



Fax: +44(0)1684 273171

★ Email: enquiry@ingridwest.co.uk

# Product Catalogue 2024



## Working with local partners throughout Europe



We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

COIL WINDING SOLUTIONS YOU CAN RELY ON







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## BOBBIN WINDING MACHINE SERIES





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#### WH 800 SINGLE SPINDLE TRANSFORMER WINDING MACHINE.

#### **SPECIFICATION**

Program Microprocessor controlled, capable of holding 999 program sequences which may

be run independently or in selected blocks for compound windings.

**Control** Spindle drive - High torque brushless DC induction motor producing a max torque

78.5 Ncm. Traverse - Constant current driven 4-phase stepper

motor.

Application Wire guide is capable of holding four wires at the same time for multiple

windings e.g. standard EI transformers.

Package Includes wire guide, margin tape & cover tape attachments and

wire feeder system, with comprehensive manual.

Wire size 0.02 - 1.0 mm

Max pitch 10 mm

Winding

Width

110 mm (max)

Bobbin dia 110 mm (max)

Max speed 6000,

(optional)

3000 Rpm

Power AC 230 / 110V

± 10%, 50-

60hz

Dims 760 x 680 x

720 mm

Net

37 kg

Weight

CE cert. no. AE9955093 01



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#### WH 800i TWO SPINDLE TRANSFORMER WINDING MACHINE.

#### **SPECIFICATION**

**Program** Microprocessor controlled, capable of holding 999 program

sequences which may be run independently or in selected

blocks for compound windings.

**Control** Spindle drive - High torque brushless DC induction motor

producing a max torque 78.5 Ncm.

Traverse - Constant current driven 4-phase stepper

motor.

Application Nozzle type wire guides feed each spindle,

these are adjustable so that dual winding may be

carried out successfully. Each guide is fed via a tension unit.

Package Includes 2 x nozzle wire guides, 2 x tension units and cover tape

attachment, with comprehensive manual.

Wire size Typically 0.02 - 0.6 mm (1.0mm in single spindle mode).

Max pitch 10 mm

Winding

Width 110 mm (max)

Bobbin dia 110 mm (max)

Max speed 6000, 3000 (optional)

Power AC 230 / 110V ± 10%, 50-

60hz

**Dims** 760 x 680 x 720 mm

Net weight 37 kg

CE cert. no. AE9955093 01



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#### WH 752 HEAVY DUTY TWO SPINDLE COIL WINDING MACHINE.

#### **SPECIFICATION**

**Program** Microprocessor controlled, capable of holding 999 program sequences which

may be run independently or in selected blocks for compound windings.

**Control** Spindle drive - High torque brushless DC induction motor

producing a max torque of 157 Ncm.

**Traverse** Constant current driven 4-phase stepper motor.

**Application** Roller type wire guide and separate tension unit for each

spindle. Wire guides adjust for dual winding.

Package Includes 2 x roller wire guides

and 2 x tension units, with comprehensive

manual.

**Wire size** 0.3 – 1.6 mm

Max pitch 10 mm

Winding Width 110 mm (max)

Bobbin dia. 110 mm (max)

Max speed 3000 rpm

Power AC 230 / 110 V  $\pm$  10%,

50 - 60 Hz

**Dims** 600 x 480 x 900 mm

Net weight 55 kg.

CE cert. no. AE 9955093 01



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#### WH 764 FOUR SPINDLE COIL WINDING MACHINE.

#### **SPECIFICATION**

Program Microprocessor controlled, capable of holding 999 program sequences, which

may be run independently or in selected blocks for compound windings.

**Control** Spindle drive - High torque brushless DC induction motor producing a max

torque of 78.5Ncm.

Traverse - Constant current driven 4-phase stepper motor.

**Application** Nozzle type wire feeder

heads on each spindle; these have adjustable parallelism so that multiple winding may be carried out. Each spindle is fed via a separate tension unit.

Package Includes 4 x nozzle type

wire feeder heads, 4 x tension units, and comprehensive manual.

Wire size 0.02 - 0.6 mm

Max pitch 10 mm

Winding Width

100 mm (max)

Bobbin dia. 100 mm (max)

Max speed 6000 rpm

**Power** AC 230 / 110

V ± 10%, 50 - 60 Hz

**Dimensions** 1000 x 500 x 1000 mm

Net weight 60 kg

**CE cert. no.** AE9955093 01



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#### WH 766T SKEINING SIX SPINDLE COIL WINDING MACHINE.

#### **SPECIFICATION**

**Programming** Microprocessor controlled, capable of holding 999 program sequences, which

may be run independently or in selected blocks for compound windings.

**Control** Spindle drive - High torque brushless DC induction motor producing a max

torque of 78.5Ncm.

Traverse - Constant current driven 4-phase stepper motor.

**Application** Designed for thin wires that require skeining. Nozzle type wire feeder heads on

each spindle; these have adjustable parallelism so that multiple winding may be carried out. Each spindle is fed via a separate tension unit through a skeining

device.

**Automated skein function** - The winding is stopped a few turns from the end, and the machine automatically performs the skeining function. Half of the skeined length is then wound into the bobbin, and the remaining skeined length

is used for the start of the next coil.

Package Includes 6 x nozzle type wire feeder heads, 6 x skeiner units, and comprehensive

manual.

Wire size 0.03 - 0.30mm

Max pitch 10 mm

Winding Width 100 mm (max)

Bobbin dia. 100 mm (max)

Turns 9999.9 turn or

99999

Max speed 6000 rpm

Power AC 230 / 110 V ±

10%, 50 - 60 Hz

Net weight 85 kg

CE cert. no. AE9955093 01



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## WH 751 HEAVY DUTY VERSATILE SINGLE SPINDLE COIL WINDING MACHINE

#### **SPECIFICATION**

Program Microprocessor controlled, capable of holding 999 program sequences which

may be run independently or in selected blocks for complex windings.

**Control** Spindle drive - High torque brushless DC induction motor.

**Traverse** Constant current driven 4-phase stepper motor.

**Application** Bigger transformers and large wire windings, long coils, antennas.

Package Base machine with belt selectable drive ratios for 3000 and 800 max. rpm,

tensioner stand, tailstock, footswitch and comprehensive manual.

Accessories Large choice of wire feeder heads and tensioners, taping attachments, variable

speed foot pedal

Wire size: 0.02 - 3.0 mm

Max pitch: 10 mm

Bobbin dia: 200 mm (max)

Winding width: 300 mm (max)

700 mm (option)\*

Net weight: 58 kg

**Dims:** 950 x 520 x 600 mm

Power: AC 230/110

V±10% 50/60Hz

CE cert. no. AE 9955093 0



Max Speed (Rpm)	Max Torque (Nm)	
800 / 3000 (standard)	8.8 / 1.1	
400 / 1600**	17.6 / 2.2	

<sup>\*</sup> This machine is also available with an extended bed for coils longer than 300mm.

For examples of wire feeder heads and other accessories, please see overleaf.

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<sup>\*\*</sup> High Torque version available as an option.





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#### **WH 751 Accessories**



Roller feeder head



Digital wire tension display



Variable speed foot pedal



Multi wire feeder head with margin taping



Guide tube feeder head



Dual Servo electronic tensioner



Type "TCS~TCM"



TCL-x heavy wire tensioner



TC3L heavy wire tensioner

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#### COIL WINDING SOLUTIONS YOU CAN RELY ON









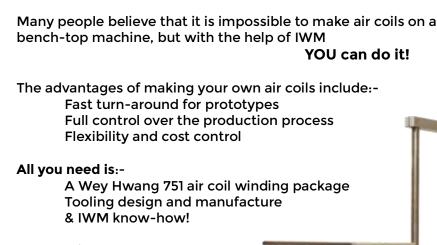
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Exact Air flow & Temperature control

are essential

#### WH 751 AIR COIL WINDER WITH HOT-AIR BONDING.



#### Package includes:-

WH-751 bobbin winding machine Tensioner and wire guide as required Safety heat-shield Heat gun Manual tailstock

Precise control of the heatgun air temperature and air flow rate, and exact positioning of the nozzle, warm the wire and the tooling just enough to guarantee perfect adhesion of wire to wire, with correct release from the tooling.

Careful design of the tooling, and Wey Hwang's advanced machine controllability, ensure reliable wire entry and exit from the coil every time.

For the price of the tooling - refundable against machine order we can create tooling and wind you some samples to demonstrate quality (and cycle time) created from this package.



As these machines are custom made, please speak to us about the coil specification you wish to produce

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#### We want to show you some examples of the capabilities of the machine.

		l		
Coil Data	Wire (mm)	ID (mm)	Turns	Cycle time (Sec)
0	0.06	13	220	35
0	0.2	62 * 36	74	40
0	0.315	13	54	25
	0.71	90	150	45
	0.18	13	243	40
	0.315	Triangular	277	45



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#### WH 520 TWO SPINDLE "FLY WINDING" MACHINE.

#### **SPECIFICATION**

Program Microprocessor controlled, capable of holding 999 program sequences which

may be run independently or in selected blocks for compound windings.

**Control** Spindle drive, high torque brushless DC induction motor producing a max torque

78.5 Ncm.

Traverse - Constant current driven

4-phase stepper motor.

Index - Constant current driven

4-phase stepper motor.

**Application** Nozzle type wire guides feed each

spindle. Each guide is fed via a separate tension unit. With the Fly winding principle, wire is wound around the stationary core - ideal for

motors.

Package Includes 2 x nozzle wire guides,

2 x tension units and cover tape attachment, with comprehensive

manual.

Wire size 0.03 - 0.6 mm

Max pitch 10 mm

Winding

70 mm (max)

Width

**Motor OD** 8 - 50 mm

Motor Height 20 mm (max)

Max speed 3000 rpm

Power AC 230 / 110V ± 10%, 50-60hz

**Dims** 700 x 350 x 100 mm

Net weight 65 kg

CE cert. no. AE9955093 01







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#### WH 521 Single spindle "Fly winding" machine.

#### **SPECIFICATION**

Program Microprocessor controlled, capable of holding 999 program sequences which

may be run independently or in selected blocks for

compound windings.

**Control** Spindle drive-High torque brushless DC induction

motor producing a max torque 78.5 Ncm. Traverse - Constant current driven 4-phase

stepper motor.

Index - Constant current driven 4-phase stepper

motor.

Application Nozzle type wire guides feed each

spindle. Each guide is fed via a separate tension unit. With the Fly winding principle, wire is wound around the stationary core - ideal for motors.

Package Includes nozzle wire guide, 1 x tension units and

cover tape attachment, with comprehensive manual.

**Wire size** 0.03 - 0.8 mm

Max pitch 10 mm

Winding

Width

70 mm (max)

**Motor OD** 8 - 140 mm

Motor Height 30 mm (max)

Max speed 3000 rpm

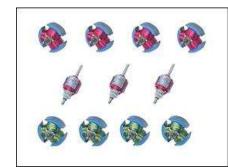
**Power** AC 230 / 110V ± 10%, 50-60hz

**Dims** 700 x 350 x 100 mm

Net weight 65 kg

CE cert. no. AE9955093 01





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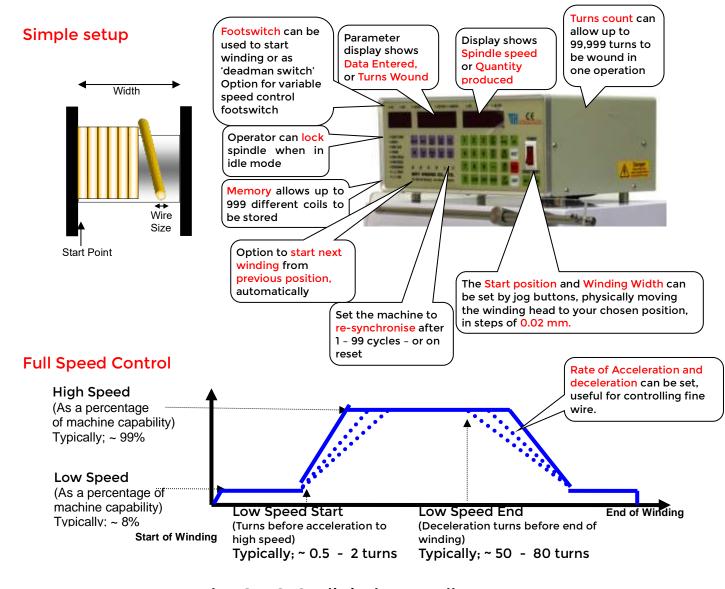
#### **BOBBIN WINDING CONTROLLERS.**

Setting up a winding machine can be a long process, especially when adjustments can only be made mechanically. For a short production run – or even a one-off prototype - a fast solution is vital.

The CWC-01 digital controller is designed for rapid programming.

Its design philosophy is based on moving as many mechanical adjustments

Its design philosophy is based on moving as many mechanical adjustments into software as possible, giving fast change-over times from one job to another.



The CWC-01 digital controller...

"full of features" & "quick to set up"

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#### **TENSIONERS - FINE WIRE, LOW COST**

#### **SPECIFICATION**

These mechanical tensioners provide precision control of winding tension for wires in the range from 0.02mm to 2.0mm.

The arm position provides feedback to the system, adjusting the main fiction wheel to regulate and maintain constant tension during the winding cycle.

Felt pads provide pre-tension and remove dust and other debris from the wire.

Ceramic eyelets and roller guides at each point of contact protect insulation from mechanical damage, and the guide wire.

The performance of these units is exceptional given the low cost, providing outstanding value for money.

\*The wire sizes shown are a guide only, for copper magnet wire at recommended "Standard Tension". The tension required in practical applications may vary considerably.



Models	Model	Model
TC3S -TCM	TCL-X/TCLL-X	TC3L

Model Type	Min Tension (grams)	Max Tension (grams	Min Wire Gauge (mm)*	Max Wire Gauge (mm)*
TC3S	2	11	0.02	0.04
TCSS-X	7	30	0.03	0.06
TCSS	9	50	0.04	0.08
TCS-E	20	130	0.06	0.13
TCS	40	200	0.08	0.16
TCM	90	500	0.16	0.25
TCL-X	200	2000	0.20	0.60
TCLL-X	1000	5000	0.50	1.2
TC3L	2000	10000	0.70	2.0

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#### **MAGNETIC TENSIONERS**

#### Providing stable & consistent tension control over long periods

Wire tension is one of the critical parameters of any coil winding process, having an influence on product characteristics, particularly DC resistance. Tensioning devices are therefore required to ensure constant wire tension throughout the winding process.

One major disadvantage of mechanical tensioning devices is that the friction materials are in contact with each other, resulting in mechanical wear. Therefore the tension may change from the set value over time.

#### **KEY ADVANTAGES OF MAGNETIC TENSIONERS**

These magnetic tensioners use a permanent magnet as a non-contact method of generating a variable friction on the main wheel of the tensioner, maintaining wire tension at the set value for long periods with no requirement for adjustment.





The arm position provides feedback to the system, adjusting the main friction wheel to regulate and maintain constant tension during the winding cycle.

Felt pads provide pre-tension and remove dust and other debris from the wire.

Ceramic eyelets and roller guides at each point of contact protect insulation from mechanical damage, and guide the wire.

The performance of these units is exceptional given the low cost, providing outstanding value for money.

Model Type	Min Tension	Max Tension	Min Wire Gauge	Max Wire Gauge
	(grams)	(grams)	(mm)	(mm)
MTCSS	4	40	0.03	0.07
MTCS	10	120	0.04	0.14
MTCM	50	400	0.08	0.25
MTCL	80	600	0.12	0.35
MTCLL	100	800	0.12	0.40

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#### MAGNETIC TENSIONERS WITH TENSION RELEASE

#### Providing stable and consistent tension control over long periods

Wire tension is one of the critical parameters of any coil winding process, having an influence on product characteristics, particularly DC resistance. Tensioning devices are therefore required to ensure constant wire tension throughout the winding process.

One major disadvantage of mechanical tensioning devices is that the friction materials are in contact with each other, resulting in mechanical wear. Therefore, the tension may change from the set value over time.



#### **KEY ADVANTAGES OF MECHANICAL TENSIONERS**

These magnetic tensioners use a permanent magnet as a non-contact methos of generating a variable friction on the main wheel of the tensioner, maintaining wire tension at the set value for log periods with no requirement for adjustment.

The arm provides feedback to the system, adjusting the main friction wheel to regulate and maintain constant tension during the winding cycle.

Felt pads provide pre-tension and remove dust and other debris from the wire.

Ceramic eyelets and roller guides at each point of contact protect insulation from mechanical damage, and guide the wire.

Ceramic eyelets and roller guides at each point pf contact protect insulation from mechanical damage, and guide the wire.



The models shown have a pneumatic cylinder (controllable from the winding machine) for tension release as required during pin wrapping operations as well as microswitch detecting arm moving up indicating wire brake.

Model Type	Min Tension (grams)	Max Tension (grams)	Min Wire Gauge (mm)	Max Wire Gauge (mm)
MTA20	4	40	0.03	0.07
MTA100	10	120	0.04	0.14
MTA300	50	400	0.08	0.25
MTA600	80	600	0.12	0.35
MTA800	100	800	0.14	0.40

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#### **TENSIONERS - CWF "DUAL SERVO"**



Combining advanced digital control techniques with unique "twin servo" technology, the CWF tensioner is the ultimate wire tension control device for coil winding applications.

Introducing our new electronic tensioner with Intelligent Digital Feeding for precision control of wire tension.

LCD display is easily legible even in poor lighting conditions.

Ergonomic keys for easy setting and adjustment

Motorised "Storage and Release" system compensates for sudden changes in wire demand and reduces wire breaks and stretching.

The system detects fluctuations in input tension; the Dual Servo Drive automatically compensates and adjusts output tension and controls wire stretch.

Wire cleaning device

Load cell continuously measures wire tension

Input wire feed roller

Output wire feed roller

The CWF device offers manufacturers of wound products an opportunity to reduce unit costs by increasing productivity, reducing cycle times and improving product quality.



The device is an ideal partner for today's high spindle speed automatic winding machines, enabling rapid acceleration from rest to high wire velocities together with reduced incidence of wire breakage, and close control of DC resistance.

The optional SMART MATRIX external terminal together with PC-LINK software allows the user to store, upload, visualise and control in graphic form all parameters and statistics, e.g. wire tension, speed and wire consumption of up to 100 CWF devices.

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#### **FEEDER HEAD OPTIONS**

#### **MULTI WIRE AND TAPE FEEDER HEAD**

- Used for producing multi-winding transformers at one workstation
- Allows use of up to 4 different wire sizes without rethreading
- Felt pads for cleaning of wire and back tension
- Includes margin tape and cover tape attachment



#### **GUIDE TUBE FEEDER HEAD**

- Ceramic parts at every wire contact point, to protect the wire coating
- Guide tube places wire accurately
- Independent micro-adjustment for more than one spindle
- Felt pad for cleaning of wire and back tension
- Takes guide tubes of inside diameter 0.3-1.2mm



#### FIXED ROLLER FEEDER HEAD WITH MICRO ADJUSTMENT

- Durable brass rollers to control heavy gauge wire
- Independent micro-adjustment for more than one spindle
- Felt pad for cleaning of wire and back tension



#### VARIABLE ANGLE ROLLER FEEDER HEAD

- Durable brass rollers to control heavy gauge wire
- Adjustable angle of feed
- Adjustable roller position enables wire pre-bend/straightening



We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

#### COIL WINDING SOLUTIONS YOU CAN RELY ON









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#### **TAILSTOCKS**









Large bobbins/solenoids and air coils need a tailstock to support the outer flange during winding.

The WH-751 machine can be fitted with either a manual or a pneumatic tailstock, and either option can be mounted or removed in minutes. All tailstocks are adjustable for left-to-right position, and are provided with a removable precision angular contact meaning.

Heavy Duty	Specifications	Pneumatic
25mm	Stroke Length	50mm
10mm	Bearing ID to locate tool	8mm
N/A	Air supply	5 Bars

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## FLOOR STANDING HEAVY DUTY BOBBIN WINDING MACHINE SERIES





## Working with local partners throughout Europe







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#### E-300W WINDING MACHINE - "Industry 4.0"

#### **DESCRIPTION**

**Small-sized bench winding machine** Equipped with:

- Traverse head
- Sturdy base
- Tailstock with security lock,
- Guider system
- Controlled by numeric PLC and electronic programming.
- Safety shielded foot pedal (Optional).

This machine is designed for the manufacture of solenoids, inductors and transformers, (with capacity to make multiple windings).





#### **TECHNICAL CHARACTERISTICS**

Max. Winding length	
Max Wire pitching Ø	99 mm
Max. distance between points	370 mm
Max. Winding Ø	240 mm
Face plate diameter	60 mm
Guider precision	0,001 mm
Spindle Resolution	
Main shaft motor	Brushless servomotor
Guider motor	Brushless servomotor
Power Supply	230Vac - 50/60 Hz
Dimensions (L*W*H)	1000 x 520 x 310 mm
Net Weight (approx.)	140 Kg

#### **TORQUE AND SPEED**

There are many versions of the drive system, please contact your local representative to discuss your requirements.

E300W		E300W -1 speed Direct Drive		E300W -1 speed Direct Drive	
SPEED (rpm)	TORQUE (Nm)	SPEED (rpm)	ED (rpm) TORQUE (Nm)		TORQUE (Nm)
13.000	1	200	19	300	50
2.750	5				

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E30	E300W R E300W N E300W G		E300W R		OW G	E300	)W G+
SPEED	TORQUE	SPEED	TORQUE	SPEED	TORQUE	SPEED	TORQUE
(rpm)	(Nm)	(rpm)	(Nm)	(rpm)	(Nm)	(rpm)	(Nm)
9.000	2	6.000	3	3.000	5	1.600	9
6.000	3	3.000	6	1.500	10	800	18
3.000	6	1.500	12	750	20	400	36

#### **PROGRAMMING CHARACTERISTICS**

	7inch (178mm) Colour Touch Screen Max. 1,000
No. of windings per coil	10,000 program & 200 winding per program
-	when connected to a local network virtually infinite storage
Software language	Main European
Type of programming	CNC
	ug) RJ45
Delivery Time	60 Days from order confirmation

#### **KEY BENEFITS OF THE NEW E-300W**

- The new range of solutions has been designed in accordance with the "Industry 4.0"
   concept, providing capabilities of traceability, remote control and process monitoring
- The E-300W provides a combination of high performance with reduced cost and a "stateof-the art" control system.
- The new hardware platform reads variables and parameters in "real time" and makes them available online.
- Operators, managers, quality controllers and engineers can view the "live" information via the Internet from anywhere in the world using any "smart" device for example, a laptop, tablet computer or even a Smartphone.

#### **BUILT-IN NETWORK FUNCTIONALITY**

- Save and recall programs from the main company server.
- Check the status of the winding machine from anywhere in the world.
- Setup using the touch screen or remote control using laptop or tablet.
- Programs are easily searched and selected.
- Easy back up to Cloud storage.

TAPES.	Propert	Frances	Date	Blat	Roe	- Trop.	ties	Dies	Fitte	Cred Print
14.	Inadetect	TALSE	3019-11-13	16:46:26	16.50,18	thetts	2293.9	0.0	0.36	Breve 231
56	prodetest.	TALSE	2019-11-13	15.46.26	16.52.38	5121	2291.9	. 88	1/38	PROPERTY.
4	865	THUE	2016-11-12	12:21:51	19,36-58	18036000	99.2	99.0	0.46	0000034
14	act.	TRUE	2015-11-12	12:21:51	163438	191154m30	96.0	96.0	0.46	0000014
56	lect.	THUE :	2019-11-12	12 21 51	12 22 21	304	953	96.0	0.46	0000014
54	jed-	THIE	2019-11-00	14:57:31	12:21:42	121/21/142	86.2	96.0	0.66	0000014
54	jed.	SHUE	2015-11-00	(4.57.31	1221141	12h21mil1	36.3	96.0	0.40	0000034
54	805	THIE	2019-11-06	145731	122139	12/12/19/38	36.1	36.0	0.46	0000034
54	jed	391/00	2019-11-00	14/57/31	14.58.32	314	36.8	96.0	0.46	00000134
51	jed.	FALSE	2019-11-06	14:57:08	1457:27	791	95.7	0.0	0.46	0000034
£1.	345	FALSE	2019-11-00	14:57.00	14.57.25	191	36.0	8.0	0.46	0000034
12	ad	79166	2015-11-00	14:50:28	14,50.58	30x	95.2	95.0	0.46	0000034
51	lech.	FALSE	2019-11-06	14.56.26	14.59.29	Omi-	96.3	0.0	0.46	0000034
50	act	THUE	3016-11-00	14.55.57	16 66 12	. 30s	86.2	90.0	0.66	0000034
49	905	TRUE	2019-11-00	14:54:17	14:55:34	testifs	95.0	95.5	0.46	10000534

This is the first in a new line of machines from ERASAN - "value engineered" without losing the focus on maximum performance.

We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

#### COIL WINDING SOLUTIONS YOU CAN RELY ON







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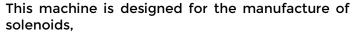
#### E-300 WINDING MACHINE

#### **DESCRIPTION**

Small Sized Bench Winding Machine Equipped with: -

- Traverse head
- Sturdy base
- Tailstock with security lock,
- Guider system
- Controlled by numeric PLC and electronic programming.
- Safety shielded foot pedal (Optional).





inductors and transformers, (with capacity to make multiple windings), and small distribution and power transformers.





There are various configurations of speed ranges, up to 9,000 rpm (depending machine version). This produces a fast cycle time for high turn primary windings.

#### **TECHNICAL CHARACTERISTICS.**

Max. Winding length	390 mm
Max Wire pitching	99 mm
Max. distance between points	500 mm
Max. Winding	350 mm
Face plate diameter	80mm
Guider precision	
Spindle Resolution	
Main shaft motor	(Brushless servomotor) 6Nm/3000 r.p.m
Guider motor	(Brushless servomotor). 1.4NM
Power supply	
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help and advice on all aspects of coil winding, from tooling d	lesion to machine choice and set-up.

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<b>Torque</b>	and s	peed
---------------	-------	------

Winding shaft speed \_\_\_\_\_ 3000 rpm / 6000 rpm / 9000 rpm

Torque and speed (\*\* There are three version of this machine each having three belt positions)

Belt	G version -	3000 RPM	N version -	6000 RPM	R version - 9000 RPM		
Position	Speed (Rpm)	Torque (Nm)	Speed (Rpm)	Torque (Nm)	Speed (Rpm)	Torque (Nm)	
1	3000	6	6000	3	9000	2	
2	1500	12	3000	6	6000	3	
3	750	24	1500	12	3000	6	

#### PROGRAMMING CHARACTERISTICS.

User interface	7inch (178mm) T.Screen Color
No. of programmable windings	Max. 10,000 (per SD card)
No. of windings per coil	Max. 200
Software language	Main European
Type of programming	CNC
Delivery Time	60 Days from order confirmation

#### **KEY BENEFITS OF THE NEW E-300**

#### **Energy Efficiency**

The "green efficiency" design concept of this machine reduces power consumption. All motors are synchronous and each movement has been optimised for improved energy efficiency.

#### Simple & effective machine operating software

The all-new machine operating software has an intuitive graphical interface and a 7-inch (178mm) full colour touch screen with user's choice of language - making programming a new coil easier than it has ever been.

Programs are stored on solid-state media - directly to a standard SD memory card. This allows a fast and simple backup, with the option of Windows  $^{\text{TM}}$  software -

"WINbobbin" - for full PC connectivity.

	A CONTRACTOR OF THE PARTY OF TH	Name and						M Inches	A	With Laws
Series	Propen	Entroy	DAME	Start.	2ML	Title	Tyres.	Store	PASS	Entrac
58	Problems	FALTE:	2019-11-12	164928	16:52:19	Tiedhi	2293.0	9.9	0.78	\$9995221
34	Nobbest	FALSE	2819-11-12	104030	16 52 33	BHZ1	2291.0	0,0	0.08	\$6694135
55	917	TRUE	2819-11-12	12:21:31	10.30.58	10/09/05	10.5	96.0	0.46	(0000034
51.	kd.	TRUE	2899-11-12	12/21/81	23438	10/34:10	39.0	96.6	0.46	0000034
21	act.	TRUE	2019-21-12	12,21.51	12.22.21	.20x.	96.0	96.0	-0.46	00000034
54	incl .	1905	2019-11-06	14.57.31	12:21:42	12/21942	99.7	953	0.46	0000634
54	945	7906	2019-11-06	14:57:31	1221.41	12/21/641	86.0	95.0	0.40	0000034
54	act.	TRUE	2019-11-06	14:57.31	12.21.38	QQ to be	95.0	96.0	2.46	90000534
54	pct.	TRUE	2019-11-08	1437.31	1438.00	3%	98.0	98.0	0.46	0000034
45	345	FALSE	2019-11-08	14.57 29	14,67,27	194	95.0	0.0	0.46	10000034
55	act	FALSE	2819-11-06	14 57 19	493	164	96.0	9.0	0.40	10000834
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\$1	act	FALSE	2019-11-08	1419-28	145628	les.	94.0	0.0	0.46	10000834
51	act	TRUE	2019-11-06	14.55.37	14.56.12	364	16.0	96.0	0.46	0000014
41	act	TRUE	2019-11-05	14.54.17	14.55.34	16/176	99.0	0.20	1.46	0000534

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#### COIL WINDING SOLUTIONS YOU CAN RELY ON







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#### **E-600 WINDING MACHINE**

#### **DESCRIPTION**

## Medium-sized "Power house!" Winding Machine

#### Equipped with: -

- Traverse head
- Sturdy base
- Tailstock with security lock,
- Guider system
- & Safety shielded foot pedal.
- Controlled by numeric PLC and electronic programming.

This machine is designed for the manufacture of solenoids, inductors, distribution and power transformers, with capacity to make multiple windings and a wide range of wire sizes.



There are various configurations of speed ranges, (depending machine version). This produces a fast cycle time for high turn primary windings.

#### **TECHNICAL CHARACTERISTICS**

	_
Max. Distance between points	650mm
Max winding length	480mm
Max. Ø of winding.	600mm
Height from centre face plate to machine base	300mm
Tailstock Morse Cone	N° 2
Guider programmable resolution	0,001 mm
Spindle Resolution	0,01 turns
Main shaft motor (Parker)	
Guider motor (Brushless servomotor)	1.2Nm
Weight (approx)	250 Kg
Electrical source	380 V + N + GND- 50/60 Hz
Wire guide	Included
Machine aluminium base table (with electrical cabinet)	Included
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#### **TORQUE AND SPEED**

(\*\* There are many versions of this machine, two examples are shown here)

Belt Position	Version -	400 RPM	Version - 3	00 RPM
	Speed (Rpm)	Torque (Nm)	Speed (Rpm)	Torque (Nm)
1	420	85	300	130

#### PROGRAMMING CHARACTERISTICS.

7inch (178 mm) Color Touch Screen
Max. 10,000 (per SD card)
Max. 200
_ (English/German/Spanish/Czech/Hungarian/ Norwegian )
CNC
60 Days from order confirmation

#### **KEY BENEFITS OF THE NEW E-600**

#### **Energy Efficiency**

The "green efficiency" concept of this machine reduces power consumption. All motors are synchronous and each movement has been optimised for improved energy efficiency.

#### SIMPLE & EFFECTIVE MACHINE OPERATING SOFTWARE

The all-new machine operating software has an intuitive graphical interface and a 7-inch (177mm) full colour touch screen - with user's choice of language - making programming a new coil easier than it has ever been.

Program storage is now done directly to a standard SD card. This allows a fast simple backup, with the option of windows ™ software, WIN bobbin for full PC connectivity

Surface	Propen.	Enstead	DATE:	Start.	216	Tires	Turns	Store	PAIN	Entrac
511	Prodefect	FALSE	2019-11-13	164926	16:10:19	Thedite	2293.0	0.0	0.08	\$10001221
31	(Nodelet)	FALSE	2819-11-12	104030	19 52 38	90121	2295.0	0.0	0.08	\$0004110
55	pt.7	19100	2899-15-12	122131	56.36.58	101/09/105	16.5	.96.0	0.46	(0000034
51	kd.	TRUE	2899-11-12	12/21/81	31438	10/34120	99.0	96.0	0.46	0000034
51	pt.5	1808	2019-21-12	122151	12:22:21	30x	96.0	96.0	-0.46	00000034
54	inc1	79VE	2919-11-06	14.57.31	12:21:42	121219142	99.0	952	0.46	0000534
54	912	791/0	2019-11-06	14.57:31	1221.41	121211141	86.0	96.2	0.46	00000534
54	pc5	TRUE	2019-11-08	14:57.31	12.21.38	1272 Int St	98.0	96.0	2.46	00000534
54	act.	TRUE	2019-11-08	14 57 31	1438.00	314	96.0	98.0	0.46	0000534
55	345	FALSE	2019-11-08	14.57 29	14,67,27	198	96.0	0,0	0.46	10000034
55	pc5	FALSE	2819-11-06	14 57 19	14:57.25	184	96.0	9.0	2.46	10000834
12	act :	TRUE	2019-11-08	14.56.28	14,56.58	306	86.0	95.0	0.46	10000834
51	pcl.	FALSE	2819-11-08	1419-28	14.5628	Drine .	96.0	0.0	0.46	0000834
51	act	TRUE	2019-11-06	14.55.37	14.56.12	364	16.0	963	0.46	0000034
46	pcl .	TRUE	2819-11-08	14.54.17	14.55.34	186779	99.0	96.0	1.46	0000534

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#### E-900 SERVOTECH WINDING MACHINE

#### **MEDIUM-SIZED BENCH WINDING MACHINE**



#### Equipped with: -

- · Face plate.
- Guider system
- Safety shielded foot pedal.
- CNC motion controller and simple electronic programming.
- Tailstock with security lock.
- Traverse head
- Sturdy base constructed from welded steel for strength and durability.

State-of-the-art winding machine. The E-900 is a floor standing style winding machine, medium sized to be easily placed in a factory or workshop, equipped with head and bench in galvanised steel and covered in stainless steel, fixation plate, tailstock with security closure, guider system protection and pedal. With highly advanced features, including, energy efficient servo motors, and intelligent torque boosting technology.

The applications of this machine include the manufacture of solenoids, inductors, and transformers, with capacity to make multiple windings and even distribution and power transformers from 10 to 600 KVA.

The wide range of velocities, up to 400 r.p.m, permits primary and secondary windings on the same machine, thus reducing the production processes.

The concept and design facilitates the placement of necessary accessories such as end-fillers, insulation paper or foil, of various types.

#### **TECHNICAL CHARACTERISTICS**

Wire $arnothing$ and profile wire	0.01 - 10mm
Max winding length	800 mm
Max distance between points	900 mm
Max Winding Ø	560 mm
Guider precision	0.01 mm

<sup>\*</sup> The standard machine is available with speed torque shown below, however please contact us should you require other ratings

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	1500 RPM	version**
	Torque	Speed
Belt Position	(Nm)	(Rpm)
1	165	0-400
2	300	0-200

Main shaft motor Brushless Servo Motor Guider motor (Brushless) 0.4HP / 300W (2.2Nm) Air supply 6 Bar - low consumption Electrical supply 3 x 380Vca - 50/60 Hz

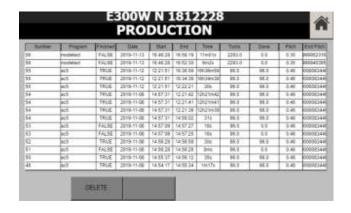
#### **PROGRAMMING CHARACTERISTICS**

User interface (touch screen)	10inch (254mm)
No. of winding programs (per SD card)	Max. 10,000
No. of windings per coil	Max. 200
Type of programming	
Typical delivery time	
•	(Please confirm at time of order)

#### SIMPLE & EFFECTIVE MACHINE OPERATING SOFTWARE

The all-new machine operating software has an intuitive graphical interface and a 10-inch (254mm) full colour touch screen - with user's choice of language - making programming a new coil easier than it has ever been.

Program storage is directly to a standard SD memory card. This allows a fast, simple program backup, with the option of Windows ™ software, "WINbobbin" for full PC connectivity.



#### **ACCESSORIES**

The wide range of accessories designed to work with the E-900 includes guiders for round and square wires, wire tensioning and de-reeling systems, paper and insulation material feeders.

We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

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#### E-1200W WINDING MACHINE

#### **DESCRIPTION**

The E-1200 is a floor standing style winding machine, medium sized to be easily placed in a factory or workshop, equipped with head and bench in galvanised steel and covered in stainless steel, fixation plate, tailstock with security closure, guider system protection and pedal.

The machine is governed by numeric control and CNC electronic programming.

This machine is specially designed for the manufacture of solenoids



and power and distribution transformers from 10 to 1.200 KVA, using aluminium or copper wires, including rectangular or flat wires with a special guider.

The wide range of velocities, up to 500 r.p.m, permits primary and secondary windings on the same machine, thus reducing the production processes.

The concept and design facilitate the placement of necessary accessories such as end-fillers, insulation paper or foil, of various types.

#### **TECHNICAL CHARACTERISTICS**

Wire $\varnothing$ (and profile wire	e) 0.01 - 30 mm
Max winding length	1.100 mm
Max distance between	points 1.200 mm
Max winding $\varnothing$	800 mm
<b>Guiding precision</b>	0,01mm
Winding shaft speed	500/250 rpm*
Main shaft motor	Brushless Servo Motor
Guider motor (Brushle	ss) 0.4 HP / 300 W
Power supply	3 x 380Vca-50/60Hz
Max load between poi	nts (coil weight)

1,000 Kgs Approx machine weight 1,200 Kgs

<sup>\*\*</sup> The head has two belt positions; the position directly depends on the product to be wound. E.g. Wire cross-sectional area & Coil diameter > torque required.

Belt	High Speed		Low S	-
Position*	500 RPM		250 F	
	Torque	Speed	Torque	Speed
	(Nm)	(Rpm)	(Nm)**	(Rpm)
1	172	500	413	242
2	1033	96	1447	69

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<sup>\*</sup> The standard machine is available in two models, high speed and low speed





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**Email:** enquiry@ingridwest.co.uk

#### **PROGRAMMING CHARACTERISTICS**

User interface (touch screen)	10inch (254mm)
No. of winding programs (per SD card)	Max. 10,000
No. of windings per coil	Max. 200
Type of programming	
Typical delivery time (please confirm at time of order)	

#### SIMPLE & EFFECTIVE MACHINE OPERATING SOFTWARE

The new range of solutions has been designed in accordance with the "Industry 4.0" concept, providing capabilities for traceability, remote control and process monitoring.

The E-1200W provides a combination of high performance with reduced cost and a "state-of-the art" control system. The new hardware platform reads variables and parameters in "real time" and makes them available online.

Operators, managers, quality controllers and engineers can view the "live" information via the Internet from anywhere in the world using any "smart" device - for example, a laptop, tablet computer or even a Smartphone.

#### **BUILT-IN NETWORK FUNCTIONALITY**

- Save and recall programs from the main company server,
- Check the status of the winding machine from anywhere in the world.
- Setup using the touch screen or remote control using laptop or tablet.
- Programs are easily searched and selected.
- Easy back up to Cloud storage.

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56	mubbled -	FALSE	2019-11-13	16.4025	19.58.19	the6ts	2093.0	8.0	1.16	PRIVESZ316
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10	act.	TRUE	2019 11-12	1221.81	15.34.39	10124103	16.7	16.1	1.40	00008348
11	pt5	1976	2019-11-12	122535	12.22.21	206	18.0	18.1	1.6	000003144
94	945	1916	2019-11-06	14:57:31	1221.42	QN21n42	26.5	16.1	1.46	000003440
54	815	191,6	2019-11-08	19.57.35	1221.41	12521941	94.0	1.61	146	00002344
14	915	TRUE	2019-11-0E	1457.31	12 21 30	12521939	96.0	16.1	1.40	00000344
54	act	7946	2019-11-06	93731	14 59 52	311	16.2	81	1.46	00000144
1	ach	FALSE	2019-11-08	14.57.09	14.57.27	199	18.0	1.0	3.46	000003440
9	act.	FALSE	2019-11-06	14:57.09	1437.25	79	16.1	83	149	00000144
0	805	1914	2019-11-06	1430.29	14.16.50	301	16.0	181	1.40	00000348
51	is5	FALSE	2019-11-08	1450.26	1439.20	Ditto	19.2	. 89.	1.46	0000E144
56	act	TRUE	2019-11-06	14.55.37	1636.12	.20	16.1	34.1	1.40	000003440
48	ect.	1916	20年11年	19.58.17	14,55,74	100171	36.0	98.1	8.46	00002344

#### **ACCESSORIES**

The wide range of accessories designed to work with the E-1200W includes guiders for round and square wires, wire tensioning and de-reeling systems, paper and insulation material feeders.

We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

COIL WINDING SOLUTIONS YOU CAN RELY ON









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#### **E-2500 WINDING MACHINE**

#### **DESCRIPTION.**

The EZ-2500 is a floor standing style winding machine, Large size to be easily placed in a factory or workshop, equipped with head and bench in galvanised steel and covered in stainless steel, face plate, tailstock with security closure, guider system and foot pedal.



The machine is governed by numeric control and CNC electronic programming.



This machine is specially designed for the manufacture of re-winds, large rotor coils for use in wind turbine industry, using aluminium or copper wires, including rectangular or flat wires with a special guider.

The concept and design facilitates the placement of necessary accessories such as end-fillers or insulation paper in foil, of various levels.

#### **TECHNICAL CHARACTERISTICS.**

Wire Ø	0.01 - 30 mm
Winding speed	
Max. winding length	
Max. Distance between points	2.500 mm
Spindle height (from floor)	
Tailstock movement	1.500 mm
Guider precision	
Main shaft motor	
Guider motor	0,3HP (Brushless)
Power supply	3 x 380Vca - 50/60 Hz
Air supply	
Weight	
PROGRAMMING CHARACTERISTICS.	
Standard with the machine, turns counter, simple program	
By request, electronic control	
Max. No. of programmable windings	
Max. No. of windings per coil	
Type of programming	
Delivery Time	

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help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.





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E 1200 C

for

#### E-1200 C WINDING MACHINE

#### **DESCRIPTION**

Robust and reliable, the E-1200C winding machine is a floor standing Style winding machine.

The sturdy chassis is manufactured from heavy gauge welded steel durability, painted for ease of cleaning and maintenance.

The machine consists of a headstock with speed change, face plate, and pedal.

Due to the intended application of this machine, it does not have a bench or wire guiding system



This machine is specially designed for the manufacture of solenoids and power and distribution transformers from 10 to 1.200 KVA, using aluminium or copper wires, including rectangular or flat wires.

#### **TECHNICAL CHARACTERISTICS**

Maximum winding shaft speed	500 r.p.m
Winding shaft slow speed	0 - 20-60-120 r.p.m
Maximum coil diameter	1,600 mm
Maximum torque (low speed)	80 Kgm
Main motor	5 HP (3.7 kW)
Power supply	3 x 380Vca - 50/60 Hz
Air supply	6 bar (minimum)
Delivery	90 DAYS from confirmation of the order.

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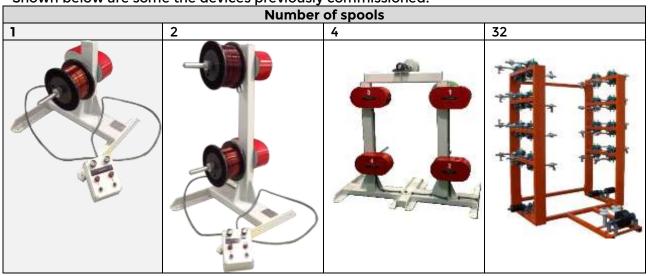
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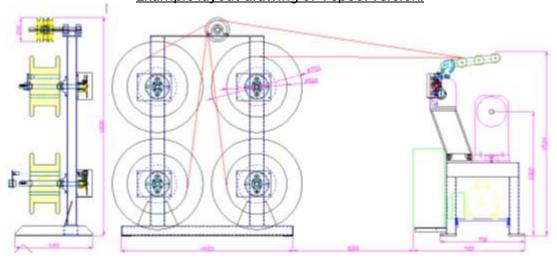
#### **ERASAN SPOOL TENSIONING SYSTEM - (DP series)**

The Erasan range of heavy duty coil winders often require a tensioning device mounted behind the machine. For wire sizes greater than 1.0mm the best method is to apply a braking force to the supply spool itself and not the wire.

Shown below are some the devices previously commissioned.



Example layout drawing of 4 spool version.



#### **TECHNICAL CHARACTERISTICS**

Number of spools	1, 2, 4, 32 versions available
Wire ∅	0.01 - 99 mm
Spool Diameter _	up to 500/750 mm
Braking method _	pneumatic controlled hydraulic caliper
Delivery time	60 Days from order confirmation

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#### **4 COIL DE-SPOOLER - DESCRIPTION**

This is a floor standing de-coiling machine, medium sized and easily placed in a factory or works. Profile wire de-coiling device, two levels, 4 spool capacity, with hydraulic disc braking system pneumatically controlled. All controls brought up to the machine, as shown below with hydraulic gauge indicators, and tension release switch:-



#### **TECHNICAL CHARACTERISTICS**

Max Weight per coil	250 Kgs
Max coil (spool) Ø	750 mm
Max No Spools	4 pcs
Dlease note that 1.2.8.8.32 speed versions are also available	

Please speak with your local representative for further information or custom requirements.

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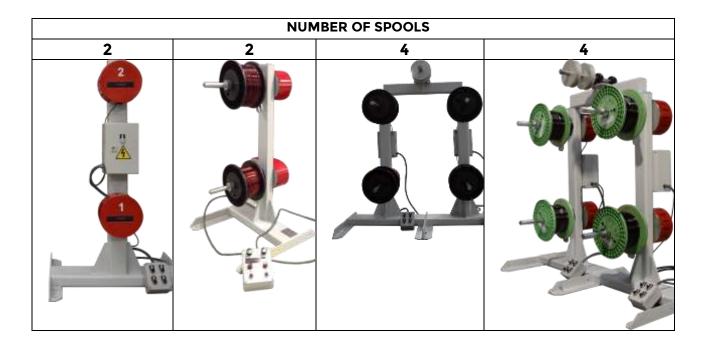
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# **ELECTRIC SPOOL TENSIONING SYSTEM (DPE Series)**

#### **DESCRIPTION**

The Erasan range of heavy duty coil winders often require a tensioning device mounted behind the machine. For wire sizes greater than 1.0mm the best method is to apply a braking force to the supply spool itself and not the wire.

Shown below are some the devices previously commissioned.



#### **TECHNICAL CHARACTERISTICS**

Number of spools	1, 2, 4, 32 versions available (others configurations on request)
Wire	0.01 - 99 mm
Spool Diameter	up to 500/750 mm (others configurations on request)
	Electric brake (pneumatic device on request)
Electric brake features:	
Max tension	35 Nm*
Max. speed	2.000 rpm
Max. service temperature	70 °C
	230 V
	25 W
Delivery time	

<sup>\*</sup>Other brake sizes available on request

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#### 4 COIL DE-SPOOLER - DPE -4 - DESCRIPTION

This is a floor standing de-coiling machine, medium sized and easily placed in a factory or works. Profile wire de-coiling device, two levels, 4 spool capacity, The brake pulley is controlled by electrically powered magnetic particle braking system, giving highly repeatable settings, adjustable by potentiometer or integrated digitally into the main winding machine software.

All controls brought up to the machine, as shown below with Pot and tension release switch. Alternatively, the tension can be controlled from the winding machine's operating software, setting the desired tension independently for each winding and stored with that program / coil setup.



#### **TECHNICAL CHARACTERISTICS**

Max Weight per coil	250 Kgs
Max coil (spool) Ø	750 mm
Max No Spools	4 pcs
Standard spool shaft Ø	
Dimensions1	750 X 780 X 1600 mm
Net weight	260 Kg

Please note that 1, 2, 8 & 32 spool versions are also available Please speak with your local representative for further information or custom requirements.

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# SERVO DRIVEN SPOOL TENSIONING SYSTEM (DPSD Series -GB option)

The Erasan range of heavy duty coil winders often require a tensioning device mounted behind the machine. For wire sizes greater than 1.0mm the best method is to apply a braking force to the supply spool itself and not the wire.

To meet the growing customer demand, working to improve control of the higher wire tensions required for larger wires and profile.

# A new generation in profile wire tensioning and de-coiling.

Working similar to a foil machine in "torque following" mode, the torque to the winding axis is monitored and the reverse torque to driven de-coiler is controlled according to the required tension.

The operator can program a digital tension value that is measured and kept constant during the winding cycle.

Shown below: a previously commissioned device.



The range is available in standalone fixed units similar to the DP series of 1,2,4 up to 32 spool varieties.

#### **GB - (GUIDER BASE) OPTIONS**

However as shown above, there is the option to mount the whole de-coiler onto a ballscrew carriageway.

Reducing factory space requirements, the servo-driven de-coiler monitors the exact position of the guider on the machine, so the spool moves the same distance and with the same speed as the machine guider.

### Example layout drawing of 4 spool version - fixed.

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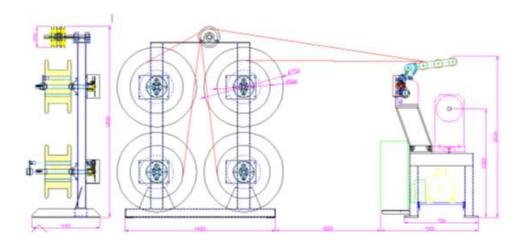




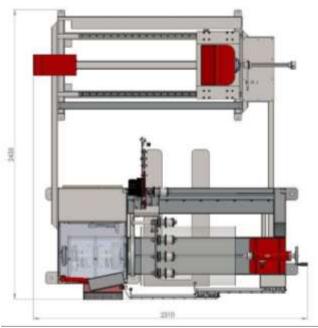


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Example layout drawing of 1 spool version - Guider Base (reduced footprint).



#### **TECHNICAL CHARACTERISTICS**

	1, 2, 4, 32 versions available 0.01 - 99 mm
	up to 500/750 mm
Standard spool shaft	
Tension control method	Servo motor "torque control"
Max torque (for DP1-SD model)	
Power supply (for DP1-SD model)	2 Kw (others configurations on request)
Max weight per coil	250 Kg
Delivery time	60 Days from order confirmation
Please speak with your local represer requirements.	ntative for further information or custom

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# **TH3- ELECTRONIC TENSIONER**

(For Heavy Duty Winding Machines)

#### **DESCRIPTION**

The TH3 is a floor standing style heavy duty tensioner. Suitable for wires 0.5 to 3mm in diameter.

For maximum stability, provision has been made to enable this unit to be bolted to the floor.

The wire is perfectly guided as soon as it leaves the supply spool, through ceramic eyelets with soft felt pads and a set of adjustable pulleys to give the desired pre-tension, according to the thickness of the wire and without damaging the insulation.

The brake pulley is controlled by electrically powered braking system, giving *highly repeatable settings*, adjustable by digital potentiometer or integrated into the main winding machine software.

There are 2 different versions of the tensioner TH3.

The **TH3-S** (Standalone) version - This version is ideal to mount onto any machine; also available with the support stand.





The supply voltage is 230V single phase and the maximum power consumption is 25W.

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In the **TH3-I** (integrated) **full version**, the tensioners are integrated with an Erasan winding machine and its controller.



The tension is controlled from the machine's operating software, setting the desired tension independently for each winding and stored with that program / coil setup.

#### **SPECIFICATION**

Model	TH3-S	TH3-I
Control Box	Yes	No (in winding machine program)
Floor stand	Optional	Optional
Erasan Machine Bracket	Optional	Optional

500 mm
650 mm
ELECTRICAL
12Nm
137 mm
18 Kg
2000 rpm
40 rpm
70° C
220Vac - 50/60 Hz
670x540x1755
95 Kg
30-60 Days from order confirmation
(Please confirm at time of order)

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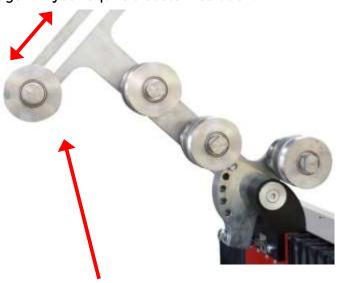


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# **PROFILE WIRE GUIDER GP1 - SINGLE WIRE**

The Erasan range of heavy duty coil winders require a guide head system suitable for the application to be wound, many factors influence the choice of guide head, from wire size to wire type / profile etc. Shown below is the single profile wire guider, please do ask your local agent if you require a custom solution.

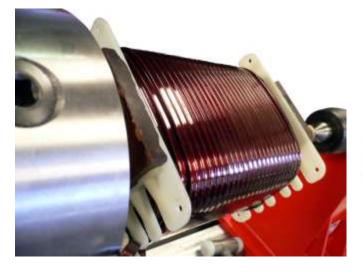


The front roller is also adjustable in height / angle. This "negative effect" roller can be used to produce an upward curve on the wire.

When wound onto the flat sides of the bobbin the inverse curve of wire presses against the long flat edges of the bobbin, reducing the bow effect

The guide head angle is adjustable; Course adjustment in steps of 18° Fine adjustment from bolt underneath

The guide head has four profile rollers - adjustable width & wire insulation protecting Teflon side walls, as well as outer "V" groove roller for round wire





Standard Max wire width 40mm Option GP1-D Max Wire width 80mm

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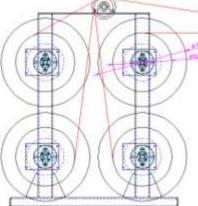
# **PROFILE WIRE GUIDER GP2 - MULTIPLE WIRES**

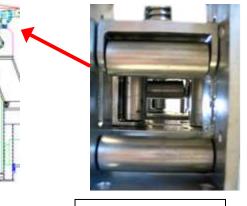
The Erasan range of heavy duty coil winders require a guide head system suitable for the application to be wound, many factors influence the choice of guide head, from wire size to wire type / profile. Shown below is the multi profile wire guider, however please do ask your local agent if you require a custom solution.





This guide has at the rear, a series of four parallel roller sets, each is mounted at 90° to the previous one and independently adjustable.

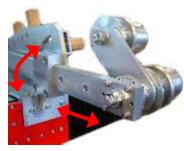




The reason for this is to bring multiple wires coming from different supply spools together - forming a single packet to then wind onto the core / bobbin.

The front section of the guider head has two profile rollers, adjustable width & Teflon side walls to protect the wire insulation.

Standard\* Max packet size 55 mm \* 55 mm \*larger options available



The front roller is also adjustable in angle. This "negative effect" roller can be used to produce an upward curve on the wire, meaning when wound onto flat sides of bobbin, the inverse curve of wire presses against the long flat edges, reducing the bow effect



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# RANGE OF EXPANDABLE MANDRELS

# **ROUND style for heavy duty winding machines**

Customers often need to wind foil or wire onto a mandrel which can be expanded during the winding process and then collapsed to allow the finished coil to be removed. Iron cores or laminations can then be inserted later in the production process. Shown below are some examples of the previous designs we have made.





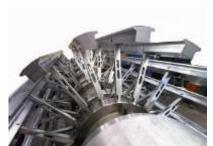


As can be seen in the photos, the expanding mandrel are finished with aluminium bars and wood mounted on the outer diameter. Each mandrel has a built in gearbox which is driven by a pneumatic hand tool, which expands the mandrel for winding and then collapses it for easy removal of the coil at the end of the winding process. Larger versions can be provided with an expanding and contracting mechanism that is powered by hydraulics.

#### **TECHNICAL CHARACTERISTICS**

Dia	meter	Length
Min	Max	
140	200	1100
250	425	1800
400	650	1800
500	820	2000
820	1300	2000

However, please do note that this is only a representative range, and nearly 90% of these mandrels are made to customer order and specifications.







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#### **RANGE OF EXPANDABLE MANDRELS -**

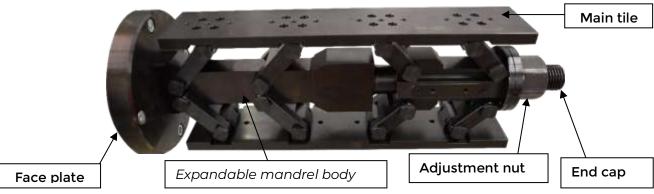
# **RECTANGULAR** style for heavy duty winding machines



The new generation of expandable mandrels provide the possibility of winding with rectangular, circular or ovoid shape coils, without changing mandrel.

Allows winding with round & flat / profile wires as well as foil. Over the main tile the customer can assemble supplements with geometries according to the application.

Simple manual opening & can be mounted in cantilever or between points.

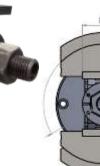


Both the main body and tiles are made of treated steel which ensures robustness and protection against rust and corrosion.

Wide range of opening add to its' versatility.



Additional supplements can be mounted on the main mandrel to allow a variety of rectangular or ovoid cores to be wound.





Strong and robust design leads to high loading capacity

Faceplate & Tailstock coupling as well as the main dimensions of expandable mandrel are configurable to your requirements.



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# **FOIL WINDING MACHINE SERIES**

One of the latest developments at Erasan Technology is the range of foil winding equipment,

with high-tech control features, improving quality of winding and reducing maintenance to a minimum.

Shown below are some of the machines already delivered along with concept drawings showing a basic machine layout.

There are various configurations possible, up to 1500mm width. This allows winding of primaries easily and with very short production cycle times.







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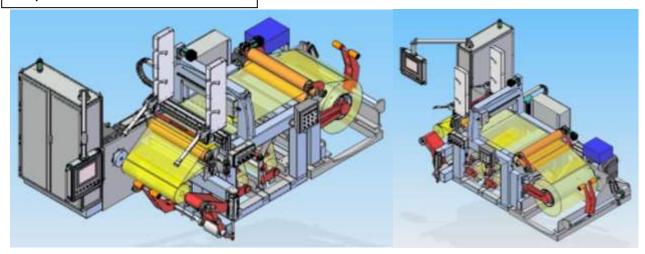


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The system incorporates high torque Parker servo motors with integrated reduction drive systems for precision control.

Expanding mandrels are made in house, to suit the exact requirement of the machine and product to be made.





Additional processes and stages of automation can be included in the function of the machine according to your requirements.

Shown here is a cold pressure welding station, used for fixing the terminal leads "in-line" during the winding.

# **TECHNICAL CHARACTERISTICS**

Various configurations of machine are available depending on your application requirements, Eg:1 foil, 1 insulator // 1 foil, 2 insulators // 2 foils, 2 insulators.

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# STRIP FOIL WINDING MACHINE SERIES

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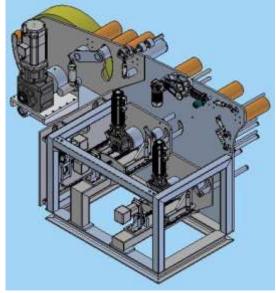
Primarily used for winding of Cast Resin / Air Cooled transformers, the machines shown below are some of those already delivered, along with concept drawings showing a basic machine layout.

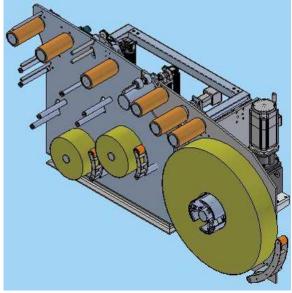
There are various configurations possible, with coil widths up to 2.3M with a winding area of **1.8M**. This allows winding of a wide range of transformer sizes and number of strips as required.











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Each mandrel's foil or insulation has independent traversing system, with feedback from an edge sensor, producing perfectly aligned coils

The system incorporates high torque Parker servo motors with integrated reduction drive systems for precision control.

Additional processes and stages of automation can be included in the function of the machine according to your requirements.

Shown here is a cold pressure welding station, used for fixing the terminal leads "in-line" during the winding.



# **TECHNICAL CHARACTERISTICS**

Various configurations of machine available depending on your application requirements. Eg. 1 foil, 1 insulator // 1 foil, 2 insulators.

Max foil width	25 up to 150 mm
	0.1 up to 1.5mm-Al (1.2mm-Cu)
	up to 6,000 mm
	up to 2,300 mm
Max coil width	up to 1,800 mm
Max coil Diameter	up to 1,300 mm
	up to 2.000 Kg
Guider Precision	Built in sensor detecting the foil/paper edge creates
	independent feedback look to ensure precise turn on foil layering
Type of programming	CNC- industrial PC

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# FULLY AUTOMATIC BOBBIN WINDING MACHINE SERIES





# Working with local partners throughout Europe







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# MULTI AXIS AUTOMATIC WINDING MACHINE 4 SPINDLE VERSION.

#### **APPLICATION:**

Relays, Automotive ABS coils, LCD coils, transformers, ignition coils, inductors, sensor coils, solenoids DVD reader, Inverter, Switching Power Supplies, Ballast Transformer and other bobbin-wound products....

#### Main features:

The wire guide movement can be freely programmed in all 3 axes (X, Y, and Z).

Wraps either radial or axial pins, - programmable nozzle movement through 0° and 90° angles.

Wire cutting on bobbin pin, nozzle cut or nipper. Method can be chosen by operator and setup in the program.

Simplified programming with teach-in programming system using 15" touch screen. windows based interface. industrial PC with **USB.** Ethernet network and DVD ROM facilities.

Easy to change tooling and machine set-up recalled from the onboard computer when changing product.

Fully CE compliant.

### **Options:**

- Air nipper for larger wire.
- Load and unload shuttle transfer system (as shown).
- Skeining (twisting) unit.
- Customised accessories to suit your application.

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Main technical specifications			
No. of spindles	4		
Wire size	0.02-0.5 mm		
Max traverse width	85 mm		
Spindle pitch	105 mm		
Max bobbin diameter	100 mm - less if lo	ad unload system used	
Spindle speed	9,000 rpm		
Spindle position accuracy	+- 0.1°		
Guide head drive motor	200W AC servomo	otor X , Y and Z axis	
Max movement of guide head	X (front/back)	100 mm	
	Y (left/right)	75 mm	
	Z (up/down)	65 mm	
Nozzle positions	0°, 90° or 120°		
Max pin wrap speed	150 Turns / min		
Control system	Windows interface PC with USB connector & DVD		
	ROM		
Interface	RS232 or USB		
Touch screen	15 inch		
Air supply	6 Bar		
Power supply	single phase 220V +-10% 50Hz		
Power consumption	3kwA		
Weight	450 Kg		
Dimensions (cm) 110(W) x 130(L) x 155(H) - excluding wire spool stand			



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# MULTI AXIS AUTOMATIC WINDING MACHINE 6 SPINDLE VERSION.

#### **APPLICATION:**

Relays, Automotive ABS coils, LCD coils, transformers, ignition coils, inductors, sensor coils, solenoids DVD reader, Inverter, Switching Power Supplies, Ballast Transformer and other bobbin-wound products....

#### Main features:

 The wire guide movement can be freely programmed in all 3 axes (X, Y, and Z).

- Wraps either radial or axial pins, programmable nozzle movement through 0° and 90°angles.
- Wire cutting on bobbin pin, nozzle cut or air nipper. Method can be chosen by operator and setup in the program.
- Password function, prevent accidental program change.
- Simplified programming with teach-in programming system using 15" touch screen.
- Easy to change tooling and machine set-up recalled from the onboard computer when changing product.
- Fully CE compliant.

#### **Options:**

Air nipper for larger wire. Load and unload shuttle transfer system (as shown). Skeining (twisting) unit (as shown). Customised accessories to suit your application.

We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

# COIL WINDING SOLUTIONS YOU CAN RELY ON









Fax: +44(0)1684 273171

**Imail:** enquiry@ingridwest.co.uk

Main technical specifications			
No. of spindles	6		
Wire size	0.02-0.5 mm		
Max traverse width	85 mm		
Spindle pitch	70 mm		
Max bobbin diameter	62 mm - 32m	nm if load unload system used	
Spindle speed	18,000 rpm		
Spindle position accuracy	=> 0.1°		
Guide head drive motor	200W AC servomotor X , Y and Z axis		
Max movement of guide head	X (front/back)	100 mm	
	Y 75 mm (left/right)		
	Z 65 mm (up/down)		
Nozzle positions	0°, 90° or 120°		
Max pin wrap speed	150 Turns / min		
Control system	Windows interface PC with USB connector & DVD ROM		
Interface	RS232 or USB		
Touch screen	15 inch		
Air supply	6 Bar		
Power supply	single phase 220V +-10% 50Hz		
Power consumption	3 KVA		
Weight	<b>/eight</b> 450 Kg		
Dimensions (cm)	Dimensions (cm) 110(W) x 130(L) x 155(H) - excluding wire spool stand		



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# MULTI AXIS AUTOMATIC WINDING MACHINE 8 SPINDLE VERSION.

#### **APPLICATION:**

Relays, Automotive ABS coils, LCD coils, transformers, ignition coils, inductors, sensor coils, solenoids DVD reader, Inverter, Switching Power Supplies, Ballast Transformer and other bobbin-wound products....

#### Main features:

The wire guide movement can be freely programmed in all 3 axes (X, Y, and Z).

Wraps either radial or axial pins, - programmable nozzle movement through 0°, and 90° angles.

Wire cutting on bobbin pin, nozzle cut or air nipper. Method can be chosen by operator and setup in the program.

Password function. prevent accidental program change.

- Simplified programming with teach-in programming system using 15" touch screen.
- Easy to change tooling and machine set-up recalled from the onboard computer when changing product.
- Fully CE compliant.

#### **Options:**

- Air nipper for larger wire.
- Load and unload transfer system (as shown).
- Skeining (twisting) unit (as shown).
- Customised accessories to suit your application.

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Main technical specifications		
No. of spindles	8	
Wire size	0.02-0.5 mm	
Max traverse width	85 mm	
Spindle pitch	55 mm	
Max bobbin diameter	50 mm - 25 mm if load unload system used	
Spindle speed	18,000 rpm	
Spindle position accuracy	=> 0.1°	
Guide head drive motor	200W AC servomotor X, Y and Z axis	
Max movement of guide head	X(left/right) 100 mm Y(front/back) 75 mm Z(up/down) 65 mm	
Nozzle positions	0°, 90° or 120°	
Max pin wrap speed	150 Turns / min	
Control system	Windows interface PC with USB connector & DVD ROM	
Interface	RS232 or USB	
Touch screen	15 inch	
Air supply	6 Bar	
Power supply	single phase 220V +-10% 50Hz	
Power consumption	3 KVA	
Weight	540 Kg	
Dimensions (cm)	110(W) x 130(L) x 155(H) - excluding wire spool stand	



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**Email:** enquiry@ingridwest.co.uk

# MULTI AXIS AUTOMATIC WINDING MACHINE 12 SPINDLE VERSION.

#### **APPLICATION:**

Relays, Automotive ABS coils, LCD coils, transformers, ignition coils, inductors, sensor coils, solenoids DVD reader, Inverter, Switching Power Supplies, Ballast Transformer and other bobbin-wound products....

#### Main features:

• The wire guide movement can be freely

programmed in all 3 axes (X, Y, and Z).

- Wraps either radial or axial pins, programmable nozzle movement through 0°, and 90°angles.
- Wire cutting on bobbin pin, nozzle cut or nipper.
   Method can be chosen by operator and setup in the program.
- Password function, prevent accidental program change.
- Simplified programming with teach-in programming system using 15" touch screen.
- Easy to change tooling and machine set-up recalled from the onboard computer when changing product.
- Fully CE compliant.

# Options:

- Automatic load / unload system.
- Load and unload shuttle transfer system (as shown below).
- · Skeining (twisting) unit.
- Customised accessories to suit your application.

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# COIL WINDING SOLUTIONS YOU CAN RELY ON









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Main technical specifications				
No. of spindles	12			
Wire size	0.02-0.3 mm			
Max traverse width	85 mm	85 mm		
Spindle pitch	55 mm	55 mm		
Max bobbin diameter	45 mm			
Spindle speed	12,000 rpm	12,000 rpm		
Spindle position accuracy	+- 0.1°			
Guide head drive motor	200W AC servom	200W AC servomotor X , Y and Z axis		
Max movement of guide head	X (front/back)	100 mm		
	Y (left/right)	75 mm		
	Z (up/down)	65 mm		
Nozzle positions	0°, 90° or 120°	0°, 90° or 120°		
Max pin wrap speed	150 Turns / min			
Control system	Windows interface PC with USB connector & DVD ROM			
Interface	RS232 or USB			
Touch screen	15 inch			
Air supply	6 Bar			
Power supply	single phase 220V +-10% 50Hz			
Power consumption	3kwA			
Weight	650 Kg	650 Kg		
Dimensions (cm)		110(W) x 150(L) x 155(H) - excluding		
wire spool stand				



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# OPTIONAL ACCESSORIES FOR MULTI SPINDLE SERIES

When configuring the range of multi spindle machinery, several customer/application specific accessories may be required. We like to think we have one of the most comprehensive available, and can offer a solution to almost any winding requirement.

#### **OPTIONS**

#### Air Nipper for wire range 0.2mm-0.8mm



For cutting larger wire diameters the pin tear method will no longer work. In this case we can fit air operated cutters close to the nozzle head.

### Load and unload Turret Tailstock



Allows automated load and unload, improving the machine throughput/cycle, and allowing easy access for extra stations to be added to the line, e.g soldering, welding etc.

#### **Tensioners stand**



An essential piece of equipment to mount all supply spools of wire, the unit can be built to hold the required number of spools for the number of spindles on the winding machine. Offered with mobile options, changing reels can be done away from the machine.

#### **Skeining unit**



When making a solder connection to fine wire, the mechanical strength of a single strand of wire may not be sufficient. The skeining unit reinforces the start and finish leads of the winding by twisting multiple strands of the wire together, so that they can withstand the soldering process.

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# COIL WINDING SOLUTIONS YOU CAN RELY ON







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**Email:** enquiry@ingridwest.co.uk

# **FULLY AUTOMATIC "AIR COIL" WINDING MACHINE**

#### **APPLICATION:**

For winding self supporting coils using thermo-plastic coated wire.

The wire is heated using hot air as it is wound onto a former, bonding the turns together. At the end of the cycle, the former is then removed and the finished coil ejected from the machine.

Typical products include: RFID coils. laser heads, voice coils, magnet coils, sensor coils, vibrator coils and pancake motor coils.



#### Main features:

- Clamp/cut system, layer winding, coil unloading arm, wire lead picker, all fully automatic during each cycle - operatorless.
- Freely programmable pitch control & guider movements enabling precise layer winding.
- Freely programmable servo driven tailstock movements provides programmable coil width.
- Easy to integrate to other devices utilising available I/O; such as:-
  - > Cold air jet,
  - Skeining unit,
  - > Alcohol dispensing.
  - Electronic tensioner

     with selectable
     tension during the
     wind cycle.
- 15" touch screen for easy setup, with industrial PC, network card, simple program backup to USB memory stick.
- Synchronously driven tailstock ensures precise tool alignment and allows for smaller core ID's.

Temperature & Air flow of the hot air system is freely programmable.

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# COIL WINDING SOLUTIONS YOU CAN RELY ON



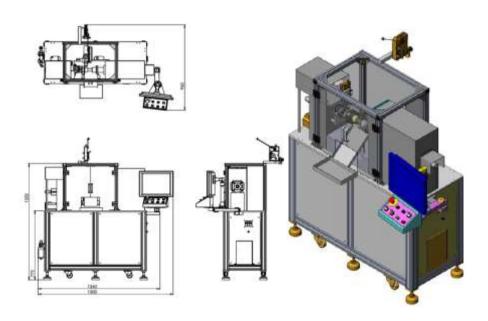




Fax: +44(0)1684 273171

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Main technical specifications					
Coil diameter - max	80 mm				
Max Coil width larger available on request	< 25 mm				
Wire size	0.04 - 0.60 mm				
Motor driver	CNC 3 Axis AC servo motor synchronizing control				
Controlling system - freely programmable	Windows interface PC with USB connector & DVD ROM				
Programmable pitch resolution	0.001mm				
Bonding method	Hot air Max 600°C, 2.5Kw heater element Available with alcohol application				
Spindle position accuracy	±0.1°				
Max spindle speed	3000 rpm				
Air supply // consumption	4.5-6 Bar // 80-100 L/min				
Power supply	AC220V ±5% 50HZ				
Power consumption	4KVA (including hot air bonding)				
Weight (approx)	250kg				



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COIL WINDING SOLUTIONS YOU CAN RELY ON









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# MULTI AXIS AUTOMATIC WINDING MACHINE - RFID CHIP INDUCTOR WINDING.

#### **APPLICATION:**

0402, 0603, 0805, 1008 chip sizes and other ferrite-wound products....

#### Main features:

• The wire guide movement can be freely programmed in all 3 axes (X, Y, and Z).

 Built-in welding system to connect start and finish leads.

 Bowl fee ferrite component, Wire cutting on tooling clamp, guide over start pad on ferrite, weld, winding, guide over end pad, weld, cut end wire, remove ferrite, unload - all preformed in a fully automatic way.

Password function, prevent accidental program change.

 Simplified programming with teach-in programming system using 15" touch screen.

 Easy to change tooling and machine set-up recalled from the onboard computer when changing product.

• Fully CE compliant.

#### **Options:**

- Load and unload to tape and reel.
- Various tooling can be designed depending on component requirements.
- Customised accessories to suit your application.



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COIL WINDING SOLUTIONS YOU CAN RELY ON





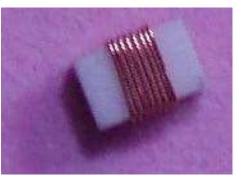


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Main technical specifications						
No. of spindles	1					
Wire size	0.025-0.1 mm					
Spindle speed	3,000 rpm					
Spindle position accuracy	=> 0.1°					
Nozzle movement	0.001 mm					
Spindle control	Winding spindle 3 Axis servo motor	Welding table 2 axis stepper motor				
Welding machine	Adjustable parameters, 0-300 / Touch time 3ms					
Control system	Panasonic FP ∑ system					
Interface	Delta DOP-A57					
Touch screen	15 inch					
Air supply	6 Bar					
Power supply	single phase 220V +-10% 50Hz					
Power consumption	3 KW					
Weight	120 Kg					
Dimensions (cm)	1070(W) x 800(L) x 1880(H) - excluding wire spool stand					





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# **E-FLY FLY WINDING MACHINE**

#### **DESCRIPTION.**

This is a special machine for conducting coils used in alternators. As a single head, it produces one coil per cycle.

This machine is built on a steel chassis welded and aluminium profiles. The wire guide system is placed on linear bearing guides, which ensures a precise guide control and great robustness.

# **Key Features:**

- Programmable aperture of "nose tooling", using slip rings and servo motor
- Motor of wire guide Brushless servo motor
- Main motor Brushless servo motor with break
- Table positioning motor Brushless servo motor
- Protection Shield with pneumatic function controlled by program
- Specific software for this application.
- CE normative.



# **Technical Characteristics**

Max Wire $\varnothing$ (round)Max winding lengthMax. $\varnothing$ of windingMax. $\varnothing$	150 mm
Main Motor, Brushless. (Medium Inertia)	
Wire guide motor, Brushless	
Drive motors	
Max. Winding speed	
Main controller	
Software language (others available on request)	English
Max. Programmable Pitch	9mm
Spindle Accuracy	
Guiding precision	
Dimensions (approx)	
Weight approx	450 Kg
Programming Characteristics	
Max. No. of programmable windings (Standard 50)	Max. 175
Max. No. of windings per coil (Standard 20) Type of programming	

#### DELIVERY TIME - 60 days from order confirmation.

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# BENCH TOP TOROID WINDING MACHINE SERIES





# Working with local partners throughout Europe







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# WH 900 TOROID WINDING MACHINE.

#### **SPECIFICATION**

**Program** TWC-01 digital controller holds up to 999 program sequences

**Control** DC 400 W spindle motor with stepping motor for spreading

**Features** Choice of Belt or Slider type winding heads both available in 4 or 6 inch versions

Includes base, core rotator, winding head and your first shuttle **Package** 

Wire size 0.05 - 1.1 mm (depending on machine head type and shuttle size)

O D Range 8 - 60 mm

Min finished 3 mm (depends on shuttle size & core height)

I D

Min wire size depends on shuttle size and head type

1500 rpm (depending on Max speed

AC 230 /110 V ± 10%, **Power** 

50 - 60hz

**Dims** 600 x 620 x

640 mm

**Net weight** 70 kg

CE cert. no. AE9955093 01



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**区 Email:** enquiry@ingridwest.co.uk

HEAD TYPE	B4 BELT TYPE	B6 BELT TYPE	S4 SLIDER TYPE	S6 SLIDER TYPE				
PICTURE								
COIL O.D.	5~60mm	8~60mm	8~60mm	8~60mm				
MIN.FIN. I.D.	3mm	6mm	7mm	7mm				
MAX. HEIGHT	25mm	45mm	25mm	45mm				
WIRE SIZE	0.12~0.8mm	0.25~0.9mm	0.04~0.35mm	0.05~0.4mm				
SHUTTLE DIA.	100mm	150mm	100mm	150mm				
	1.8, 2.0, 2.4, 2.5, 2.8, 3.4, 4.7, 6.3, 7.9, 9.5	4.7, 6.3, 7.9, 9.5	3.4, 4.7, 6.3, 7.9, 9.5	4.7, 6.3, 7.9, 9.5				
Min. Finished I.D. Will be different by shuttle size and coil height.								

# SHUTTLE WIRE CAPACITY CHART (IN FEET) - 1 FOOT = 304.8 mm

		FOR B4 & S4 TYPE							FOR B6 & S6 TYPE						
SHUTTLE	PN	1.8	2.0	2.4	2.5	2.8	3.4	4.7	6.3	7.9	9.5	4.7	6.3	7.9	9.5
SHUTTLE W	IDTH AWG NO.	1.8	2.0	2.4	2.5	2.8	3.0	3.7	5.1	6.4	7.1	3.7	5.1	6.4	7.1
0.912MM	19									13	23			19	35
0.813MM	20						3	5	12	16	28	8	18	24	43
0.724MM	21						4	7	14	20	35	11	22	30	53
0.643MM	22						5	8	18	25	43	12	27	38	65
0.574MM	23					4	6	10	22	30	54	15	33	46	81
0.511MM	24				4	5	8	13	27	38	67	20	41	57	101
0.455MM	25			4	5	7	10	16	34	48	84	24	51	71	125
0.404MM	26			5	6	8	12	20	42	59	104	30	63	87	153
0.361MM	27			6	7	10	15	24	52	73	128	36	78	108	191
0.320MM	28			7	9	12	18	30	65	90	159	45	98	134	236
0.287MM	29			10	11	15	23	38	80	113	198	56	120	167	293
0.254MM	30			12	14	19	28	47	100	140	245	69	150	206	363
0.226MM	31			14	18	24	35	58	123	173	304	86	186	255	450
0.203MM	.32			23	22	29	44	72	153	215	377	107	230	318	558
0.180MM	33			28	27	36	54	89	190	267	468	132	284	393	690
0.160MM	34			35	33	45	67	110	235	330	579	165	354	487	854
0.142MM	35				41	56	83	136	292	410	719	204	438	602	1057
0.127MM	36							169	362	508	891	252	542	746	1309
0.114MM	37							209	449	630	1105	312	671	923	1620
0.102MM	38							260	556	781	1370	387	830	1142	2005
0.089MM	39							322	690	969	1700	479	1027		
0.079MM	40							399	855	1200	2108	592	1272		
0.064MM	41							495	1060	1490	2614				
0.056MM	42							615	1315	1847	3240				
0.051MM	43							763	1631	2290	4020				
0.046MM	44							946	2022						
COLOUR INDI	WHITE: FOR B4 TYPE  COLOUR INDICATION  YELLOW: FOR B4 & S4 TYPE  GREEN: FOR S4 TYPE					WHITE: FOR B6 TYPE YELLOW: FOR B6 & S6 TYPE GREEN: FOR S6 TYPE									

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# COIL WINDING SOLUTIONS YOU CAN RELY ON







Fax: +44(0)1684 273171

Email: enquiry@ingridwest.co.uk

# WH 900A TOROID WINDING MACHINE.

#### **SPECIFICATION**

Program TWC-01 digital controller holds up to 999 program sequences

**Control** DC 400 W spindle motor with stepping motor for spreading

Features Choice of Belt or Slider type winding heads both available for 8 inch shuttle

diameter

Package Includes base, core rotator, winding head, your first shuttle, and comprehensive

manual

Wire size 0.3 - 1.2 mm (depending on machine head type and shuttle size)

**O D Range** 40 - 120 mm

Min finished 12 mm (depends on shuttle size

ID & core height)

Min wire size depends on shuttle size

and head type

Max speed 1200 rpm (depending on

winding head)

**Power** AC 230 / 110 V ± 10%, 50 - 60hz

**Dims** 770 x 690 x 550 mm

Net weight 80 kg

CE cert. no. AE9955093 01



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HEAD TYPE	B8 BELT TYPE	S8 SIDE SLIDER TYPE			
PICTURE					
COIL O.D.	40~120mm	40~120mm			
MIN.FIN. I.D.	12mm	15mm			
MAX. HEIGHT	80mm	80mm			
WIRE SIZE	0.3~1.1mm	0.3~0.8mm			
SHUTTLE DIA.	220mm	220mm			
SHUTTLE TYPE	8, 10, 12, 15, 17, 20	8, 10, 12, 15, 17, 20			
* Finished ID will vary according to shuttle specification and coil height					

# SHUTTLE WIRE CAPACITY CHART (FEET) 1 FOOT = 304.8 mm

		FOR B8 8	SS TYPE				
SHUTTLE WIDTH		8	10	12	15	17	20
1.290MM	AWG NO.16		60	77	99	149	240
1.151MM	AWG NO.17		76	97	125	186	302
1.024MM	AWG NO.18	49	95	122	158	236	382
0.912MM	AWG NO.19	61	121	155	199	297	481
0.813MM	AWG NO.20	77	151	194	250	374	605
0.724MM	AWG NO.21	97	204	246	315	471	763
0.643MM	AWG NO.22	123	246	311	400	598	968
0.574MM	AWG NO.23	155	303	391	501	750	1214
0.511MM	AWG NO.24	194	383	492	633	946	1532
0.455MM	AWG NO.25	247	483	621	798	1193	1932
0.404MM	AWG NO.26	312	613	788	1013	1513	2451
0.361MM	AWG NO.27	393	768	986	1268	1895	3069
0.320MM	AWG NO.28	498	972	1256	1614	2411	3906

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# WH 300 TOROID WINDING / TAPING MACHINE.

#### **SPECIFICATION**

**Program** TWC-01 digital controller holds up to 999 program sequences

**Control** DC 400 W spindle motor with stepping motor for spreading

Features Choice of three Gear type winding heads & three taping heads, fully controllable

spreading

Package Includes base, core rotator, head and your first shuttle

Wire size 0.5 - 2.6 mm (depending on machine head type and

shuttle size)

**O D Range** 40 - 250 mm

Min finished 25 mm (depends on

I D shuttle size & core height)

Min wire size depends on shuttle size

and head type

Max speed 250 rpm (depending on

winding head)

Power AC 230 /110 V  $\pm$  10%,

50 - 60hz

**Dims** 690 x 630 x 780 mm

Net weight 90 kg

CE cert. no. AE9955093 01



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HEAD	G10S	G10B	G13	T10S	T10B	T13 TAPING				
		WINDING	WINDING			115 IAPINO				
TYPE	WINDING	WINDING	WINDING	TAPING	TAPING					
PICTURE				9		9				
COIL O.D.	40~150mm	60~150mm	80~250mm	40~150mm	60~150mm	80~250mm				
MIN.FIN. I.D.	25mm	35mm	45mm	25mm	35mm	45mm				
MAX. HEIGHT	80mm	80mm	120mm	80mm	80mm	120mm				
WIRE SIZE	0.5~1.5mm	0.5~2.2mm	0.5~2.6mm	-	-	-				
SHUTTLE DIA.	250mm	250mm	350mm	250mm	250mm	350mm				
SHUTTLE TYPE	8, 12, 16, 20, 25	8, 12, 16, 20, 25	11, 14, 17 20, 23, 26	TAPE WIDTH 4~8mm	TAPE WIDTH 8~15mm	TAPE WIDTH 12~25mm				
Min. Finish	Min. Finished I.D. Will be different by shuttle size and coil height.									

## SHUTTLE WIRE CAPACITY CHART (FEET) 1 FOOT=304.8mm

G10S						G10E	3				G	13					
SHUTTLE WI	DTH - MM	8	12	16	20	25	8	12	16	20	25	11	14	17	20	23	26
Approx Min	Finished ID	25	29	33	38	42	35	39	43	48	52	45	48	51	54	57	60
2.590mm	AWG 10											68	95	124	153	182	211
2.300mm	AWG 11						17	34	51	68	88	86	122	158	194	231	267
2.050mm	AWG 12						21	42	63	84	109	107	153	199	245	291	337
1.830mm	AWG 13						27	54	81	108	140	134	192	249	307	365	422
1.630mm	AWG 14	19	38	57	76	99	34	68	102	136	177	169	242	314	387	460	532
1.450mm	AWG 15	24	48	72	96	125	42	84	126	168	218	214	306	398	490	581	672
1.290mm	AWG 16	31	62	93	124	161	53	106	156	212	276	270	386	502	618	734	850
1.151mm	AWG 17	39	78	117	156	203	67	134	201	268	348	339	485	631	777	922	1067
1.024mm	AWG 18	49	98	147	196	255	84	168	252	336	437	429	613	797	981	1165	1349
0.912mm	AWG 19	61	122	183	244	317	107	214	321	428	556	541	773	1004	1237	1469	1700
0.813mm	AWG 20	77	154	231	308	400	135	270	405	540	702	680	973	1265	1556	1848	2139
0.724mm	AWG 21	97	194	291	388	504	170	340	510	680	884	859	1227	1594	1962	2330	2698
0.643mm	AWG 22	123	246	269	492	640	220	440	660	880	1144	1088	1555	2021	2488	2954	3421
0.574mm	AWG 23	155	310	465	620	806	275	550	825	1100	1430	1366	1951	2536	3122	3707	4292
0.511mm	AWG 24	195	390	585	780	1014	350	700	1050	1400	1820	1724	2462	3200	3939	4677	5416

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COIL WINDING SOLUTIONS YOU CAN RELY ON







Fax: +44(0)1684 273171

Email: enquiry@ingridwest.co.uk

#### WH 900 T6 TOROID TAPING MACHINE.

#### **SPECIFICATION**

Program TWC-01 digital controller holds up to 999 program sequences

**Control** DC 400 W spindle motor with

stepping motor for spreading

Package Includes base, core rotator,

Taping head and your first

shuttle

Tape Width 4 mm - 10 mm

(depends on shuttle

Width)

**O D Range** 8 - 60 mm

Min finished 15 mm (depends on shuttle size & core

shuttle size & core height) 45mm Max.

Height

Shuttle Dia 150 mm

Max speed 300 rpm (depending on

winding head)

Power AC 230 /110 V ± 10%, 50 -

60hz

**Dims** 780 x 780 x 1250 mm

Net weight 90 kg

**CE cert. no.** AE9955093 01

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#### OTHER HEADS THAT FIT THIS MACHINE BASE

HEAD TYPE	B4 BELT TYPE	B6 BELT TYPE	S4 SLIDER TYPE	S6 SLIDER TYPE					
PICTURE	151		5.4						
COIL O.D.	5~60mm	8~60mm	8~60mm	8~60mm					
MIN.FIN. I.D.	3mm	6mm	7mm	7mm					
MAX. HEIGHT	25mm	45mm	25mm	45mm					
WIRE SIZE	0.12~0.8mm	0.25~0.9mm	0.04~0.35mm	0.05~0.4mm					
SHUTTLE DIA.	100mm	150mm	100mm	150mm					
SHUTTLE TYPE	2.4, 2.5, 2.8, 3.4 4.7, 6.3, 7.9, 9.5	4.7, 6.3, 7.9 9.5,12.7, 15.6	4.7, 6.3, 7.9, 9.5	4.7, 6.3, 7.9 9.5,12.7, 15.6					
Min. Finished I.D. Will be different by shuttle size and coil height.									

## SHUTTLE WIRE CAPACITY CHART (IN FEET) 1 FOOT = 304.8 mm

		FOR	B4 & 9	S4 TYP	E					FOR E	86 & S6 T	YPE			
SHUTTLE W	IDTH	2.4	2.5	2.8	3.4	4.7	6.3	7.9	9.5	4.7	6.3	7.9	9.5	12.7	15.6
0.912MM	AWG NO.19							13	23			19	35	58	
0.813MM	AWG NO.20				3	5	12	16	28	8	18	24	43	72	
0.724MM	AWG NO.21				4	7	14	20	35	11	22	30	53	89	
0.643MM	AWG NO.22				5	8	18	25	43	12	27	38	65	111	
0.574MM	AWG NO.23			4	6	10	22	30	54	15	33	46	81	138	207
0.511MM	AWG NO.24		4	5	8	13	27	38	67	20	41	57	101	170	255
0.455MM	AWG NO.25	4	5	7	10	16	34	48	84	24	51	71	125	211	316
0.404MM	AWG NO.26	5	6	8	12	20	42	59	104	30	63	87	153	216	324
0.361MM	AWG NO.27	6	7	10	15	24	52	73	128	36	78	108	191	324	486
0.320MM	AWG NO.28	7	9	12	18	30	65	90	159	45	98	134	236	400	600
0.287MM	AWG NO.29	10	11	15	23	38	80	113	198	56	120	167	293	496	744
0.254MM	AWG NO.30	12	14	19	28	47	100	140	245	69	150	206	363	613	919
0.226MM	AWG NO.31	14	18	24	35	58	123	173	304	86	186	255	450	759	1140
0.203MM	AWG NO.32	23	22	29	44	72	153	215	377	107	230	318	558	940	1410
0.180MM	AWG NO.33	28	27	36	54	89	190	267	468	132	284	393	690	1163	1745
0.160MM	AWG NO.34	35	33	45	67	110	235	330	579	165	354	487	854	1440	2160
0.142MM	AWG NO.35		41	56	83	136	292	410	719	204	438	602	1057	1782	2673
0.127MM	AWG NO.36					169	362	508	891	252	542	746	1309	2205	3300
0.114MM	AWG NO.37					209	449	630	1105	312	671	923	1620	2730	4000
0.102MM	AWG NO.38					260	556	781	1370	387	830	1142	2005		
0.089MM	AWG NO.39					322	690	969	1700	479	1027				
0.079MM	AWG NO.40					399	855	1200	2108	592	1272				
0.064MM	AWG NO.41					495	1060	1490	2614						
0.056MM	AWG NO.42					615	1315	1847	3240						
0.051MM	AWG NO.43					763	1631	2290	4020						
0.046MM	AWG NO.44				,	946	2022								
COLOUR IN	DICATION	WHI	TE : FC	OR B4	TYPE					WHIT	E : FOR I	36 TYPE			
				FOR B	4 & S <mark>4</mark> 1	TYPE				YELLO	W : FOF	R B6 & S	6 TYPE		
	GRE	EN: FO	OR S4 T	YPE					GREE	N: FOR S	66 TYPE				

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COIL WINDING SOLUTIONS YOU CAN RELY ON







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Email: enquiry@ingridwest.co.uk

#### WH 300 G7 TOROID WINDING MACHINE.

#### **SPECIFICATION**

**Program** TWC-01 digital controller holds

up to 999 program sequences

Control DC 400 W spindle motor with

stepping motor for spreading

**Features** The Gear type winding heads

was designed for winding small

coil with precise winding

requirement.

Includes base, core rotator, head **Package** 

and your first shuttle

Wire size 0.5 - 2.6 mm (depending on

shuttle size)





28 - 80 mm

Min finished 15 mm (depends on shuttle size &

core height)

Shuttle Dia. 175 mm

Max speed 300 rpm

AC 230 /110 V ± **Power** 

10%, 50 - 60hz

**Dims** 690 x 630 x 780 mm

**Net weight** 85 kg

CE cert. no. AE9955093 01





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#### WH 200 HOOK WINDER.

#### **SPECIFICATION**

**Program** Digital controller capable of holding data for 999

winding operations, Fully programmable pitch per

turn (wire spacing). Start position, winding direction and segment winding angle

programmable.

In semi-automatic mode, hold-time is programmable at top and bottom of stroke

**Control** Pneumatically operated hook

Mechanically adjustable stroke length

Turns counted digitally

Full control of core rotation using stepping motor

Package Includes full height cabinet, digital

controller and one hook Air cylinder, filter & regulator;

stepper motor system

**Hook sizes** 3 standard hook sizes, with specials

available

**Wire size** 0.3 ~ 2.2 mm

**O.d. range** 15 ~ 80 mm

Air supply Typically 5 Bar

Power supply AC 230 /110 V ± 10%, 50 - 60 Hz

Dimensions 70 x 55 x 150 cm

#### **Hook data**

Hook type	H5	Н8	H10
Hook size	5mm	8mm	10mm
Min. finished i.d	8mm	llmm	14mm

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#### **HOOK WINDER SKS "PULLWINDER"**

Pneumatically driven needle hook

Package Bench mounting base and one hook, Air cylinder,

filter & regulator with pneumatic foot pedal

**Hook sizes** 3 standard hook sizes

-with specials available

Wire Range  $0,2 \sim 3.5 \text{ } \text{Ø} \text{ } \text{mm}$ 

Core OD Range  $15 \sim 80 \ \emptyset \ \text{mm}$ 

**Hook Sizes** 3, 6, 8 & 10 mm

**Air supply** Typically 5 Bar

Weight 45 Kgs

**Dimensions** 40 x 30 x 90 cm









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#### Hook winder with 3 stroke dimensions:

Туре	SKS 50-200	SKS 50-320	SKS 50-400				
Height mm ca.	920	1160	1280				
Wire range	ø0,2 mm to ø3,5 mm						
Coil diameter (OD MAX)	ø15 mm ~ ø150 mm						
Air supply	8 bar 8 bar						
Cylinder Festo	DNC-50-200	DNC-50-400					



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#### **TAPE WINDER - "AIR JET"**

The Air jet is a rapid way to tape small Toroidal cores, giving machine wound repeatability and quality on every product run.



- · Cutting length between 20-999mm
- · Tape width from 7mm upto 50mm

#### Simple operation process...

Place the core



Hold tape over top of toroid



With the help of "Air Jet", the tape will be pushed through the core, after that, we have to bring the tape over the top of the toroid to produce the wound tape turns...

The finished taped core



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# WINDING SHOP FLOOR PRODUCTION AIDS







### Working with local partners throughout Europe







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#### **COIL HANDLING / PACKING TRAYS.**

Damage, rework and scrap currently adds to manufacturing costs, making companies uncompetitive in World markets. Prevention is the key; maintain the conformance of each part by using good work handling practices.

A range of standard containers available for protection of precision components. We can also create customised containers to protect even the most complex shapes and sizes. These are precision moulded to offer smart presentation and protection, especially ideal for transportation of coils. Made from High density EPS, these trays very light (55 Gramms / Litre) whilst still very strong means they can be used again and again and again...

Features and benefits include:

#### **EXCELLENT PROTECTION:**

Prevent accidental impact, Protection from contamination / oil, Thermal properties protect from extreme temperatures. Protection when shipped to and from subcontractors

#### **PRECISION MOULDED:**

Smart presentation and good part location

#### **PARTS SEGREGATION:**

Reduces transit damage and rework.
upto 250 stock sizes / types available, however
this method of tray production results in LOW tooling
costs, meaning we can produce new designs to
exactly match your product / assembly...
Option available for foam lined base for use with
PCB / Pin type bobbins.

CONDUCT-A-PAK:

Option for material to be static/electrical compliant STACKABILITY:

Fitted lids are available to make trays stackable to minimise storage costs PRODUCT ENHANCEMENT:

Can be made with embossed company logo for clear identification.

Available in range of colours, either to support corporate identity or for product coding

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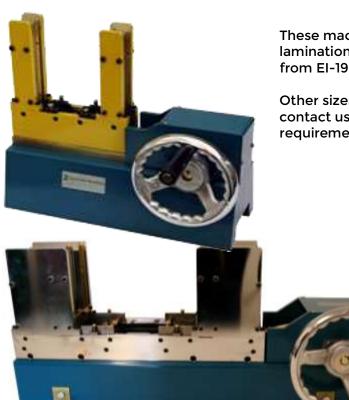




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#### **E I LAMINATION STACKING MACHINES.**



These machines stack standard El laminations in a wide range of sizes, from El-19 to El-180 & Ul & EE ranges.

Other sizes are available; please contact us to discuss your requirements.

Laminations of
0.35 mm to 0.5
mm thick are
stacked at up to 300 pieces per
minute, manually or
automatically, with full
interleaving.

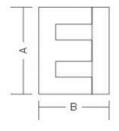
Standard range, manual: -

Juliania	range, me								
EI-19	EI-24	EI-25.4	EI-28	EI-30	EI-35	EI-36	EI-38	EI-41	EI-42
EI-43	EI-48	EI-54	EI-57	EI-60	EI-66	EI-66.7	EI-75	EI-76.2	EI-78
EI-84	EI-85.8	EI-96	EI-105	EI-114	EI-4.5-	EI-120	EI-	EI-135	EI-150
					3.75		133.2		
EI-152.4	EI-162	EI-63/8	EI-171	EI-180	EI-196				

Standard range, automatic: -

EI-36	EI-38	EI-41	EI-42	EI-43	EI-54	EI-57	EI-60	EI-66	EI-66.7
EI-76.2	EI-85.8	EI-96	EI-105	EI-114	EI-133.2	EI-152.4	EI-162	EI-196	

Other sizes & OEM laminations available to order.





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#### COIL WINDING SOLUTIONS YOU CAN RELY ON







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#### RANGE OF WIRE STRIPPING MACHINES

We offer three types of enamel Wire removal systems, the choice between them mainly depends of wire size and application.

<u> </u>				
Features	Wire	Stripping	Dimensions	<b>Product Picture</b>
	Range		(mm)	
	(mm)			

#### **WH-S03**

A fast and inexpensive method of wire stripping, Removal of enamel coating on copper wire with automatic dust collection  In-feed length - 1.7mm - how close the machine can strip from coil body	0.4 - 3.0	Single wire only (round)	280L * 160W * 200H	
<b>Tooling</b> - Five blades to remove wire		5 Knife		
enamel		Blades		

#### **WH-S02**

wire dian	with fineters re are 2 lable, ea	enamel coating on copper ne adjustability for small wire Fiberglass wheels types ach suited to a specific wire	Max 0.4	Single wire only	280L * 160W * 200H	
	Size	Recommended wire range		2 Fiberglass		100
	1	0.18mm to 0.40mm		wheels		1 10
	0	0.03mm to 0.16mm				

#### **WH-S01**

the enamell		nsert the end of by 90 degrees oped wire.	2.0 - 8.0	Single & Litz wire	390L * 180W * 180H	
each suite	3 brush type: d to a specifi Wire range	c wire range.				
S01-0.06mm	0.1mm - 0.2mm	Steel brushes with 0.06mm wire - Set of two				
S01-0.1mm	0.2mm - 0.3mm	Steel brushes with 0.1mm wire - Set of two				
S01-0.2mm	> 0.3mm	Steel brushes with 0.2mm wire - Set of two		2 Brush wheels		

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#### **IWM-LD ELECTRONIC LABEL DISPENSER**

#### **SPECIFICATION & FEATURES**

- Ideal for small labels and small work areas
- Will dispense labels and die-cut parts
- Photosensor Accuracy and Reliability
- Automatically removes paper, vinyl, acetate, polyester, foil, etc. from its liner
- Automatically rewinds liner scrap for a cleaner working environment

• Liner scrap is easily removed

• No maintenance required

 Adjustable strip plate for hard-torelease labels

 High Torque Motor for large diameter label rolls

Label counter 0-999999pcs

Roll ID (min) 25mm

Roll OD (max) 250mm

Label Length 3 to 150mm

Label Width 4 to 140mm

**Feed Speed** 16 – 130

mm/Sec - adjustable via

dial

Power supply 110 / 220 /

240 VAC 50 /

60 Hz

Dimensions 210L x 210W x 220H

Weight 4.5 Kgs



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#### **IWM TAPING SOLUTIONS**

#### **TAPE - CUT TO LENGTH MACHINES**

Model	IWM1000	IWM025	IWM006		
Characteristics					
Cutting Length	30mm to 999 mm	12 to 60mm	40 mm to 999 mm		
Tape Width	7mm to 50mm	3mm to 25mm	15 mm to 80 mm		
Power	AC 230 / 110 V ± 10%, 50 - 60 Hz				
Dimensions (mm)	218 * 137 * 150	300 * 160 * 160	166 * 245 * 243		
Net weight (kgs)	3.4	2.75	9.4		

#### **TAPE - AUTO BOBBIN MACHINES**

Model	TP-01
Characteristics	Automatic taping with bobbin change-over. Tape cutter with start and finish wiper and automatic unload. 2 handed start button operation.
Cycle time:	Typically 3 seconds per bobbin for 2 turns of tape, cut and auto unload.
Dimensions (mm)	600 x 350 x 300

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#### **ELECTRONIC LABEL DISPENSER**

#### **SPECIFICATION & FEATURES**

- Ideal for small labels and small work areas
- Will dispense labels and die-cut parts
- Photosensor Accuracy and Reliability

 Automatically removes paper, vinyl, acetate, polyester, foil, etc. from its liner

Automatically rewinds liner scrap for a cleaner working environment

Label Length 3 to 150mm

Label Width 4 to 140mm

Feed Speed 16 - 130 mm/Sec -

adjustable via dial

**Dimensions** 210L x 210W x 220H

Weight 4.5 Kgs



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#### TENSIONER METERS.

Model No.	Range	Resolution	Tension Units	Copper Wire
TX-1-125	0-125g	0.1 to 1g	cN, grams or lb	54 - 37 AWG .0111 mm
TX-1- 1000	10- 1000g	1 to 5g	N, grams or lb	40 - 32 AWG .08 mm20 mm
TX-1- 5000	50- 5000g	5 to 10g	N, grams or	40-28 AWG .08 mm30 mm

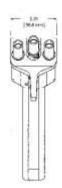


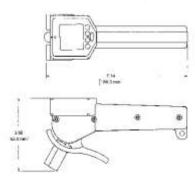
Large, easy to read backlit, graphic display with adjustable backlighting and contrast. Data Logging feature included; Capture and view data within a user-defined time window. Select the time window; then select the sampling rate (from 1-100 Hz).

- Active, color changing Bar Graph
- Select Material and Size. Instrument automatically adjusts the calibration
- Minimum and Maximum values



Indicate real-time speed in FPM, or MPM. Maximum measurable speed is 9,999 FPM or 9,999 meters per minute, however line speeds in excess of 2,000 FPM are generally unsafe for hand-held applications. Read length of part run in feet or meters. Maximum length measuring up to 9,999 meters or feet.





#### A - Analog Output Option

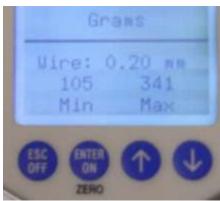
Analog Output Option for both speed and tension values. 0-5 VDC or 4-20 mA with software-definable ending sequences. Provided with 10' cable. Data outputted at 40Hz.

#### E - RS-232 Serial Output Option

Provided with 10' cable to interface with your receiving device. Select data sampling rate from 1, 2 or 5 Hz. After capturing the data, review the data on the instrument's display or upload it using the 10' serial interface cable.



Order code:- [Model number] + [options] e.g. tx-1-1000-S-E



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#### DIGITAL TENSIONER DISPLAY.



B500 / TD-J1000 tension measurement indicators can be mounted on a winding machine independently of the tension unit for real-time measurements, easy installation features, access to DC24V power required.

E1000 This tension monitor tension values, in addition to real-time display, its highlight feature is the ability to connect to the computer, gathering accurate records through the PC software, you can carry out after the required data analysis or set the alarm, This software can work simultaneously detecting / recording 100 measuring points, to enhance the quality of your wound product.

- Direct display of real time measurement reading
- Wide tension range
- Independent operation; for single or multi-spindle applications.
- Compact design, simple operation.

Accuracy:	+/- 1% FS
Power:	24V DC (external power sources required.)
Dimensions	25 (W) x 140mm(H) x 45mm (D)
Weight :	126g



#### **Range Options**

Model	Range	Resolution	Features
B500	3g-500g	0.5g	Real-time display of tension / plastic housing
J1000	3g-1000g	1 g	Real-time display of tension / aluminum alloy housing
** E1000	3g-1000g	2 g	Tension computer records the data real-time display / aluminum alloy shell

Order code:- [Model number] + [MAX tension]

e.g. TD-J1000

\*\* Available soon

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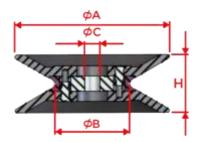
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#### **CERAMIC ROLLER GUIDES**



Doub No.	Dimensions in mm				
Part No.	Α	В	С	Н	
IWM1001	20	15	3.0	5	
IWM1002	29	20	4.0	6.5	
IWM1003	30	15	3.0	10	
IWM1004	40	20	4.0	15	
IWM1005-6	45	30	6.0	10	
IWM1006	60	38	8.0	13	
IWM1008	79.2	50	10.0	15	



Our ceramic roller guides are made from fine Alumina (Al<sub>2</sub>O<sub>3</sub>), which provides excellent resistance to wear and reduces heat and friction.

The ceramic surfaces are polished to a mirror finish in order to reduce friction to a minimum.

The ceramic ring is enclosed in plastic flanges to reduce weight and inertia; the core of the ceramic part is mounted onto a precision bearing to optimise performance.

These rollers are normally used for guiding the wire during coil winding operations, but also have many applications in the wire manufacturing and textile industries.

Standard stock sizes are highlighted in green; all other sizes are available subject to minimum order quantities.





We aim to be much more than a machinery supplier. Our team has a vast range of winding experience and is able to offer help and advice on all aspects of coil winding, from tooling design to machine choice and set-up.

COIL WINDING SOLUTIONS YOU CAN RELY ON







Fax: +44(0)1684 273171

**X** Email: enquiry@ingridwest.co.uk

#### **CERAMIC CAPTIVE ROLLERS**

Our ceramic captive rollers are made from fine Alumina ( $Al_2O_3$ ), which provides excellent resistance to wear and reduces heat and friction.

The ceramic surfaces are polished to a mirror finish in order to reduce friction to a minimum.

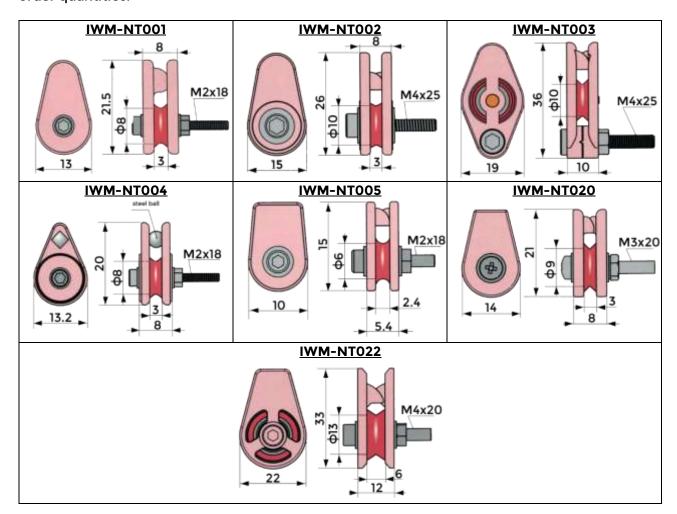
The wire jump preventer is used in instances in which there are radical changes in direction and prevents wire jumping out of the pulley during winding processes.

There is a high speed bearing within the pulley's porcelain circle

which keeps the sliding distance between the enamelled wire and the OD under 0.2mm. Normally used for guiding the wire during coil winding operations, but also have many applications in the wire manufacturing and textile industries.

Weight (g)
4
7.5
13.5
4
2
4.5
11.5

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#### **CERAMIC EYELET GUIDES AND GROMMETS**

Dort No.	Dimensions in mm				
Part No	Α	В	С	D	E
IW-001	4.5	2.8	1.0	3.0	1.0
IW-002	5.0	3.5	2.4	3.6	1.0
IW-003	6.8	4.7	2.6	3.3	1.3
IW-004	10.0	7.2	4.8	8.8	1.7
IW-005	10.0	7.0	4.8	8.8	1.7
IW-006	11.0	8.0	3.7	9.2	3.0
IW-007	7.8	5.2	3.0	5.5	1.5
IW-008	9.2	7.0	4.5	8.0	2.0
IW-009	6.0	4.2	2.6	3.2	1.2
IW-010	10.2	6.2	4.2	10.0	2.0
IW-011	9.7	7.0	4.0	9.0	2.0
IW-012	6.0	3.8	2.0	3.6	1.0
IW-013	7.0	3.8	2.0	4.0	1.5
IW-014	7.7	6.0	3.4	6.0	2.0
IW-015	6.0	4.5	2.0	5.0	1.5
IW-016	12.0	10.0	7.0	8.3	2.0
IW-017	12.0	9.0	5.5	8.5	1.5
IW-018	5.5	4.0	1.8	4.3	1.3
IW-019	5.9	4.3	2.0	5.0	1.5
IW-020	6.2	3.7	1.7	5.0	1.0
IW-021	13.0	9.0	4.3	7.0	2.0
IW-022	10.0	6.8	4.2	10.0	2.0
IW-023	14.0	10.0	6.5	9.8	3.0
IW-024	15.3	11.8	7.5	10.0	3.0
IW-025	12.0	10.0	7.1	6.0	2.0
IW-026	6.5	4.9	3.3	6.5	1.5
IW-027	7.8	6.0	3.4	4.8	1.8
IW-028	4.2	3.0	2.0	5.0	1.0
IW-029	4.2	3.0	1.0	4.0	1.0
IW-030	5.9	4.0	2.0	8.0	1.2
IW-031	7.8	6.0	3.5	8.0	1.6
IW-032	17.7	12.8	7.0	18.7	3.0
IW-033	14.0	10.4	6.6	18.0	2.5
IW-034	11.7	9.5	5.5	8.2	2.4
IW-035	12.0	9.6	6.2	10.5	2.1
IW-090	8.0	5.4	2.5	5.5	1.5

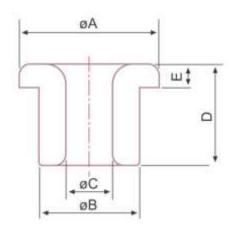


Our ceramic eyelet guides are made from fine Alumina (Al<sub>2</sub>O<sub>3</sub>), which provides excellent resistance to wear from heat and friction.

The ceramic surfaces are polished to a mirror finish in order to reduce friction to a minimum.

These eyelets are normally used for guiding the wire during coil winding operations, but also have many applications in the wire manufacturing and textile industries.

Standard stock sizes are highlighted in green; all other sizes are available subject to minimum order quantities.



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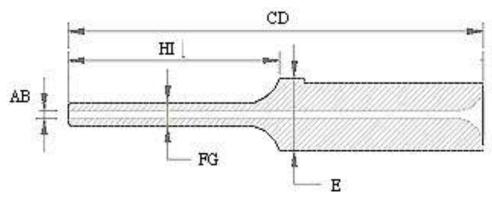




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#### **GUIDE TUBES - IWM STANDARD STOCK SIZES**



Part number format W ABCD-E-FGHI

How to specify the tube...

AB = Bore size in mm (12>1.2; 08>0.8; 03>0.3 etc..)

CD = Tube length in mm (30>30mm; 45>45mm etc...)

E = Tube OD in mm (030>3mm is standard)

FG = Shank Diameter in mm (12>1.2; 08>0.8; 03>0.3 etc..)

HI = Shank Length in mm (15>15mm; 06>6mm etc...)

Standard stock	AB =	CD = Tube	E =	FG = Shank	HI = Shank
sizes	Bore size	length	Tube OD	Diameter	Length
W0230-030-0806	0.2	30	3	0.8	6
W0330-030-0806	0.3	30	3	0.8	6
W0530-030-1406	0.5	30	3	1.4	6
W0830-030-2015	0.8	30	3	2.0	15
W1030-030-2515	1.0	30	3	2.5	15
W1230-030-2515	1.2	30	3	2.5	15
W1530-030-2915	1.5	30	3	2.9	15

## Custom guide tubes - Made to order

We can produce a vast range of custom guide tubes, for many applications.

Simply send us your drawings for a competitive quote.



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#### COIL WINDING SOLUTIONS YOU CAN RELY ON



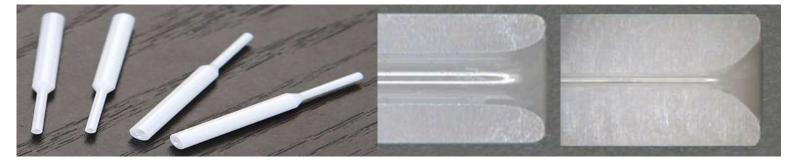




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#### SPECIAL CERAMIC GUIDE TUBES (NOZZLES)



#### **Description:**

The coil winding guide tube (or nozzle) is a vital component for high quality coil winding. Our ceramic guide tubes are made for advanced coil winding requirements. They are precision engineered for high speed winding with excellent accuracy, and minimise stress to the wire.

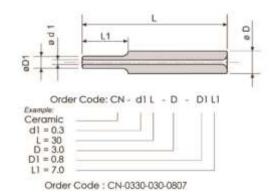
#### **Advantages:**

Precision: Concentricity between the clamping diameter and the outlet diameter is 0.01 mm. The inner bore diameter's tolerance is 0.01 mm - excellent for precision coil layering.

Minimum Friction: Made of a solid piece of high grade ceramic; there are no joints for easy threading, which also ensures a smooth path for wire travel. Every inner bore is fully polished. Both the inlet and outlet radius are carefully calculated, shaped and polished to a mirror finish to minimize stress to the wire.

High Wear Resistance: The characteristics of these ceramic guide tubes offer significant advantages over both tungsten carbide and ruby guide tubes. The special ceramics are harder than tungsten carbide and are more rigid than the stainless sleeve of ruby guide tubes.

#### **Ordering Information:**



Part Number	d1	L	D	D1	L1
CN-0330-030-0807	0.3	30	3.0	0.8	7.0
CN-0430-030-1010	0.4	30	3.0	1.0	10.0
CN-0530-030-1010	0.5	30	3.0	1.0	10.0
CN-0730-030-1410	0.7	30	3.0	1.4	10.0

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REPRESENTING







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#### **OUR EUROPEAN PARTNERS**

PARTNER IN:	GERMANY	ROMANIA	SPAIN AND PORTUGAL	POLAND
Company	Crédo-tech TECHNICAL ADVISER	komax	erasan	<b>AET</b>
Contact	Mr Christoph Klein	Mr Sergiu Czompi	Mr Jose Maria Mora	Mr Paweł Domazer
Postal address	Roemerstr. 6, German	Str. Preciziei nr. 1C Romania	Ronda Auguste y Louis Lumiere, Spain	I. Wysocka 48, Poland
Phone	+49 (0) 08193 5728	+40 21 335 5654	+34 961 986 373	48 62 737 49 53
Email	credo@credo-tech.de	info.buc@komaxgroup.com	jr.bea@dexis-iberica.com	pd@aet.com.pl

PARTNER IN:	AUSTRIA & SLOVENIA	HUNGARY	CZECH	SLOVAKIA
Company	komax	komax	komax	komax
Contact	Mr Thomas Stummer	Mr Bálint Alcsuti	Mr. Petr Pavelka	Mr Peter Ziska
Postal address	Wien 23.Bez., Perfektastraße. 59, A-1234 Wien, Austria	Cserszegi utca 2-6. 2092 Budakeszi HungarY	Hviezdoslavova 1188/5, 62700 Brno, Czech Republic	Cukrová 14, SK-81339 Bratislava, Slovakia
Phone	+ 43 1 804 2871	+ 36 23 457 003	+420 545 243 454	+42 12 527 33 664
Email	thomas.stummer@ko maxgroup.com	Info.bud@thonauer.com	info.brn@komaxgroup.co m	<u>peter.ziska@komaxgro</u> <u>up.com</u>

PARTNER		
IN:	The Netherlands	
Company	HUIBERS	
Contact	Mr Martijn Stauthamer	
Postal	Huibers Elektrotechnische Isolatiesystemen BV	
address	Haarbos 3	
	3953 HA Maarsbergen	
	The Netherlands	
Phone	+ 31 (0)343-461104	
Email	martijn@huibers.info	

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