



## Velocity Engineers Private Limited

Add: B 49/1, Industries Area, SITE IV, Sahibabad Industrial Area, Ghaziabad, Uttar Pradesh- 201010

Tel : +91-011-43503165

Mobile Phone : +91-9999313315

E-mail : [Info@velocityengineers.com](mailto:Info@velocityengineers.com)

### 500 model Triple pair-twist machine

Equipment components:

- 1.out driven pay-off machine
2. single twist back-twist machine
3. pair-twist machine
- 4.control cabinet

Performances and applications:

Suitable for pair-twist Lan cable cat5e, cat6A, cat7, data wire, communication wire etc, automatically set back-twist rate from 0-100% according to wire material requirement, it can make wire material reach cat5e, cat6A, cat7 series requirement; and the speed increases above 50% comparing with traditional pair-twist machine.

Main technical parameter

1. Bow speed: max.2000rpm (6000TPM)
2. Pitch tolerance: 2%
3. Line speed: max.120m/min for cat6
4. Back-twist ratio: 0 – 100%
5. Pitch :10 – 60mm (PLC set automatically, not need to change gear)

Technology parameter details:

1. single twist back-twist machine:

- 1-1.) outside driven pay-off machine:

- A . Applicable bobbin size:  $\phi 500\text{mm} \times 375 \times 56\text{mm}$ , or bobbin size details is provided by buyer, pneumatic push tight bobbin
- B. applicable wire: insulation Lan cable cat5e, cat6a core wire
- B. wire diameter:  $\phi 0.8\text{-}1.5\text{mm}$
- C. wire tension before twisting: 0.6-3KG
- D. line speed: max.75m/min for cat6
- E. power: 200W gear motor
- F. pay-off tension: 0.6-3kg (adjustable by tension wheel)

- 1-2. inside gyration horizontal driven pay-off rack

- A. suitable bobbin size:  $\phi 500 \times 375 \times 56$ , or bobbin size details is provided by buyers, pneumatic push tight bobbin
- B. applicable wire: insulation cat5e, cat6a cat7 core wire



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C. suitable wire diameter:  $\phi$ 0.8-1.5mm, tension before twisting:0.6-3kg

D. gyration speed:max.2000rpm

E. line speed:max.96m/min for cat6

F. power:200W gear motor

G. pay-off tension :0.6 – KG

1-3. Single twist back-twist motor:5.5KW frequency-conversion motor

1-4. capstan:

a. type: horizontal

b. wire tension:max.3KG

c. line speed:max.96m/min

d. Capstan wheel diameter:237.1mm\*1pcs+235mm\*4pcs

e. power: 0.75KW servo motor

2. pair-twist machine

2-1. suitable bobbin diameter:  $\phi$  500\*  $\phi$  375\*  $\phi$  56, or bobbin size details is provided by buyer. Pneumatic push tight bobbin

2-2. gyration speed:max.2000rpm

2-3. line speed:max.96m/min for cat6

2-4. pitch range :6mm-60mm , pitch tolerance:2%, PLC set pitch automatically

2-5. traverse distance:max.10mm

2-6. main motor: 5.5KW frequency-conversion motor 2-7. take-up motor:500W gear motor

2-7. tension control for whole process

a. set tension according to wire requirement

b. manual online test tension

c. photo electricity induction feedback.

d. module variable control

e. data show: feedback pay-off or take-up tension so that adjustment

f.full process tension automatic balance +PID tracking (make pay-off stable, and can adjust during running)

2-8. full process control for back-twist ratio and pitch

a. back-twist rate set:max0%-100%(adjustable)

b. man-interface set back-twist rate

c. man-interface set pitch

d. man-interface set gyration speed.

3. control cabinet:

3-1. type: independent control cabinet 3-2. operation panel:

a Siemens PLC module for 2 pieces

b. man-interface: full process control and show online production condition, set twist pitch, online pitch,



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ba  
etc.

c. servo controller and inverter

Safety device for whole process

Machine automatic stop when safety door doesn't close Machine automatic stop when lift tray don't reach bottom

Machine automatic stop when set length don't get back to zero Machine automatic stop when disfigure show light don't eliminate Machine automatic stop when wire break

Machine automatic stop when circuit lack phase or voltage is above or under inverter limit

Machine automatic stop when set data don, t reach

Color: Navy Blue and Off white

Main parts brand:

1.bearing: NTN, FAG

1.frequency-conversion motor: China famous brand

1. inverter: Invoance

1.servo: China famous brand

1.PLC: Siemens

1.Interface: Weviniew

1.Other low voltage electrical: Omron and Schneider

Machine data: operation manual, wiring drawing, layout drawing

