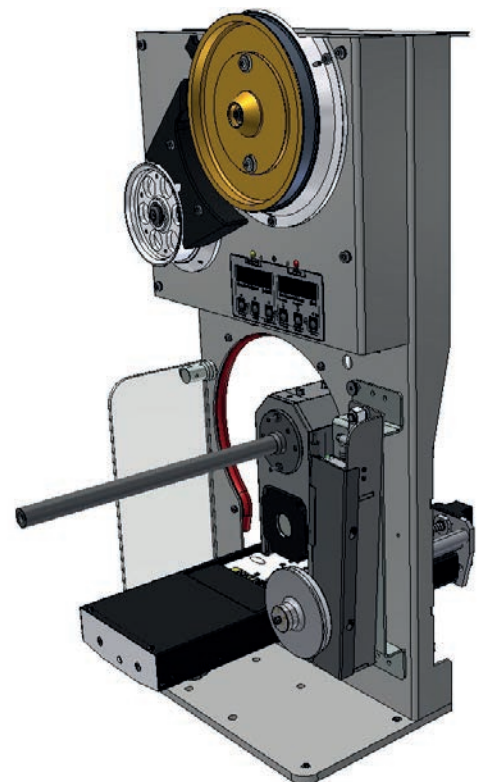
# FINE WIRE TAKE-UP Type SM33s

Wire diameter  
From 0.08 to 0.6 mm (.0035" to .024")

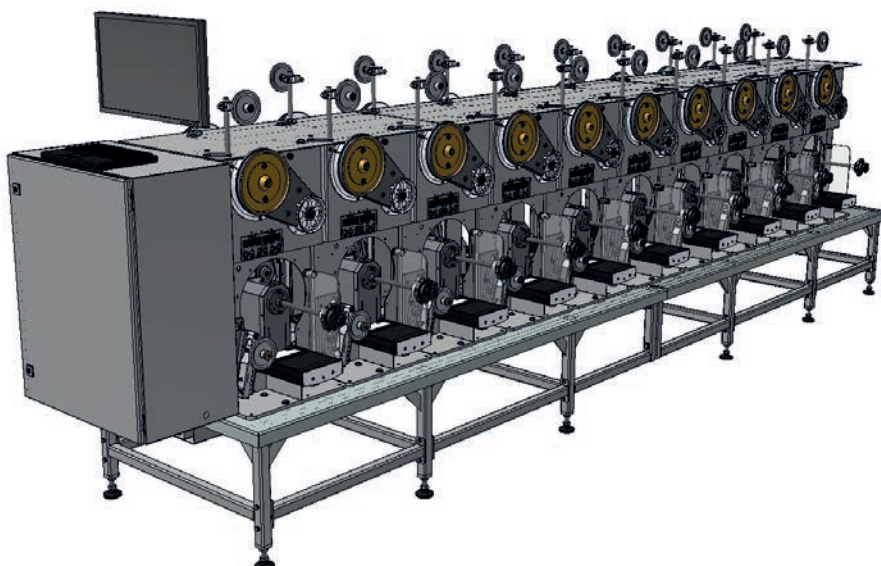
## FEATURES AND BENEFITS

Annealing take-up designed for ultra-fine wire 0,08 mm to 0,6 mm. Production speed up to 150 m/min.

- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley adjustable for easy centring of the spooling
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 22 mm (.86"), spool adapter for spool type up to DIN 250
- Spooling tension controlled and supervised via tension-measurement device at guiding pulley
- Adjustment of spooling tension by torque-controlled servo drive, range 750 - 7500 cN
- Pneumatic dancer with linear movement
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED



	Housing width	Capstan Ø	Spreader disc Ø
	mm	mm	mm
SM33s	400	191	110



## ANNEALING TAKE-UP

# Type SM30

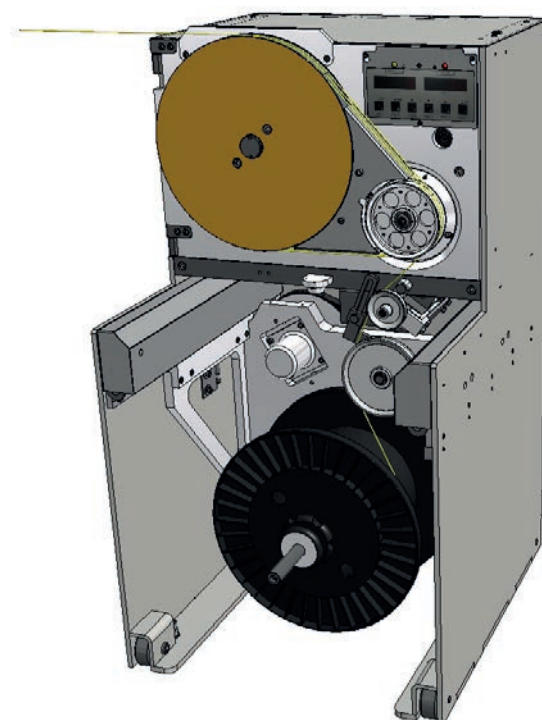
Wire diameter

From **0.5** to **1.8** mm (.02" to .07")

## FEATURES AND BENEFITS

Annealing take-up designed for fine wire 0,5 mm to 1,8 mm.  
Production speed up to 60 m/min.

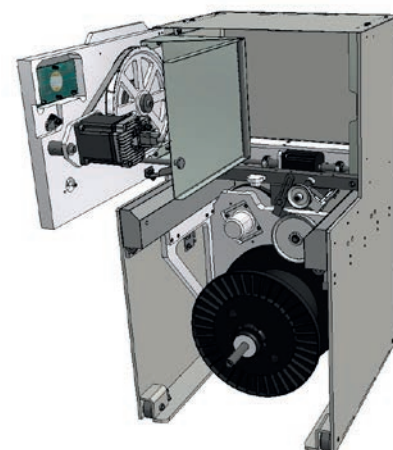
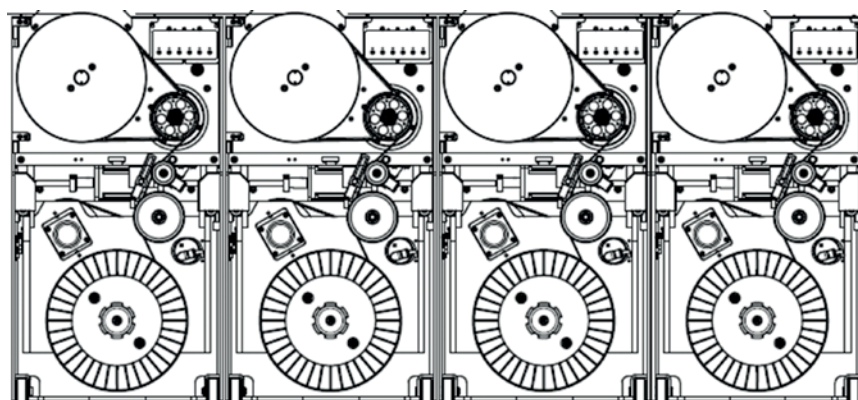
- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley adjustable for easy centring of the spooling
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 22 mm (.86"), spool adapter for spool type up to DIN 400
- Spooling tension controlled and supervised via tension-measurement device at guiding pulley
- Adjustment of spooling tension by torque-controlled servo drive, range 500 – 10,000 cN
- Pneumatic dancer with linear movement
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED



## DESIGN

- All electrical parts easily accessible via front flap
- Use of maintenance free parts only
- Spool remove by pallet truck
- Units can be grouped to requested number of lines
- Controller cards accessible by network from central PC with HDMI

	Housing width	Capstan Ø	Spreader disc Ø
	mm	mm	mm
SM30	530	318	100







# Central user interface

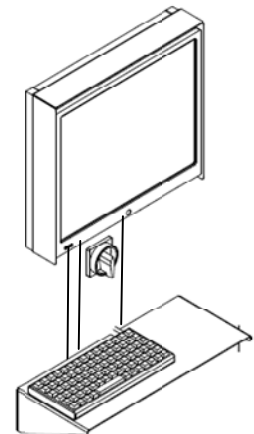
Flat screen 19"

Network bus cable connection to all take-ups

Data storage on hard disc

Ethernet connection to factory LAN

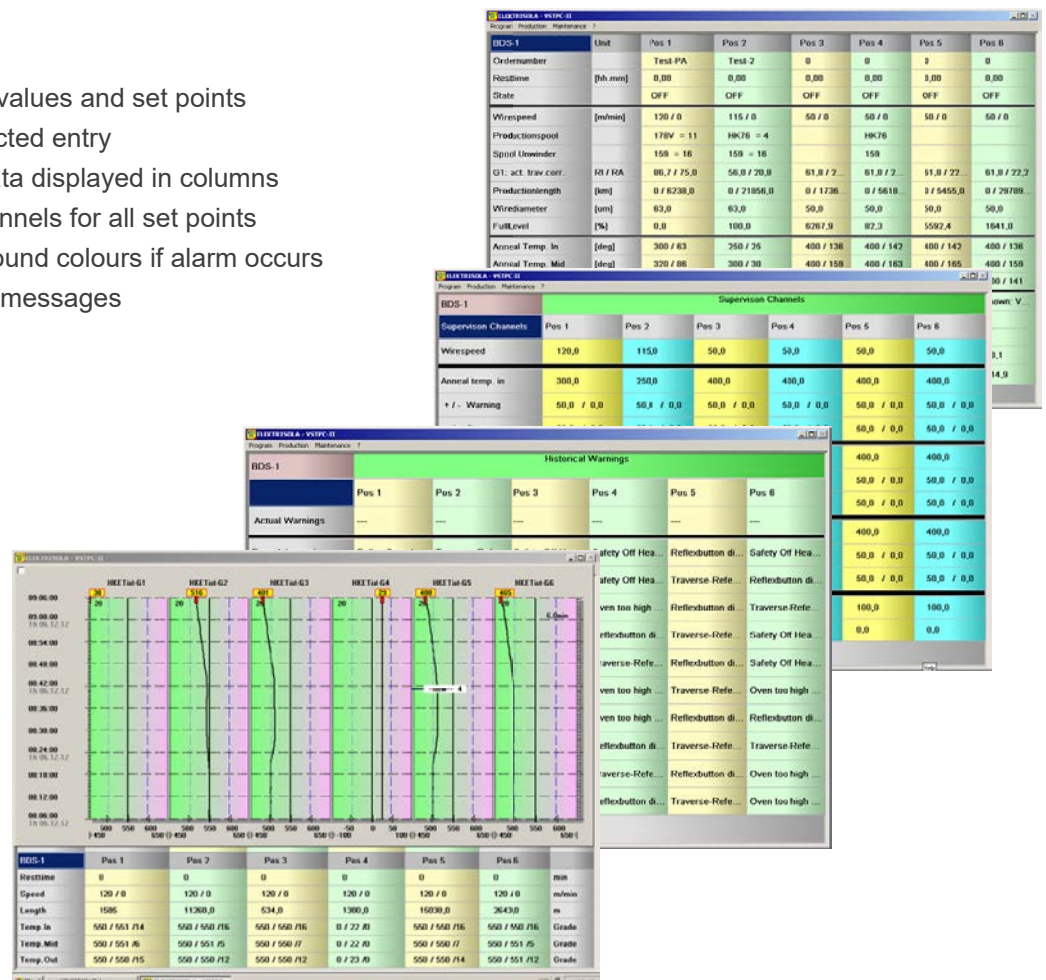
Software can be customized to any take-up configuration



## FEATURES AND BENEFITS

### Operator screen

- Show all actual values and set points
- Password protected entry
- Each take up data displayed in columns
- Supervision channels for all set points
- Change background colours if alarm occurs
- Historical alarm messages
- Trend feature



# Double spooler

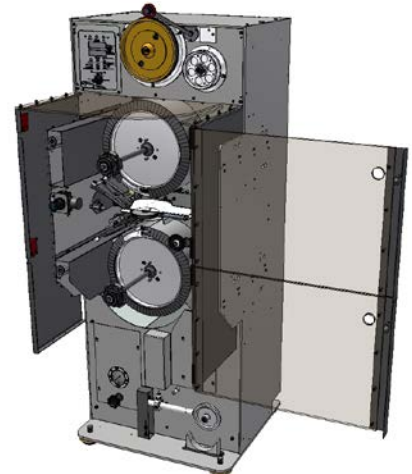
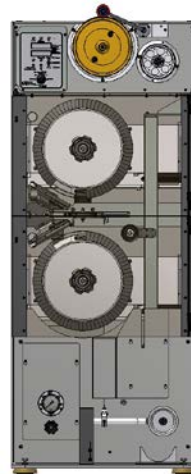
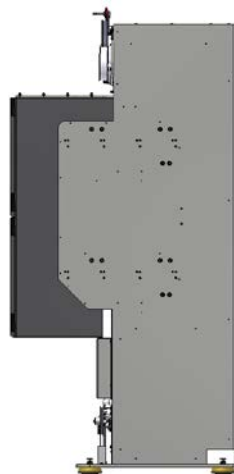
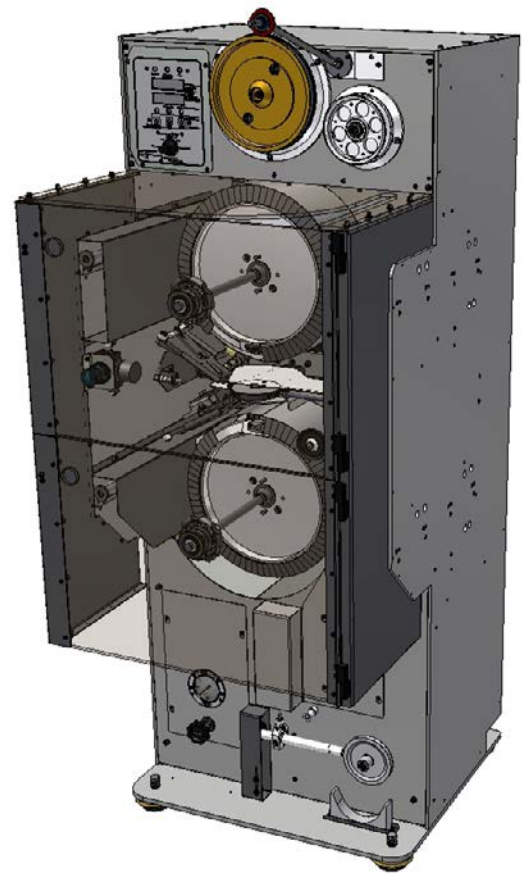
Wire diameter

From **0.08** to **0,12** mm (.0031" to .0047")

## TYPE SM33-DS

Annealing take-up with automatic spool changer, designed for ultra-fine wire 0.08 mm to 0.12 mm. Production speed up to 180 m/min. Spool change will take place automatically when spool is full. Spool must take off by hand.

- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley adjustable for easy centring of the spooling
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 22 mm (.86"), spool adapter for spool type up to DIN 250
- Spooling tension controlled and supervised via pneumatic dancer
- Adjustment of spooling tension by torque-controlled servo drive, range 30 - 2500 cN
- Automatic spool change-over when spool is full
- Spool take-out by hand, single protection flaps to spooler bay
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED







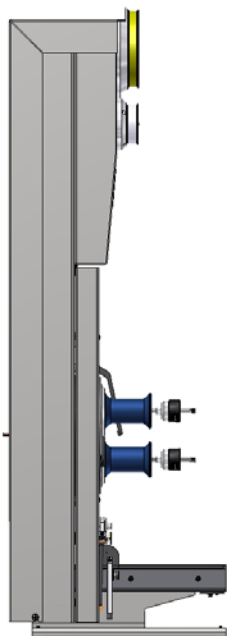
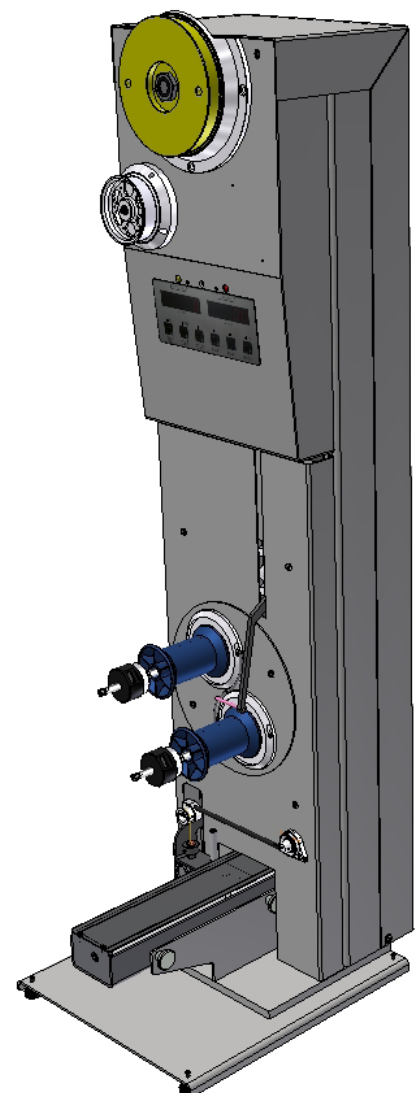
# Double spooler

Wire diameter  
From **0.01** to **0.08** mm (.0004" to .003")

## TYPE SM36-DS

Annealing take-up with automatic spool changer, designed for ultra-fine wire 10  $\mu$ m to 80  $\mu$ m. Production speed up to 300 m/min. Spool change will take place automatically when spool is full. Spool must take off by hand.

- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing, guiding pulley
- Both spool rims adjustable by operation panel buttons
- Spooler shaft  $\varnothing$  10 mm (.4"), spool adapter for spool type up to 100 mm, cylindrical and biconical
- Spooling tension controlled and supervised via spring actuated dancer, range 5 - 30 cN
- Automatic spool change-over when spool is full
- Spool take-out by hand
- Low energy consumption, safety voltage 48 V only
- Single-line microcontroller card; local operation by built-in panel with 2 digital displays and 6 buttons, 2 Alarm LED





# PAY OFF

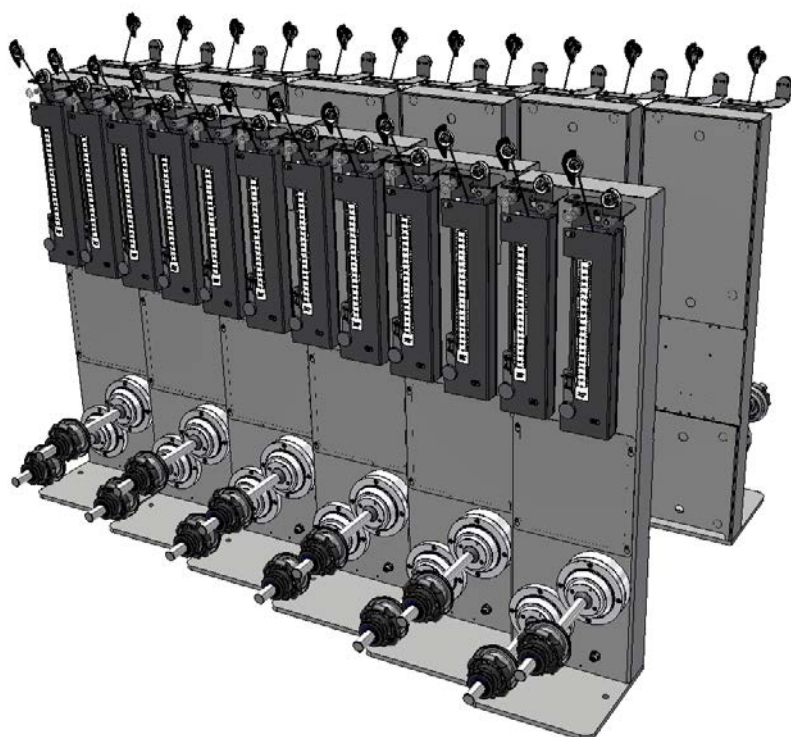
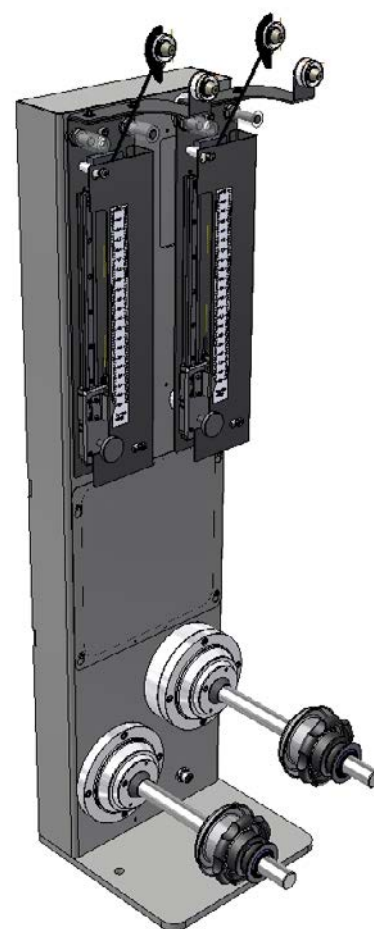
Wire diameter

From **0.01** to **0.08** mm (.0004" to .003")

## DOUBLE PAY OFF TYPE UW210, FOR TAKE UP SM36

Controlled pay off, designed for ultra-fine wire 10  $\mu$ m to 80  $\mu$ m.  
Production speed up to 300 m/min. Fixed offset to apply the annealing tubes distances.

- Two pay off units combined in one housing
- Spool shaft diameter 16 or 22 mm, direct driven by stepping motor
- Spool flange diameter up to 130 mm
- Pay off spooling force adjustable by spring actuated dancer to 0.5 – 10 cN
- Low energy consumption, safety voltage 48 V only
- Each spooler with own microcontroller
- Stop button to shut down the line
- Housing can be grouped to desired number of lines







# PAY OFF

Wire diameter  
From **0.03** to **0.6** mm (.0012" to .023")

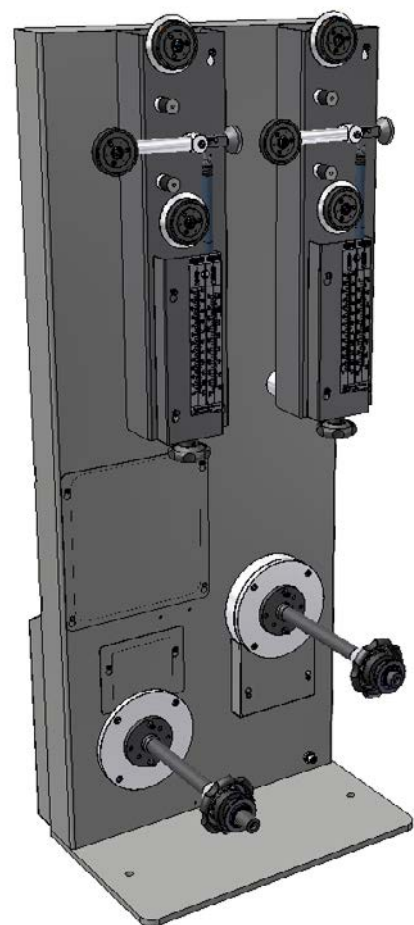
## DOUBLE PAY OFF TYPE UW2-800, FOR TAKE UP SM33

Controlled pay off, designed for fine wire 0.03 mm to 0.6 mm. Production speed up to 200 m/min. Fixed offset to apply the annealing tubes distances.

- Two pay off units combined in one housing
- Spool shaft diameter 16 or 22 mm, direct driven by stepping motor
- Spool flange diameter up to 250 mm
- Pay off spooling force adjustable by spring actuated dancer

Tension ranges:

- range #1: 30 – 90 cN
- range #2: 50 – 150 cN
- range #3: 50 – 500 cN
- range #4: 80 – 800 cN
- Low energy consumption, safety voltage 48 V only
- Each spooler with own microcontroller
- Stop button to shut down each single line
- Housing can be grouped to desired number of lines





## ANNEALING TAKE-UP

# Series SD

These take ups are designed heavy-duty for polluted environment, using industrial standards like Siemens S7-1200 PLC for controlling and supervision of the line. Other performance features are comparable with the SM series.



## FEATURES AND BENEFITS

- Annealing take-up designed for double sided lines
- Modular design for any number of annealing tubes
- Each module with own PLC for best plant certainty
- Traversing spool for best spooling quality
- Spooling tension controlled and supervised for optimal product quality
- PLC and other electrics protected in switchboard cabinets
- Low energy consumption, safety voltage 48 V only
- Three modules for different application

### Take Up Series SD

	Wire diameter range	Speed	Spool flange Ø max.	Spool weight max.	Spool shaft Ø	Traverse width	Spooling tension min.	Spooling tension max.
	mm	m/min	mm	mm	mm	mm	cN	cN
SD20/15	0,1 bis 0,35	100	200	76	15	180	150	1500
SD20/65	0,2 bis 0,65	100	250	100	20	180	400	4000
SD20/85	0,3 bis 1,0	60	355	100	20/35	180	500	5000





## ANNEALING TAKE-UP

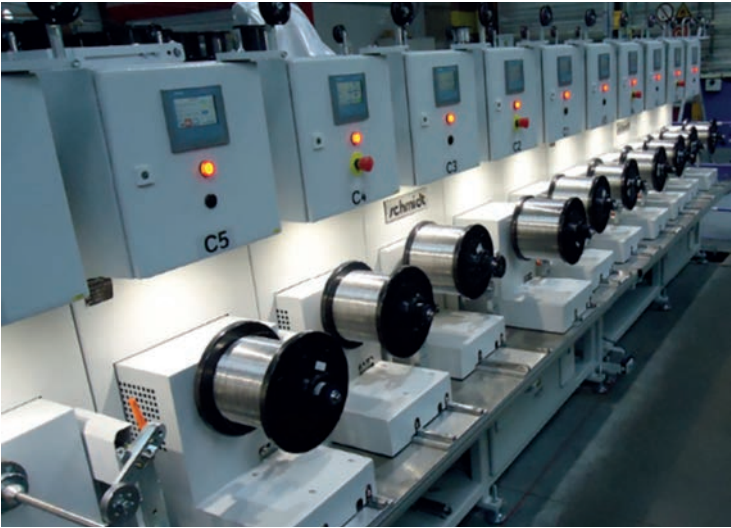
# Series SD20/xx

Wire diameter  
From 0.1 to 1.0 mm

### FEATURES AND BENEFITS

Annealing take-up available in three different sizes for wire between 0.1 and 1.0 mm diameter. Production speed up to 100 m/min.

- Capstan and spreader disc with ceramic layer from Chrome Oxide
- Traversing spool, guiding pulley with tension measurement device
- Both spool rims adjustable by operation panel buttons
- Spooler shaft Ø 15/22/35 mm, spool adapter for spool type up to DIN 355
- Adjustment of spooling tension by torque-controlled servo drive
- Spooling tension adjustable from 150 cN to 5000 cN
- Automatic spooling rim correction
- Dust protected electronic switchboard, aircon system available
- Local operation by built-in touch panel



Take Up Series SD

	Housing width	Capstan Ø	Spreader disc Ø
	mm	mm	mm
SD20/15	475	135	68
SD20/65	475	191	110
SD20/85	575	191	110

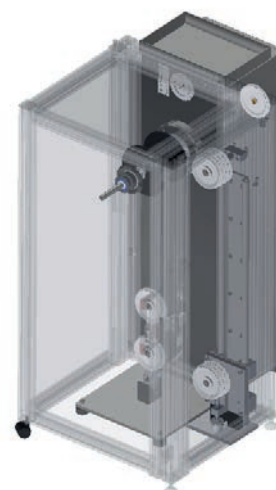
## PAY OFF

# Series UW

## FEATURES

These pay offs are designed for re-reeling of single spools.

- Compact design
- Two models for different spool range and wire tension
- Adjustable spooling tension due to pneumatic dancer
- Selectable rotation sense and pay off direction
- Control gain adjustable by manual knob
- Voltage 110-270 V, 50/60 Hz
- Pressurized air connection 6 bar
- Available with wire accumulator and protection cage



Pay Off Series UW

	Wire diameter range	Speed	Spool flange Ø max.	Spool weight max.	Spool weight max.	Spool shaft Ø	Spooling tension min.	Spooling tension max.	Housing width
	mm	UpM	mm	mm	kg	mm	cN	cN	mm
UW1/165	0,05 bis 0,20	550	250	76	15	16	10	140	300
UW1/1700	0,17 bis 0,50	550	355	100	22	22	100	1700	300
UW1/1700/DS	0,17 bis 0,50	550	355	100	22	22	100	1700	600





# Type SM02

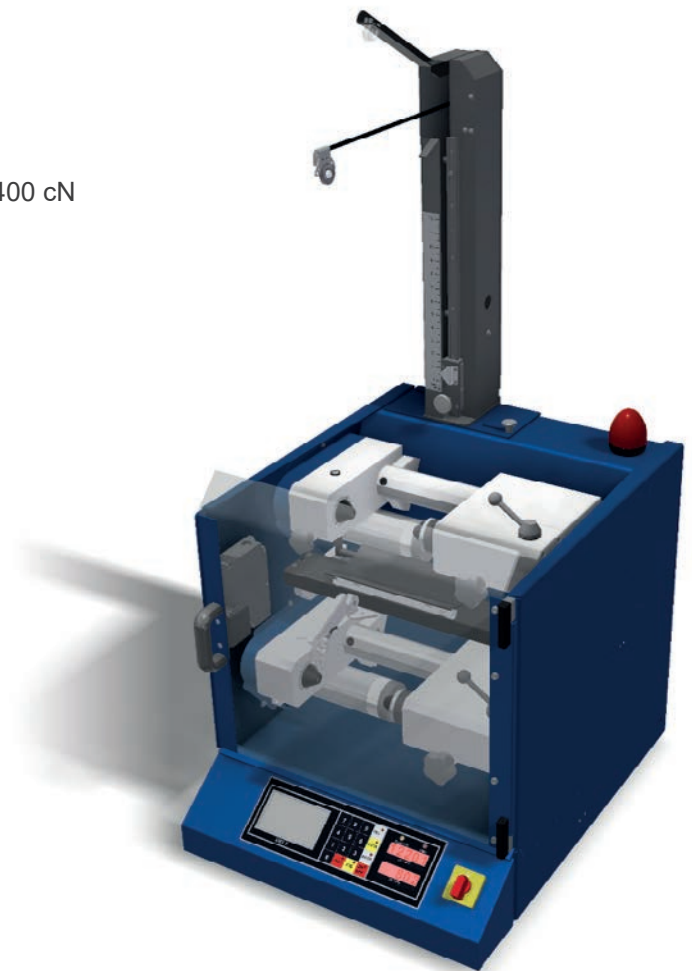
Wire diameter  
From 10 µm to 50 µm

## ULTRAFINE TABLE-TOP RE-SPOOLING DEVICE

- Spool types up to flange diameter 160 mm and overall width 160 mm
- Minimal drum diameter 40 mm
- Spool types cylindrical and biconical
- Spooling tension applied by spring actuated dancer
- Three dancer arms selectable: 1-10 cN; 10-100 cN; 40-400 cN
- Re-spooling speed up to 20 m/s
- Spooler revolution max. 6750 rpm

## SPOOL RANGE

DIN 160 (160K)	DIN 125 (125K)	DIN 100 (100K)	HKV 160 (159 45 R)	HKV 125 (124 45 R)
Abspulen / pay off	Abspulen / pay off	Abspulen / pay off	Abspulen / pay off	Abspulen / pay off
HK76/45	HK100-65-100	HK130-82-176	HK76	HK76/16-60
Aufspulen / take-up	Abspulen / pay off	Abspulen / pay off	Aufspulen / take-up	Aufspulen / take-up
HK80	SONOCO CRELLIN ø2,25" x 1" x ø1,76"	SONOCO CRELLIN ø2,5" x 3" x ø1,76"	Elmet Tungsten Spool FWM	Wardwell
Aufspulen / take-up	Aufspulen / take-up	Aufspulen / take-up	Abspulen / pay off	Aufspulen / take-up
SONOCO CRELLIN ø4,5" x 3" x ø2,5"	ø 4,86" x 3,5" x 3" Pittsfield 4-7/8" STD	ø 6" x 3,5" x ø 3,5" thin flange ABC Plastics FA-060	SONOCO CRELLIN ø6" x 3,5" x ø 3,5"	ø160mm x 90mm x ø90mm
Abspulen / pay off	Abspulen / pay off	Abspulen / pay off	Abspulen / pay off	Abspulen / pay off
Endura Braider Bobbin	Medium Hub Braider Bobbin	Large Hub Braider Bobbin Steeger 30mm	ø164x38.9xø87.6 ABC Plastics UA-060	Bonding Wire Spool 2"
Aufspulen / take-up	Aufspulen / take-up	Aufspulen / take-up	Abspulen / pay off	Aufspulen / take-up







## **schmidt Maschinenbau GmbH**

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Your competent partner for a broad range of equipment

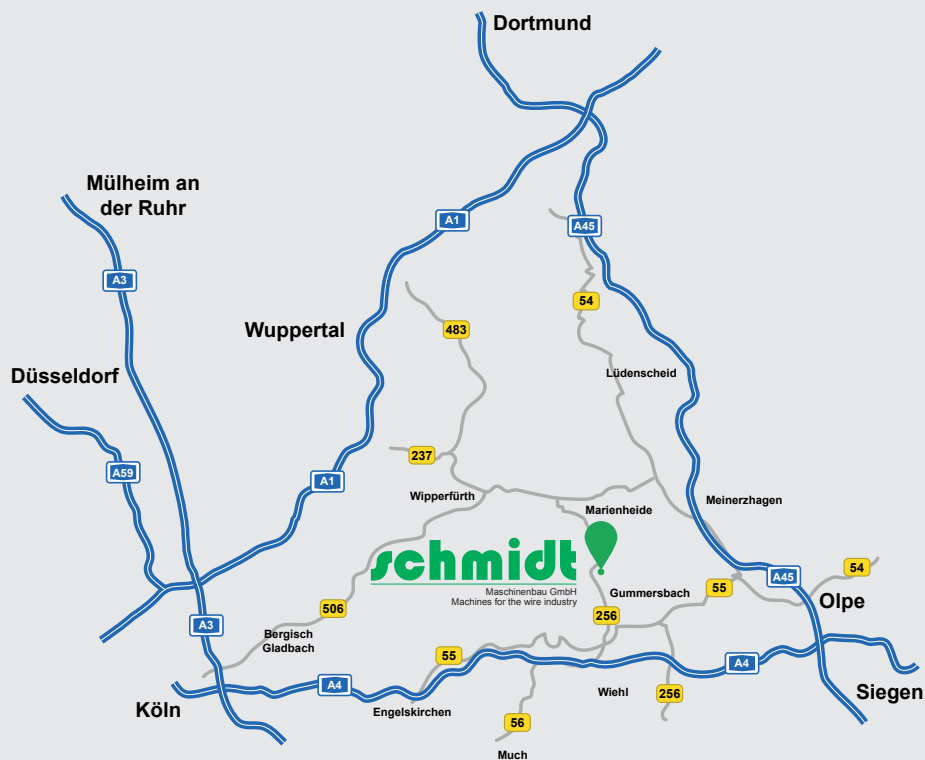
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