

Tamping machines

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Semiautomatic tamping machine Type SE 3





Semiautomatic tamping machine Type SE 3

Design:

Robust stand made of steel profiles. Attached electro-pneumatic control box with a PLC control and valves, as well as a pneumatic maintenance unit. The table, which moves up and down, is equipped with a precise linear guide and is moved using a foot pedal. Digital control of the impact frequency in 4 stages. The impact strength is determined by tension springs, which can be quickly exchanged. The pneumatic tamping head is designed for copper cables with a diameter of 0.5 - 6.5 mm The scissors arranged on the side cut the strand manually after tamping.

Advantages:

Entry-level model, ideal for small quantities, also as a supplement to automatic tamping machines. Very simple operation and short set-up times, therefore also profitable for small series. The tamping contact is made with the same quality as the automatic machines.

Method of operation:

The carbon brush can be placed in the pneumatic vice or held in a prism by hand. The tamping cycle is initiated by raising the table by depressing the foot pedal. The cable tension is automatically released and the tamping process begins. The ramming powder is now fed evenly between the hole wall and the copper cable over the knot and tamped down. The amount of powder per hit is adjustable. After the set tamping level has been reached, the cycle stops. The table is lowered manually using the foot pedal. Then the vise opens. Now the wire can be cut with the scissors or, in the case of longer cables, the carbon can be pulled to a lower stop.

For each copper cable diameter is needed :

1 clamp
1 tubular ram
1 bottom plate

When using the vice, an adapted insert jaw is required.

Application:

For processing tamping contacts on carbon brushes and cutting the copper cable to the required length.





Range of use		
a =	3 - 60mm	
t =	3 - 40mm	
r =	4 - 80mm	
Copper cable diameter =	0,5 - 6,5mm	
Copper cable length =	15 – 100 /250 mm (100mm table stroke / max250mm by aid of the second stop)	



Capacity: dependant on:

- drill hole depth
- drill hole diameter
- quantity of powder per stroke
- required joint strength
- required millivolt drop
- length of copper wire
- quality of brush materials
- skill of operator

approx. 250 -350 tamping contacts per hour.

	Technical data
cable drum diameter Ø =	max 250 mm
cable drum length =	max 200 mm
travel of tamping tube =	15 - 27 mm
force of impacts =	2 - 80 N
tamping frequency / second =	6,5 - 12 Hz
required air pressures =	4 - 6 bar
compressed air consumption =	25 L/min
space requirements =	70 x 70 x 150 cm
net weight approx =	150 kg
gross weight approx =	230 kg
box dimension =	80 x 80 x 190cm

Standard accessories

- 1 machine base
- 1 electric switch box with a programmable controller
- 1 tamping head in standard design (cable Ø 0,5–6,5)
- 1 electronic level switch
- 1 scissor unit
- 1 compressed air maintenance unit
- 1 socket adapter for pneumatic vice
- 1 table with linear guide
- 1 support table for prism or vice
- 1 cable run off frame
- 1 cable brake
- 1 set tamping tools for one cable size of your choice, consisting of
 - 1 clamp, 1 tubular ram (Steel), 1 bottom plate
- 1 set of tools
- 1 operation manual in English



Tamping Machine Type SE 7 V





Tamping Machine Type SE 7 V

This machine is used for fixing copper cables into carbon brushes by tamping. It is the succession type of our Tamping Machine Type SE 5.

Design:

Machine body of aluminium profiles. Attached electric switch box with a programmable processor. by Siemens. Compressed air maintenance unit. Moveable table running on ball sleeves. Two table lifting cylinders. Oil brake cylinder for slow movement of the last 10 mm of stroke. The safety cabin is equipped with a light curtain, therefore no double hand push buttons necessary. Full digital precision tamping frequency (9 steps) by means of a fast switching valve. The force of impacts is determined by tension springs, which can be exchanged quickly. Depending on the application there are 4 types of tamping heads available:

- 1. Standard type tamping head for chopper cables 0.5-6.5mm diameter
- 2. Soft tamping head for chopper cables 0.3-3.4mm diameter
- 3. Ultra light tamping head for chopper cables 0.1-2.2mm diameter
- 4. Heavy tamping head for copper cables 2,5-8,6mm diameter

Short set up time and therefore also suitable for short run production.

Method of operation:

After the set up of the machine the drilled carbon brush has to be placed manually in a pneumatic valve and the tamping cycle has to be started by means of the pedal switch.

As soon the operator leaves the safety curtain the cycle start automatically.

The brush will be clamped – the table moves to its top position and made a knot itself at the end of the copper cable at the bottom of the drill hole.

The clamping cylinder opens and the tamping starts.

Tamping powder is now inserted uniformly on top of the knot.

Between the drill hole wall and the copper cable and tamped firm to the set level in drill hole.

The tamping powder quantity for stroke is adjustable. After reaching the tamping level the tamping stops and the table descents to its start position.

During the table lowering the blowing nozzle clean the brush

The copper cable get clamped and the scissors cut the copper cable to the required length.

After that the pneumatic vice opens and the finished carbon brush can be taken.

For each copper cable diameter is needed :

-	1	С	laı	mp	

1 tubular ram 1 bottom plate

further more a insert for the pneumatic vice to hold the product in correct position.

Application:

For processing tamping contacts on carbon brushes and cutting the copper cable to the required length.





Capacity: dependant on:

- drill hole depth
- drill hole diameter
- quantity of powder per stroke
- required joint strength
- required millivolt drop
- length of copper wire
- quality of brush materials
- skill of operator

In automatic mode with pneumatic vice approx. 400 -500 tamping contacts per hour.

technical data		
cable drum diameter Ø =	max 250 mm	
cable drum lengtht =	max 200 mm	
travel of tamping tube =	15 - 27 mm	
force of impacts =	2 - 80 N	
tamping frequency / second =	6,5 - 14	
required air pressures =	4 - 6 bar	
compressed air consumption =	45 L/min	
space requirements =	100 x 100 x 160 cm	
net weight approx =	230 kg	
gross weight approx =	400 kg	
box dimension =	110 x 100 x195cm	

Standard accessories

- 1 electric switch box with a programmable controller by Siemens
- 1 text display multi language, including:

batch counter with reset electronic control stroke counter tamping frequency (tamping speed) error messages in clear text

- 1 tamping head in standard design (cable Ø 0,5–6,5)
- 1 safety cabin with light curtain CE conform
- 1 compressed air maintenance unit
- 1 electronic control counter
- 1 solenoid valves-island
- 1 machine base made of aluminium-profiles
- 1 front plate
- 1 table with column and sleeves
- 1 cross slide
- 2 table lifting cylinders
- 1 oil brake cylinder
- 1 cable brake
- 1 electronic level switch
- 1 set tamping tools for one cable size of your choice, consisting of

1 clamp, 1 tubular ram (Šteel), 1 bottom plate

- 1 cable run off frame
- 1 scissor unit
- 1 set scissor blades, hardened steel
- 1 set = 10 pieces tension springs for tamping
- 1 powder container
- 1 clamping tube with or without thread as per desire
- 1 pedal switch
- 1 set of tools
- 1 operating instruction in English



Tamping Machine Type SE 7 NC





Tamping Machine Type SE 7 NC

This machine is used for fixing copper cables into carbon brushes by tamping. It is the succession type of our Tamping Machine Type SE 8.

Design:

Machine body of aluminium profiles. Attached electric switch box with a programmable processor by Siemens. Compressed air maintenance unit. Moveable table running on ball sleeves. Table lifting cylinders driven by servomotor. Table top position, table down position (cable length) and feed is free programmable over the text display. Full digital precision tamping frequency (9 steps) by means of a fast switching valve. The force of impacts is determined by tension springs, which can be exchanged quickly. Depending on the application there are 5 types of tamping heads available:

- 1. Standard type tamping head for chopper cables 0.5-6.5mm diameter
- 2. Soft tamping head for chopper cables 0.3-3.4mm diameter
- 3. Ultra light tamping head for chopper cables 0.1-2.2mm diameter
- 4. Ultra light tamping head for chopper cables 0.1-2.2mm diameter with rotating tamping tube
- 5. Heavy tamping head for copper cables 2,5-8,6mm diameter

Extra short set up time and therefore also suitable for short run production.

	SIEMENS SIMATIC PANEL
digital input of the cable length	actual pos 41.8 FT (35.F6) 41.8 Set with just one push of a button
	ESC
	F1 F2 F3 F4 F5 TAB ACK
	F6 F7 F8 F9 F10 DEL HELP ENTER

Method of operation:

After the set up of the machine the drilled carbon brush has to be placed manually in a pneumatic valve and the tamping cycle has to be started by means of the pedal switch.

As soon the operator leaves the safety curtain the cycle start automatically.

The brush will be clamped – the table moves to its top position and made a knot itself at the end of the copper cable at the bottom of the drill hole.

The clamping cylinder opens and the tamping starts.

Tamping powder is now inserted uniformly on top of the knot.

Between the drill hole wall and the copper cable and tamped firm to the set level in drill hole.

The tamping powder quantity for stroke is adjustable. After reaching the tamping level the tamping stops and the table descents to its start position.

During the table lowering the blowing nozzle clean the brush.

The copper cable get clamped and the scissors cut the copper cable to the required length.

After that the pneumatic vice opens and the finished carbon brush can be taken.

For each copper cable diameter is needed :- one clamp, one tubular ram, and one bottom plate.

Further more a insert for the pneumatic vice to hold the product in correct position.

Application:

For processing tamping contacts on carbon brushes and cutting the copper cable to the required length.





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range of use			
a =	3 - 60mm		
t =	3 - 40mm		
r =	4 - 80mm (120)		
copper cable diameter =	0,1 - 8,5mm - dependant to the selected tamping head		
copper cable length =	15 – 200 mm (180mm outside of the brush) - 300mm with option SE7 NC 300		
apacity:			
dependant on: - dr	ill hole depth		
- dr	ill hole diameter		
- qı	uantity of powder per stroke		
- re	quired joint strength		
- re	quired millivolt drop		
- le	ngth of copper wire		
- qu	uality of brush materials		
- sk	cill of operator		

In automatic mode with pneumatic vice approx. 450 -600 tamping contacts per hour.

technical data		
cable drum diameter Ø =	max 250 mm	
cable drum lengtht =	max 200 mm	
travel of tamping tube =	15 - 27 mm	
force of impacts =	2 - 80 N	
tamping frequency / second =	6,5 - 14	
required air pressures =	4 - 6 bar	
compressed air consumption =	45 L/min	
space requirements =	100 x 100 x 160 cm	
net weight approx =	230 kg	
gross weight approx =	400 kg	
box dimension =	110 x 100 x195cm	

Standard accessories (included):

- 1 electric switch box with a programmable controller by Siemens
- 1 text display multi language, including:

batch counter with reset electronic control stroke counter programmable cable length (table position) tamping frequency (speed) error messages in clear text

- 1 tamping head in standard design (cable Ø 0,5-6,5)
- 1 safety cabin with light curtain CE conform
- 1 compressed air maintenance unit
- 1 solenoid valves-island
- 1 machine base made of aluminium-profiles
- 1 front plate
- 1 table with column and sleeves
- 1 cross slide
- 1 table lifting cylinder servo driven
- 1 cable brake with pneumatic cylinder
- 1 electronic level switch
- 1 set tamping tools for one cable size of your choice, consisting of

1 clamp, 1 tubular ram (Steel), 1 bottom plate

- 1 cable run off frame
- 1 scissor unit
- 1 set scissor blades, hardened steel
- 1 set = 10 pieces tension springs for tamping
- 1 powder container
- 1 clamping tube with or without thread as per desire
- 1 pedal switch
- 1 set of tools
- 1 operating instruction in English



Clamping devices









Special accessories for tamping machines

10	Tubular ram different sizes and styles available, see catalog "Tools"	
20	Collet Different sizes and styles available, dependant to the style of tamping head, see catalog "Tools"	
30	Bottom plate Different sizes and styles available, dependant to the shape of the brush top, see catalog "Tools"	
40	Clamping tube Two different styles available depending to the selected collet: a) clamping tube with tread (hexagon on top) b) clamping tube without thread exchange between the two systems easy possible	Sechskant Hexagon
50	Pneumatic vice Type SP gripping jaw size 30x20 mm for small to medium brushes sizes	
60	Insert for SP tailor made to your product dimension	
70	Pneumatic vice Type SPG gripping jaw size 40x45 mm for medium to big industrial brushes	



80	Insert for SPG tailor made to your product dimension	
90	Pneumatic vice Type SPK gripping jaw size 40x50 mm for small to big brushes, clamping point (Ø8mm) adjustable	
100	Insert for SPK tailor made to your product dimension	
110	Angle table For tamping under an angle swiveling range: +/- 45°	
120	Tension spring set consisting of 2x 0,6 / 2x0,7 / 2x0,8 / 2x0,9 / 2x1,0mm determinates the force of the tamping impact energy (other sizes from 0,4-1,2mm can be ordered individually)	
130	Tamping head standard universal usage range: cable Ø 0,5- 6,5mm	Ø14mm



140	Tamping head small usage: for small to medium brushes range: cable Ø 0,3- 3,4mm	Ø11mm
150	Tamping head super light usage: for micro to small brushes range: cable Ø 0,1- 2,2mm	Ø9mm
160	Tamping head super light rotating usage: for micro to small brushes especially for soft material range: cable \emptyset 0,1- 2,2mm the rotating tamping tube enables a constant powder flow and a polished tamped imprint	Ø9mm V
170	Tamping head heavy usage: big industrial brushes up to 25mm ² range: cable Ø 2,5- 8,6mm	Ø16mm
180	Upgrade to 300 mm cable length The machine body and the stroke length is extended to achieve 300mm cable length	



190	Special program for longer cable (selectable) usage: occasional processing of longer cables. Sequence: After the tamping cycle the table move down and the vice opens. The product can placed on a deeper adjustable stop. With another impulse on the pedal switch the cable will be cut off. The cycle time is longer as regular. Including Software upgrade and adjustable stop.	JCE xem
200	Suction device usage: sucks the interior of the cabin when the copper powder is blown off connection pipe Ø 38mm	
210	Blow-off nozzle usage: for cleaning the nest of the pneumatic vice including valve and piping	
220	Sliding table usage: for carbon brushes with two parallel holes in the horizontal axis, adjustable 0-60mm, including software upgrade	