

Late Summer 2022

Spring Maker News

 Coiling Equipment

Coiling Equipment Newsletter

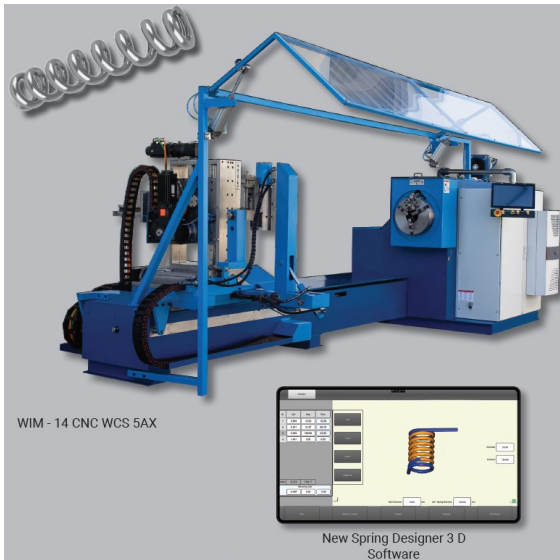


PRODUCT FOCUS

**MOST ADVANCED, VERSITILE & AUTOMATED
Lathe Spring Coiling Machines in the Industry**

WIM CNC Lathe Coiling Machines feature:

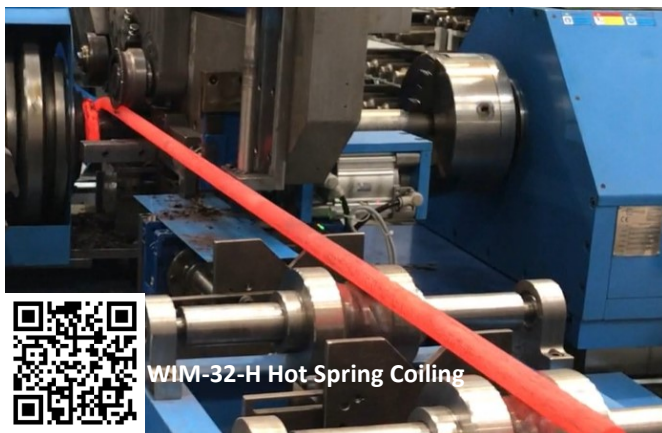
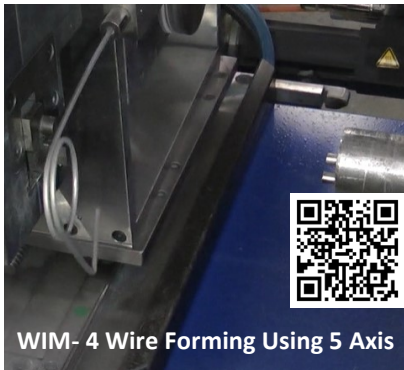
- **COLD** or **HOT** Right and left coiled cylindrical springs
- One-side conical, compression, extension and torsion springs
- Wire Catching System (WCS) allows for automatic production of springs
- 2-D wire forms
- Servo controlled axes are designed for easy and fast set up
- Easy to learn Spring Designer 3-D Software enables machine set up in just 3 steps
- Minimal tooling



FORTUNA FEDERN GmbH

WIM CNC Lathe Spring Coiling Machines offer great versatility

Scan QR Code to see the WIM Machine video



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WIM Lathe Spring Coiling Machines, 4 mm to 12 mm wire diameter

Model	WIM 4	WIM 8	WIM 12
Wire diameter (EN 10270 - DH ph - ASTM A228 music wire):	0,80 - 4 mm .0315" - .157"	4 - 8 mm .157" - .315"	5 - 12 mm .197" - .472"
Max. wire diameter for soft wire (p.e. 50CrV4):	6 mm .236"	10 mm .393"	14 mm .551"
Spring outside diameter:	up to 80 mm up to 3.150"	16 - 130 mm .630" - 5.118"	20 - 150 mm .787" - 5.906"
Max spring length -automatic- half- semiautomatic:	370 mm 14.57" 800 mm 31.49"	600 mm 23.62" 1200 mm 47.24"	650 mm 25.59" 1300 mm 51.18"
Max length of spring legs (1./2.):	300 mm / unlimited 11.81" / unlimited	400 mm / unlimited 15.75" / unlimited	400 mm / unlimited 15.75" / unlimited
Coiling speed	0 - 250 rpm	0 - 210 rpm	0 - 180 rpm
Wire cutter:	pneumatic 6 bar / hydraulic on 5AX version	hydraulic	hydraulic
Weight ca:	700 kg 1,550 lbs	2000 kg 4,410 lbs	2500 kg 5,500 lbs
Dimensions (L x W x H)	3000 x 1200 x 1350	4350 x 2200 x 1700	5000 x 2650 x 2100
Coiling mandrels:	73 pieces 10.0 - 46.0 mm .393" - 1.811" (option)	90 pieces 10.0 - 80.0 mm .393" - 3.149" (option)	100 pieces 10.0 - 100.0 mm .393" - 3.937" (option)
Wire straightener (standard)	1 piece (cover up to 90 % of all wire dimensions)	1 piece (cover up to 90 % of all wire dimensions)	1 piece (cover up to 90 % of all wire dimensions)
WCS- Wire catching system for automatic wire catching and automatic production of compression and springs (cut off in the middle of the coil)- available	option	option	option
4AX - Additional 2 asynchronous controlled axis (4 in total - 2 x servo, 2 x asynchronous for production of different.	option	option	option
5 AX/6 AX - additional 3/4 servo axis (6x servo in total) for production of one side conical compression, extension and torsion springs and different wire forms (depends on bending radius) - faster and more precise than 4AX system	option	option	option

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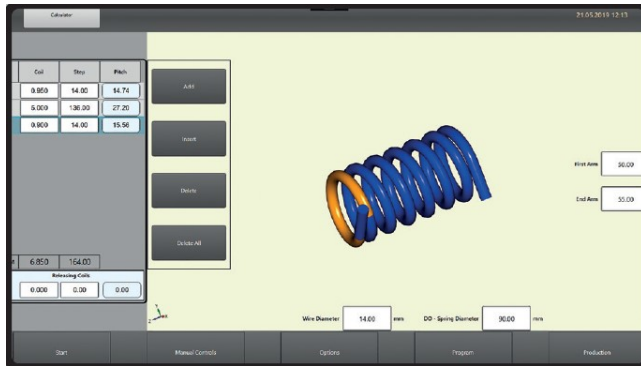
WIM Lathe Spring Coiling Machines, 14 mm to 36 mm wire diameter

Model	WIM 14	WIM 20	WIM 36
Wire diameter (EN 10270 - DH ph - ASTM A228 music wire):	6 - 14 mm .236" - .551"	8 - 20 mm .157" - .315"	8 - 36 mm (.315" - 1.417")
Max. wire diameter for soft wire (p.e. 50CrV4):	16 mm .629"	26 mm 1.023"	8 - 20 mm (.315" - .787")
Spring outside diameter:	24 - 200 mm .938" - 7.874"	40- 250 mm mandrel size 25 - 180 mm (with reduction 220 mm) 1.575" - 9.842"	40- 250 mm mandrel size 25 - 180 mm (with reduction 220 mm) 1.575" - 9.842"
		mandrel size .985"- 7.086" (with reduction 8.661")	mandrel size .985"- 7.086" (with reduction 8.661")
Max spring length -automatic- half- semiautomatic:	700 mm 27.56" 1400 mm 55.11"	1000 mm 39.37" 2000 mm 78.74"	2000 mm (78.74")
Max length of spring legs (1./2.):	500 mm / unlimited 19.69" / unlimited	500 mm / unlimited 19.69" / unlimited	ca.400 mm/ unlimited (15.74") unlimited
Coiling speed	0 - 150 rpm	0 - 130 rpm	0 - 50 rpm
Wire cutter:	hydraulic	hydraulic	hydraulic up to 20,00 mm (.787") EN 10270 - 1 DH ph - up to 30,00 mm(1.181") 50 CrV4
Weight ca:	3000 kg 6,600 lbs	6000 kg 13,200 lbs	7000 kg 15,000 lbs
Dimensions (L x W x H)	5000 x 2650 x 2100	6000 x 2800 x 2100	6000 x 2200 x 2100
Coiling mandrels:	100 pieces 10.0 - 100.0 mm .393" - 3.937" (option)	72pieces 24.0 - 100.0 mm .949" - 3.937" (option)	72pieces 24.0 - 100.0 mm (.944" - 3.937") (option)
Wire straightener (standard):	1 piece (cover up to 90 % of all wire dimensions)	1 piece (covers up to 90% of all wire dimensions) used with optional horizontal power reel for wire size up to 14,00 mm(.551") from the coil or for bars for all dimension	1 piece (covers up to 90% of all wire dimensions) used with optional horizontal power reel for wire size up to 14,00 mm(.551") from the coil or for bars for all dimension
WCS- Wire catching system for automatic wire catching and automatic production of compression and springs (cut off in the middle of the coil)- available	option	Included - up to 14,00 mm (.630") for EN 10270 - 1	option
4AX - Additional 2 asynchronous controlled axis (4 in total - 2 x servo, 2 x asynchronous for production of different.	option	option	option
5/6 AX - additional 3/4 servo axis (6x servo in total) for production of one side conical compression, extension and torsion springs and different wire forms (depends on bending radius) - faster and more precise than 4AX system	option	option	option

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WIM Lathe Spring Coiling Machines



Spring Designer 3D Software

This software makes the machine set up fast and easy while providing a tremendous 3-D visual of the spring.

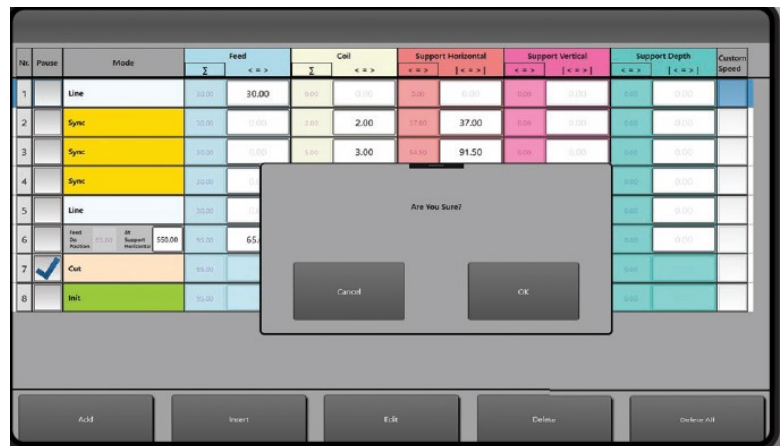
Each change made on the 3D model is updated in the numerical spring program.

Spring Template Wizard

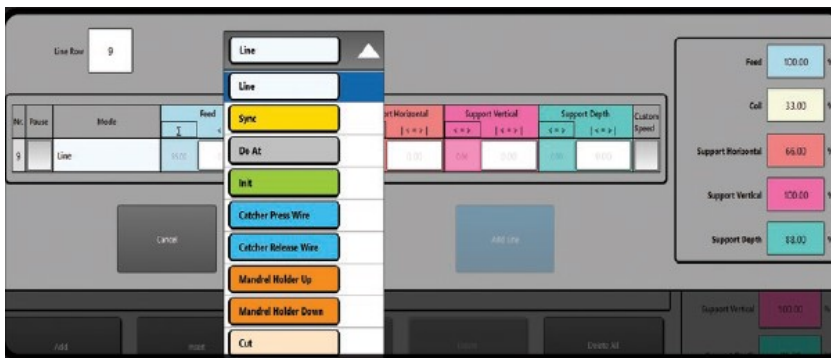
The Wizard tool makes it easy to enter spring setup details. The operator can go from the hard copy blue print to production in 3 easy steps.

It takes less than 2 minutes to create a new spring program ready for production.

Each spring program and the machine setup can be saved under a new name and detailed description.



Scan the QR code below to see the video of the newest version of WIM Spring Designer 3D software which is available for all 4AX and 5AX versions on all our WIM CNC machines.



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WIM Lathe Spring Coiling Machines

Three Main Versions of the WIM CNC Machines

2 AXIS WIM CNC

Basic Version of the WIM CNC

- Equipped with two servo motors and one asynchronous motor
- First servo motor for coiling axis
- Second servo motor for pitch axis
- Asynchronous motor in servo mode for wire feeding axis

Great productivity and short setup time make this machine perfect for standard spring production.

4 AXIS WIM CNC

A More Versatile Version of the WIM CNC

- Equipped with two servo motors and two asynchronous motors
- First servo motor for coiling axis
- Second servo motor for pitch axis
- Asynchronous motor in servo mode for wire feeding axis
- Second Asynchronous motor in servo mode for moving wire vertically

By having more axes, this machine offers more production capabilities including wire forming.

5/6 AXIS WIM CNC

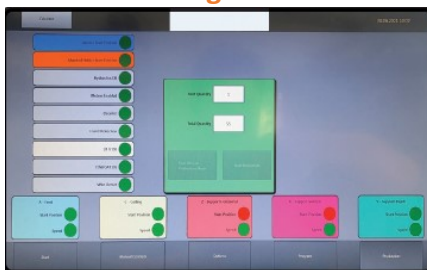
The Best Equipped Version of the WIM CNC

- Compared to the 4 AXIS machine, all axes are servo motor driven
- The 5 AXIS machine adds an additional axis for moving support towards and away from the mandrel
- By having five servo axes, the 5 AXIS is faster while maintaining precision
- The production rate is higher than lower versions and adds capability to coil one-sided conical springs
- For the 6 AXIS model, the mandrel holder axis is separate from the support head and can make more precise long length springs

The 5/6 AXIS WIM CNC machines offer the ultimate in versatility and speed, for various spring types and wire forming.

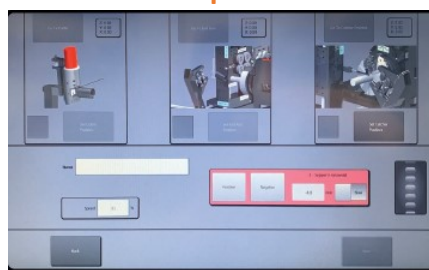
WIM CNC Features

Diagnostics



Checks for errors before allowing production

Template



Best solution for setting up new springs

Mandrel Holder



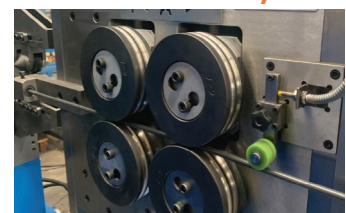
All machines include the mandrel holder

Wire Catcher System



Optional WCS for starting 1st coil automatically

Wire Detection System



Stops machine when coil wire is finished

Air Conditioning System

Maintains working temp and keeps dust out of cabinet

Gate Manager—Remote Connection

Remote access to machine for software updates and testing

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ADDITIONAL OPTIONS



The Handwheel controller gives the operator flexibility working around the WIM CNC machine.

Handwheel Controller

Using the handwheel, the operator can easily navigate through the programming and settings functions.

Setup and control of each axis is accomplished quickly.

HMV Series Power Reel

The HMV power reel is designed to work with the WIM CNC machines to provide smooth control for wire decoiling.

The HMV can be incorporated into the WIM-CNC machine's software.



The HMV power reel can also be a standalone decoiler that be used with other Fortuna Federn machines. Contact us for more details.

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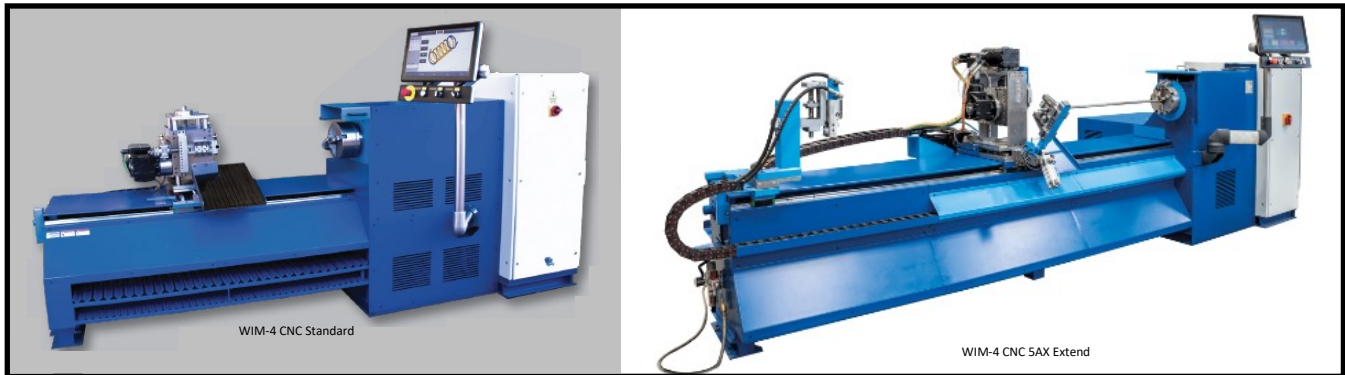
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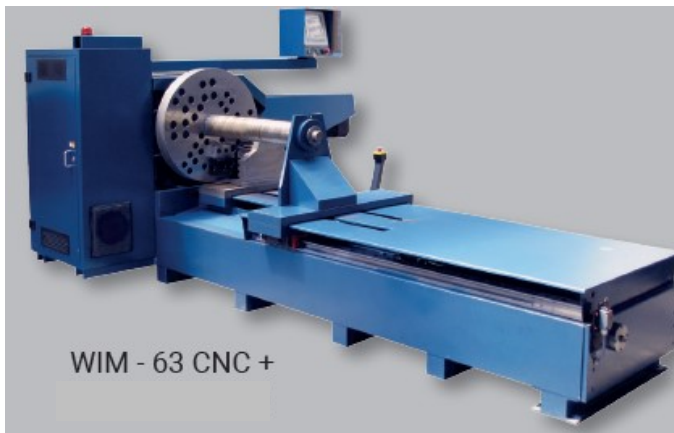
CUSTOM DESIGNED TO MEET YOUR NEEDS



From a Standard WIM-4 CNC machine to a WIM-4 CNC 5AX Extend with an extended bed, we can design the machine to meet your needs!

WIM CNC + for COLD coiling are custom designed based upon your requirements

These machines are designed to coil springs with a wire diameter up to 65 mm of various wire material (such as CrSi, CrV4, W.Nr.1.4310, EN 10270) and we can built to your spring specifications (wire diameter range, spring OD range, spring length, etc.)



Die Spring made from oval wire



Conveyor Spring without pitch (for later pitching)

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HOT COILING UP TO 100 MM



Upcoming Event: CASMI



Join us at Booth 1220

October 12th—14th 2022
Donald E. Stephens Convention Center
Rosemont, IL

Folks from Fortuna Federn will be in attendance joining Al Uzumcu and Gerry Wright at Booth 1220.

We look forward to seeing you and helping solve any challenges that you have!



Coiling Equipment is here to help you

Bring us your challenges—we can bring solutions for your needs

Production Tooling and Parts—we can provide tooling and parts

Service and Support—we will work with you and the FF service team to resolve issues and get you back up and running

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