

Professional Manufacturing Perfect Quality



# TECHNO ACTORS (FZC)

## PRECISION MECHANISM



Professional Motor Manufacturing Equipment Supplier

2010

aturing Perfect Quality



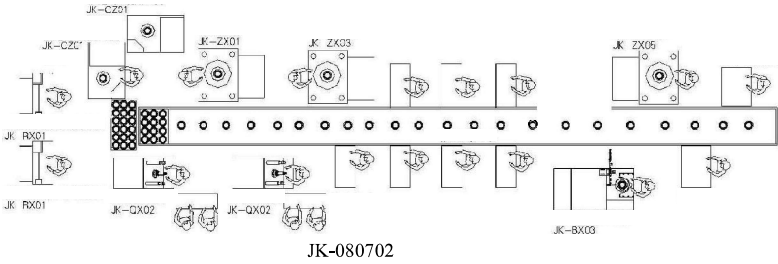
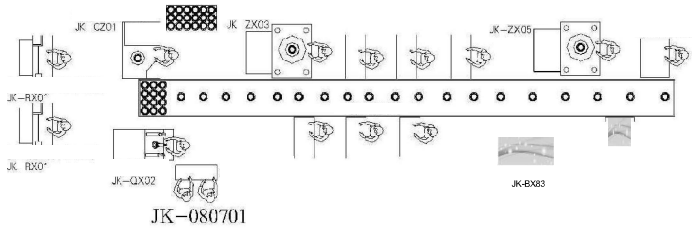
A company' s existing employees almost 200 people, 15000square meters of office and production workshops, special production of hundreds piece of equipment, including CNC machining centers, West Germany surface grinder, grinding machines and optical curve Spline Grinder, plenty of measurement and testing equipments. TECHNO ACTORS with a high quality staff, sophisticated manufacturing and testing equipment, to provide the best quality equipment with U.A.E motor automatic produce.

Main products:

- Winder: (vertical coil winding machine, table type winder, Rotor winding machine, brushless winding machine, inward winding machine)
- Insulation paper inserting machine: (single-head Machine, Multi-machine, Horizontal machine)
- Stator inserting machine, (Hydraulic System, servo system, Horizontal machine)
- Stator shaping machine: (pre-shaping machine, middle-shaping machine, final-shaping machine, double side machine)
- Stator lacing machine:( single side lacing machine, double side lacing machine <one- station>, double side lacing machine<two-station>)
- Rotor lathe finishing machine
- Cutting machine: (slot insulate, wedge insulate)
- Inserting mode: (can support Japan SANKO, America Alliance, Italy DWG, Germany Elmotec Statomat America AMT)
- Fragile accessories: (blade, storage, pusher, crochet, stripper).



# STATOR PRODUCTION PROCESS



JK-ZX05



JK-BX03



JK-RX01



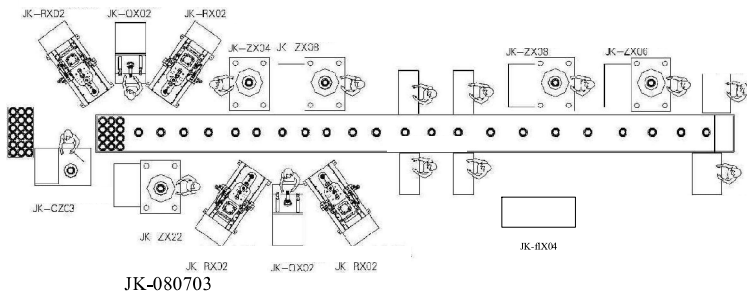
JK-CZ01



JK-ZX01



JK-ZX03



JK-ZX06



JK-BX04



JK-RX02



JK-CZ03



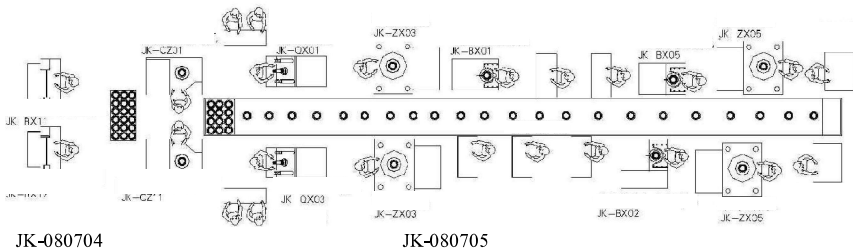
JK-ZX22



JK-ZX04



JK-ZX08



JK-BX02



JK-BX05



JK-RX02



JK-CZ03



JK-CX03

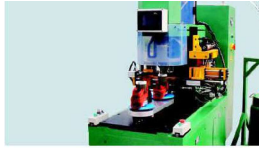


JK-CX01



JK-BX01

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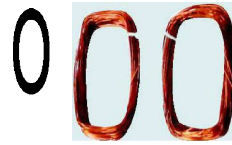


OTHER SPARE PARTAS

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## AUTOMATIC COIL WINDING MACHINE



RX01 / RX11

### RX01 / RX11

|                            |                            |
|----------------------------|----------------------------|
| Name and type              |                            |
| Diameter of wire           | 0.1-1.0mm / 0.3-1.6mm      |
| Winding width              | ≤ 190mm / ≤ 250mm          |
| 12 winding diameter        | ≤ 280mm / ≤ 380mm          |
|                            | 520mm / 500mm              |
| Effective distance between |                            |
| Winding shafts             | ≤ 190mm / ≤ 250mm          |
| Distance of classes        | 3000r/min                  |
| Max rotation speed         |                            |
| Air pressure               | 0.4-0.7MPa                 |
| Input                      | 220v/50Hz                  |
| Power                      | 0.7SKw / 1.5Kw             |
| Dimension                  | 1420mm x 1300mm x 1500mm   |
|                            | 1660mm x 2070mm x 1670mm = |
| Weight                     | ~550kg / ~700kg            |

### RX25

### RX05

|                        |                        |
|------------------------|------------------------|
| Name and type          |                        |
| Suitable wire diameter | 0.1-0.8 mm             |
| Max winding speed      | 3000r/min              |
|                        | 6mm-30mm               |
| Air pressure           | 0.4-0.6Mpa             |
| Input                  | 380V/50Hz              |
| Power                  | 1Kw                    |
| Dimension              | 650mm x 650mm x 1400mm |
| Weight                 | 400Kg                  |

|                             |                        |
|-----------------------------|------------------------|
| Name and type               |                        |
| Diameter range              | ∅0.3- ∅ 1.1mm          |
| Max Rotor core diameter     | ∅ 180mm                |
| Laminated thickness of core | 50mm~200mm             |
| The number of core slots    | 2-4                    |
| Max rotation                | 1200r/min              |
| Air pressure                | 0.4-0.6Mpa             |
| Input                       | 380V/50Hz              |
| Power                       | 1Kw                    |
| Dimension                   | 850mm x 900mm x 1500mm |
| Weight                      | 500Kg                  |

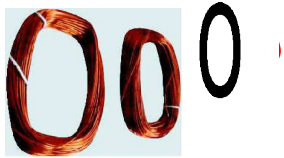
### RX06

### RX07

|                             |                        |
|-----------------------------|------------------------|
| Name and type               |                        |
| Diameter range              | ∅ 0.2-0.8mm            |
| Outer-Core diameter         | ∅ 60-110mm             |
| Core diameter               | ∅ 35-60mm              |
| Laminated thickness of core | 10mm~50mm              |
| The number of core slots    | 3-12                   |
| Max rotation                | 800 r/min              |
| Air pressure                | 0.4-0.6Mpa             |
| Input                       | 380V/50Hz              |
| Power                       | 3Kw                    |
| Dimension                   | 700mm x 600mm x 1500mm |
| Weight                      | 700Kg                  |

|                             |                        |
|-----------------------------|------------------------|
| Name and type               |                        |
| Diameter range              | ∅ 0.2-0.8mm            |
| Outer-Core diameter         | ∅ 60-100mm             |
| Core diameter               | ∅ 35-60mm              |
| Laminated thickness of core | 6mm~30mm               |
| The number of core slots    | 4-16                   |
| Max rotation                | 1800 r/min             |
| Air pressure                | 0.4-0.6Mpa             |
| Input                       | 380V/50Hz              |
| Power                       | 1Kw                    |
| Dimension                   | 800mm x 600mm x 1400mm |
| Weight                      | 500Kg                  |

All the referenced technical parameters can be designed and manufactured according to customer's request.



## AUTOMATIC COIL WINDING MACHINE



|                            | RX02                    | RX03                     |
|----------------------------|-------------------------|--------------------------|
| Name and type              |                         |                          |
| Suitable wire diameter     | 0.25-1.8mm              | 0.25-1.0mm               |
| Max winding speed          | 2000r/min               | 1400r/min                |
| Max suitable coil segments | 5                       | 5                        |
| Max coil perimeter         | 150mm                   | 150mm                    |
| Suitable motor poles       | 2, 4, 6 8               | 2, 4, 6 8                |
| Air pressure               | 0.5-0.8MPa              | 0.4-0.6MPa               |
| Input                      | 380V/50Hz               | 380V/50Hz                |
| Power                      | 9KW                     | 9KW                      |
| Dimension                  | 2100mm x 750mm x 2000mm | 2450mm x 1250mm x 2700mm |
| Weight                     | ~1500kg                 | ~2700kg                  |

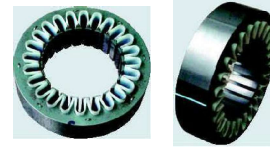
|                            | RX32                    | RX04                     |
|----------------------------|-------------------------|--------------------------|
| Name and type              |                         |                          |
| Suitable wire diameter     | 0.25-1.8mm              | 0.6-1.2mm                |
| Max winding speed          | 2000r/min               | 800r/min                 |
| Max suitable coil segments | 5                       | 6                        |
| Max coil perimeter         | 150mm                   | 200                      |
| Suitable motor poles       | 2, 4, 6 8               | 2                        |
| Air pressure               | 0.4-0.6MPa              | 0.4-0.6Mpa               |
| Input                      | 380V/50Hz               | 380V/50Hz                |
| Power                      | 9KW                     | 2Kw                      |
| Dimension                  | 750mm x 1750mm x 2240mm | 2000mm x 1000mm x 1900mm |
| Weight                     | ~ 1600kg                | 1100Kg                   |

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## INSULATION PAPER INSERTING MACHINE



CZ02, CZ03, CZ04

CZ01

CZ11

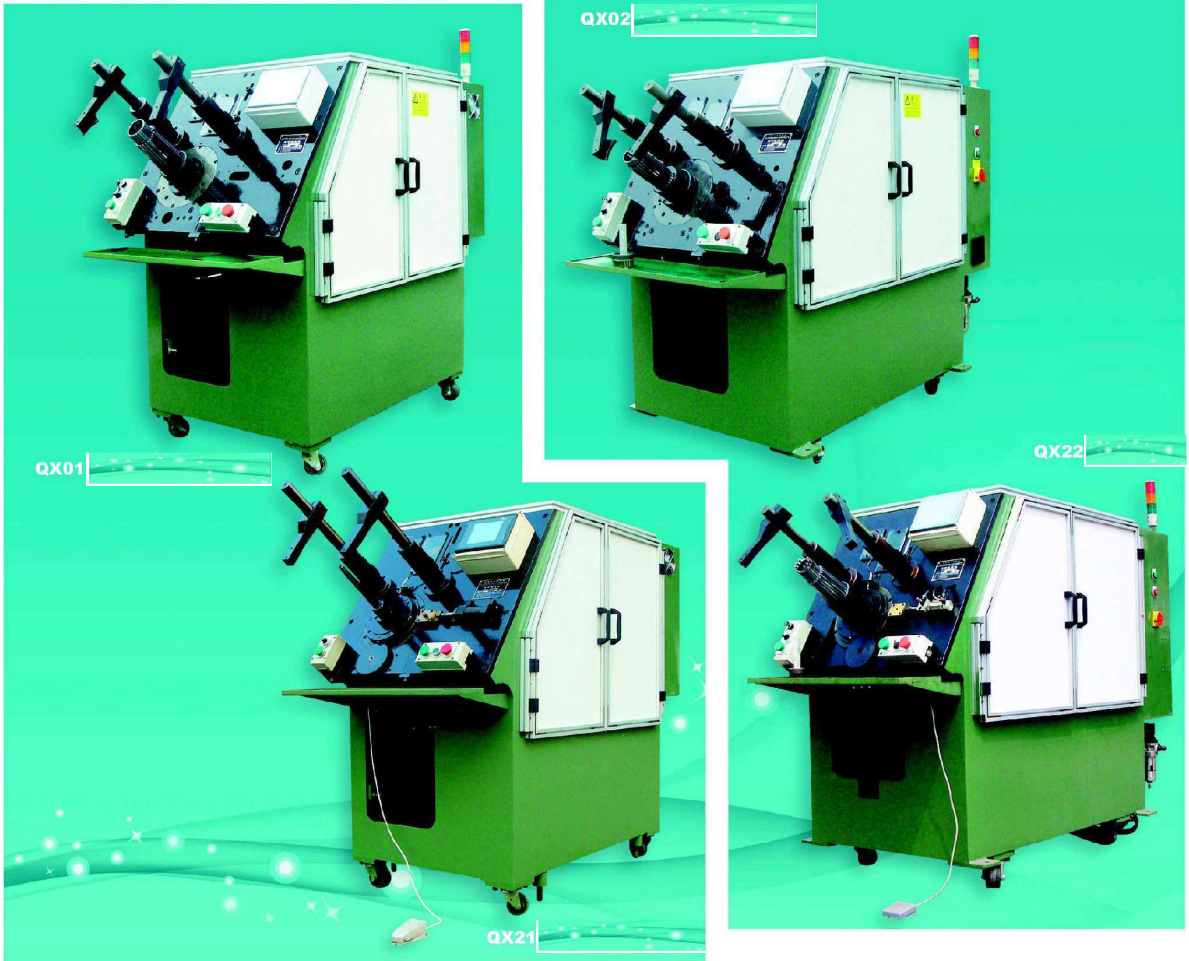


|                                  | CZ01                    | CZ02, CZ03, CZ04                  | CZ11                   |
|----------------------------------|-------------------------|-----------------------------------|------------------------|
| Name and type                    |                         | Two, three or four slot insulator | (Horizontal)           |
| Laminated thickness of stator    | 10mm-100mm              | 10mm-100mm                        | 30mm-230mm             |
| Max outer diameter of stator     | ∅200mm                  | ∅ 200mm                           | ∅ 260mm                |
| Diameter of stator               | ∅ 17mm- ∅ 90mm          | ∅ 40mm- ∅ 90mm                    | ∅ 40mm- ∅ 150mm        |
| Height of edge folded            | 2mm-5mm                 | 2mm-5mm                           | 2mm-5mm                |
|                                  | 0.15mm-0.3mm            | 0.15mm-0.3mm                      | 0.15mm-0.35mm          |
| Max insulation paper's thickness |                         |                                   |                        |
| Feeding length                   | 12mm-40mm               | 15mm-38mm                         | 15mm-45mm              |
| Tack time                        | 0.4-0.5 s/trough        | 0.5-0.7 s/trough                  | 0.6-1.0 s/trough       |
| Air pressure                     |                         | 0.4-0.7MPa                        | 0.4-0.7MPa             |
| Input                            | 380v/ 50Hz              | 380v/ 50Hz                        | 380v/ 50Hz             |
| Power                            | 0.75Kw                  | 2.5Kw                             | 0.75Kw                 |
| Dimension                        | 960mm x 1100mm x 1100mm | 1600mm x 1600mm x 1400mm          | 700mm x 700mm x 1300mm |
| Weight                           | ~ 250kg                 | ~ 900kg                           | ~ 500kg                |

All the referenced technical parameters can be designed and manufactured according to customer's request.



## WINDING INSERTING MACHINE



|                               | QX01                    | QX21                    | QX02                    | QX22                    |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Name and type                 | (Hydraulic)             | (Hydraulic)             | (AC servo)              | (AC servo)              |
| Laminated thickness of stator | 5mm-130mm               | 5mm-130mm               | 5mm-130mm               | 5mm-130mm               |
| Max outer diameter of stator  | ∅ 160mm                 | ∅ 160mm                 | ∅ 160mm                 | ∅ 160mm                 |
| Diameter of stator            | ∅ 17mm-∅ 110mm          | ∅ 17mm-∅ 110mm          | ∅ 17mm-∅ 110mm          | ∅ 17mm-∅ 140mm          |
| Displacement of oil pump      | 30F                     | 30F                     |                         |                         |
| Air pressure                  |                         |                         | 0.5-0.8MPa              | 0.5-0.8MPa              |
| Input                         | 380v/ 50Hz              | 380v/ 50Hz              | 380v/ 50Hz              | 380v/ 50Hz              |
| Power                         | 3.75Kw                  | 3.75Kw                  | 2.5Kw                   | 2.5Kw                   |
| Dimension                     | 1500mm x 740mm x 1600mm | 1500mm x 740mm x 1600mm | 1500mm x 740mm x 1600mm | 1500mm x 740mm x 1600mm |
| Weight                        | ~ 1000kg                | ~ 1000kg                | ~ 1000kg                | ~ 1000kg                |

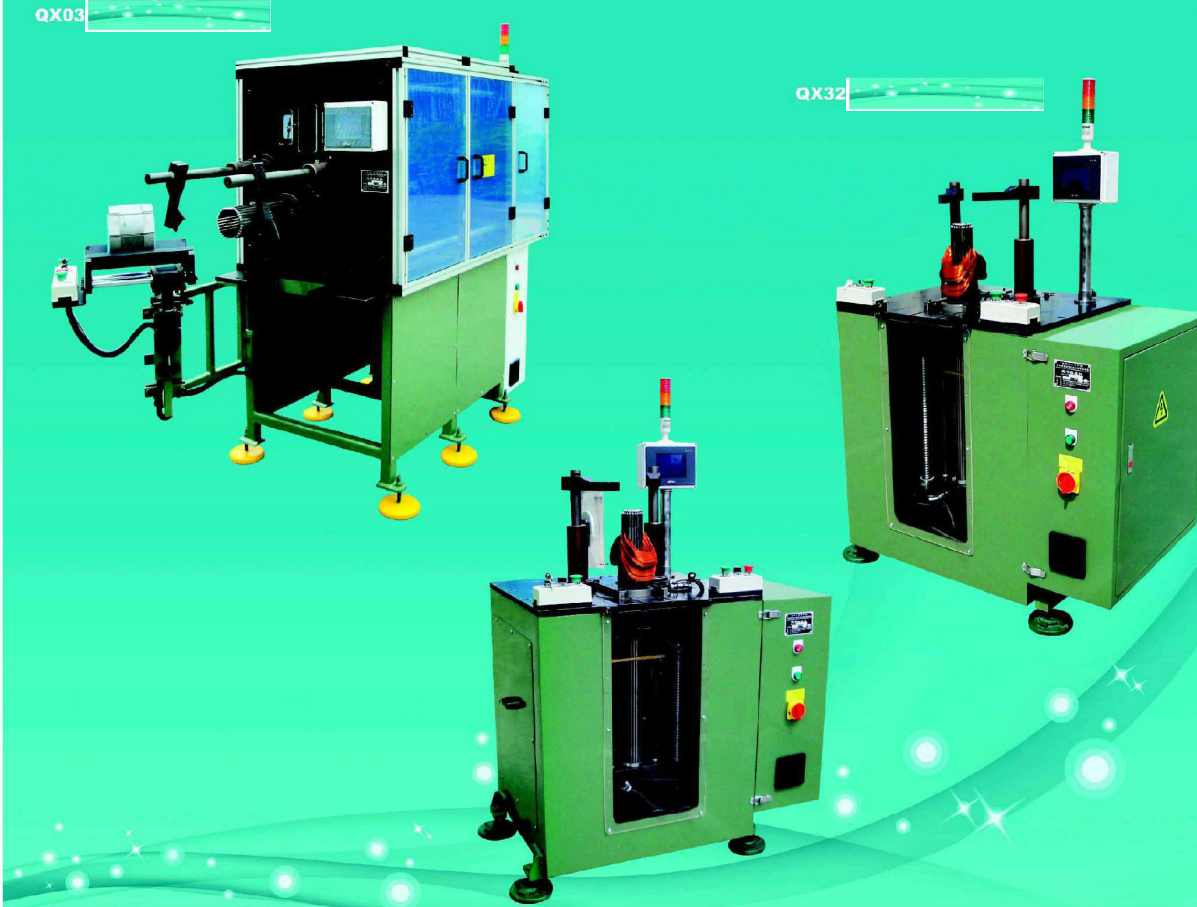
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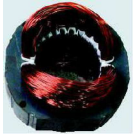
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## WINDING INSERTING MACHINE



|                               | QX03                    | QX04                    | QX31                    | QX32                    |
|-------------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| Name and type                 | (Horizontal AC servo)   | (AC servo)              | (Two AC servo)          | (Two AC servo)          |
| Laminated thickness of stator | 50mm-160mm              | 5mm-80mm                | 15mm-80mm               | 15mm-80mm               |
| Max outer diameter of stator  | 300 mm                  | 150mm                   | 150mm                   | 150mm                   |
| Diameter of stator            | ∅ 30mm- ∅ 160mm         | ∅ 17mm-∅ 100mm          | ∅ 17mm- ∅ 100mm         | ∅ 17mm- ∅ 100mm         |
| Input                         | 380v/ 50Hz              | 380v/ 50Hz              | 50Hz                    | 380v/ 50Hz              |
| Air pressure                  | 0.5-0.8MPa              | 0.4-0.6Mpa              | 0.4-0.6Mpa              | 0.4-0.6Mpa              |
| Power                         | 2.5Kw                   | 2.5Kw                   | 3Kw                     | 3Kw                     |
| Dimension                     | 2300mm x 740mm x 1500mm | 1700mm x 620mm x 1362mm | 1100mm x 700mm x 1417mm | 1100mm x 700mm x 1417mm |
| Weight                        | ~ 1000Kg                | ~ 800Kg                 | ~ 800Kg                 | ~ 800Kg                 |

All the referenced technical parameters can be designed and manufactured according to customer's request.



## PRE-SHAPING MACHINE

# TA



|                               | ZX01                    | ZX21                         | ZX22                         | ZX51                         |
|-------------------------------|-------------------------|------------------------------|------------------------------|------------------------------|
| Name and type                 | (hydraulic)             | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) |
| Laminated thickness of stator | 20m-100mm               | 20mm-100mm                   | 30mm-100mm                   | 30m-100mm                    |
| Min adaptive core borer       | 30mm                    | 30mm                         | 38mm                         | 38mm                         |
| Max outer diameter of stator  | 160mm                   | 160mm                        | 160mm                        | 160mm                        |
| Displacement of oil pump      | 20F                     | 30F                          | 30F                          | 30F                          |
| Input                         | 380v/ 50Hz              | 380v/ 50Hz                   | 380v/ 50Hz                   | 380v/ 50Hz                   |
| Power                         | 1.5Kw                   | 3.75Kw                       | 3.75Kw                       | 3.75Kw                       |
| Dimension                     | 1200mm x 630mm x 2300mm | 1200mm x 630mm x 2300mm      | 1500mm x 740mm x 2000mm      | 2000mm x 740mm x 2300mm      |
| Weight                        | ~ 800Kg                 | ~ 800Kg                      | ~ 1000Kg                     | ~ 1200Kg                     |

### ZX04 (Pneumatic)

|                               |                       |
|-------------------------------|-----------------------|
| Laminated thickness of stator | 10mm-100mm            |
| Min adaptive core borer       | Ø 38mm                |
| Max outer diameter of stator  | Ø 160mm               |
| Air pressure                  | 0.5-0.8MPa            |
| Dimension                     | 650mm x 600mm x 700mm |
| Weight                        | ~370Kg                |



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**MIDDLE-SHAPING MACHINE**



|                               | ZX02                   | ZX03                         | ZX08                         | ZX11                         | ZX52                         |
|-------------------------------|------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Name and type                 | (hydraulic)            | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) |
| Laminated thickness of stator | 20mm-100mm             | 20mm-160mm                   | 20mm-120mm                   | 20mm-120mm                   | 20mm-120mm                   |
| Max outer diameter of stator  | 100mm                  | 160mm                        | 160mm                        | 100mm                        | 160mm                        |
| Min adaptive core borer       | 30mm-100mm             | 30mm-120mm                   | 30mm-100mm                   | 30mm-100mm                   | 30mm-100mm                   |
| Displacement of oil pump      | 30F                    | 30F                          | 30F                          | 30F                          | 30F                          |
| Power                         | 3.75Kw                 | 3.75Kw                       | 3.75Kw                       | 3.75Kw                       | 3.75Kw                       |
| Input                         | 380v/ 50Hz             | 380v/ 50Hz                   | 380v/ 50Hz                   | 380v/ 50Hz                   | 380v/ 50Hz                   |
| Dimension                     | 650mm x 850mm x 2300mm | 630mm x 1200mm x 2400mm      | 740mm x 1500mm x 2300mm      | 630mm x 1300mm x 2300mm      | 1400mmx1500mmx2300mm         |
| Weight                        | ~ 600kg                | ~ 1200kg                     | ~ 1500Kg                     | ~ 1000Kg                     | ~ 1500Kg                     |

All the referenced technical parameters can be designed and manufactured according to customer's request.



## AUTOMATIC LACING MACHINE



|               | BX01   | BX02   | BX05   |
|---------------|--|--|--|
| Name and type | (One side/One station)<br>≤ Ø 190mm<br>≤ 110mm<br>≥ Ø 30mm | (One side/One station/ Horizontal)<br>≤ Ø 280mm<br>≤ 250mm<br>≥ Ø 70mm | (One side/One station/ AC servo)<br>≤ Ø 250mm<br>≤ 160mm<br>≥ Ø 30mm |
| Air pressure  | 0.5-0.7  | 0.7-1.0  | 0.5-0.7  |
| Input         | 0.4-0.7MPa   | 0.4-0.7MPa   | 0.4-0.7MPa   |
| Power         | 220v/50-60Hz   | 220v/50-60Hz   | 220v/50-60Hz   |
| Dimension     | 750W   | 750w   | 750w   |
| Weight        | 1000mm x 730mm x 1160mm<br>~ 500kg                         | 1400mm x 1400mm x 1500mm<br>~ 700kg                                    | 1270mm x 650mm x 1100mm<br>~ 500kg                                   |



|               | BX03   | BX04   | BX06  |
|---------------|--|--|---|
| Name and type | (Double side/One station)<br>≤ Ø 150mm<br>15mm~120mm<br>≥ Ø 33mm | (Double side/Two station)<br>≤ Ø 150mm<br>15mm~120mm<br>≥ Ø 33mm | (Double side/One station)<br>≤ Ø 130 mm<br>≤ 60mm<br>≥ Ø 40mm |
| Air pressure  | 0.3-0.5  | <b>0.4-0.5</b>   | 0.6-0.8   |
| Input         | 0.4-0.7MPa   | 0.4-0.7MPa   | 0.4-0.7MPa  |
| Power         | 380V/50Hz  | 380V/50Hz  | 220V/50Hz   |
| Dimension     | 1.5Kw  | 1.5Kw  | 750W  |
| Weight        | 1570mm x 670mm x 1680mm<br>~ 900kg                               | 1770mm x 850mm x 1680mm<br>~ 1100kg                              | 1270mm x 650mm x 1200mm<br>~ 400Kg                            |

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## FINAL-SHAPING MACHINE



|                               | ZX05                         | ZX06                         | ZX53                         | ZX31                  |
|-------------------------------|------------------------------|------------------------------|------------------------------|-----------------------|
| Name and type                 | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) | (Protection teeth\hydraulic) | (Hydraulic)           |
| Laminated thickness of stator | 20mm-160mm                   | 20mm-160mm                   | 20mm-160mm                   | 10mm-100mm            |
| Max outer diameter of stator  | 200mm                        | 160mm                        | 200mm                        | Ø 160mm               |
| Min adaptive core borer       | 30mm-130mm                   | 30mm-130mm                   | 30mm-160mm                   | Ø 35mm                |
| Displacement of oil pump      | 20F                          | 30F                          | 30F                          | 20F                   |
| Power                         | 1.5Kw                        | 3.75Kw                       | 3.75Kw                       | 1.5Kw                 |
| Input                         | 380V/50Hz                    | 380V/50Hz                    | 380V/50Hz                    | 380V/50Hz             |
| Dimension                     | 630mm x 1300mm x 2000mm      | 740mm x 1500mm x 2300mm      | 740mm x 1500mm x 2300mm      | 850mm x 600mm x 700mm |
| Weight                        | ~ 1000Kg                     | ~ 1500Kg                     | ~ 1500Kg                     | ~ 500Kg               |

All the referenced technical parameters can be designed and manufactured according to customer's request.

OTHER MACHINE



**JQ11**

**JQ22**

|               |   |
|---------------|---|
| Name and type | Automatic insulating paper cutting machine<br>100 |
|               | 0.1mm-0.35mm                                      |
| Input         | 220V/ 50-60Hz                                     |
| Power         | 300W  |
| Dimension     | 850mm x 540mm x 1050mm                            |
| Weight        | ~ 170Kg   |

|               |   |
|---------------|---|
| Name and type | Automatic insulating paper cutting machine<br>120 |
|               | 0-180°C<br>0.25mm-0.4mm                           |
| Input         | 220V 150-60Hz                                     |
| Power         | 300W  |
| Dimension     | 950mm x 580mm x 1050                              |
| Weight        | ~ 170Kg   |



**JC30**

|               |  |
|---------------|--|
| Name and type | (AC servo)<br>Ø 100<br>100mm<br>0.02/100mm<br>Ø 0.6<br>30S/100mm |
| Air pressure  | 0.4-0.6MPa   |
| Input         | 380V/50Hz  |
| Power         | 1.5Kw  |
| Dimension     | 900mm x 1000mm x 1500mm  |
| Weight        | 400Kg  |

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TA

TOOLING

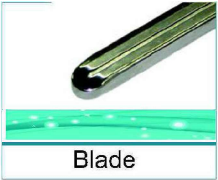


All Tooling's can tie in with SANKO JAPAN, ALLIANCE USA, DMG INTALIA, STATOMAT GERMAN etc,

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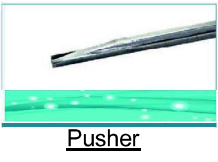
OTHER SPARE PARTAS



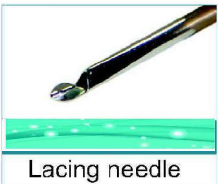
Blade



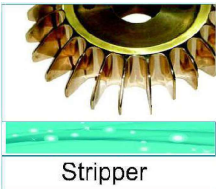
Wedge guide



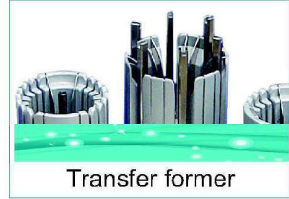
Pusher



Lacing needle



Stripper



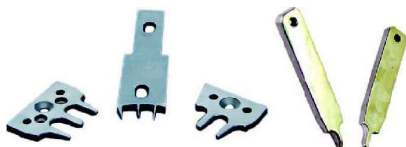
Transfer former



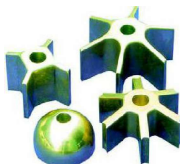
Stripper holder



Wedge magazine



Cuff



Stripper



Drift blade

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## DATA FOR EQUIPMENT SUBJECT

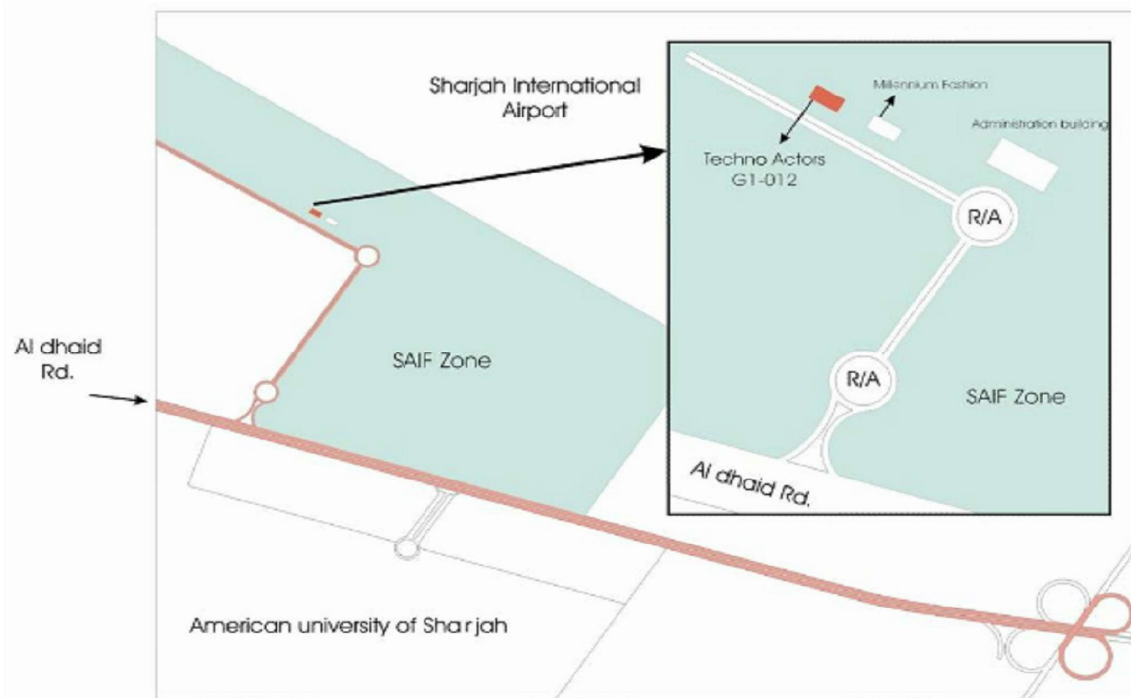
| No. | Model                   | Date   |
|-----|-------------------------|--|
| 1   | COIL WINDER             | <u>Winding drawing, Winding laybaring drawing</u>  |
| 2   | SLOT INSULATOR          | <u>Lamination drawing, Stator stack drawing, Slot liner drawing</u>  |
| 3   | INSERTER                | <u>Lamination drawing, Stator stack drawing, Stator stack drawing, Lamination drawing, Winding laybaring drawing, Slot peg drawing</u> |
| 4   | PRELIMINARY DRIFT PRESS | <u>Lamination drawing, Stator stack drawing, Stator stack drawing, Lamination drawing, Winding laybaring drawing</u>                   |
| 5   | BLOCKER                 | <u>Lamination drawing, Stator stack drawing, Stator stack drawing, Lamination drawing, Winding laybaring drawing</u>                   |
| 6   | LACER                   | <u>Lamination drawing, Stator stack drawing, Stator stack drawing, Lamination drawing, Winding laybaring drawing</u>                   |
| 7   | FINISH BLOCKER          | Lamination drawing, Stator stack drawing, Stator stack drawing, Lamination drawing, Winding laybaring drawing                          |



All the referenced technical parameters can be designed and manufactured according to customer's request.



**NOTES**



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