

Summer 2022

# Spring Maker News



Coiling Equipment Newsletter

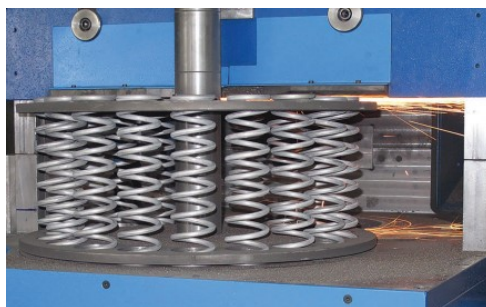
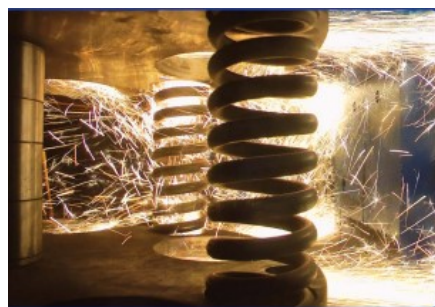


## PRODUCT FOCUS Spring End Grinding Machines



Fortuna Federn's GRM CNC Spring End Grinding Machines feature:

- **Horizontal crush or down-feed grinding**
- **Automatic adjustment coordinates with the revolutions of the grinding wheels for increased capacity and efficiency**
- **Servo controlled, semi automatic grinding**
- **Programable control technology for the loading table that simplifies the loading of the machine**



Scan to see  
GRM-13 video



Model	GRM-6	GRM-9	GRM-13	GRM-16
Wire diameter acc. to EN 10270-1 D14 ph (ASTMA228 Music Wire - ca. 1300 N/mm <sup>2</sup> )	Downfeed grinding 1 - 6 mm .039" - .236"	1 - 9 mm .039" - .354"	2 - 13 mm .078" - .511"	4 - 16 mm .157" - .629"
	Crush grinding 1 - 3 mm .039" - .118"	1 - 4 mm .039" - .157"	2 - 6 mm .078" - .236"	2 - 6 mm .078" - .236"
Max. spring outside diameter	80 mm 3.149"	100 mm 3.937"	140 mm 5.511"	200 mm 7.874"
Spring length	10,00 - 220,00 mm .393" - 8.661"	10,00 - 450,00 mm .393" - 17.716"	10,00 - 500,00 mm .393" - 19.685"	10,00 - 500,00 mm .393" - 19.685"
Dimensions of the grinding wheel	400 x 200 x 50 mm 15.748" x 7.874" x 1.968"	450 x 200 x 60 mm 17.716" x 7.874" x 2.362"	660 x 350 x 80 mm 25.984" x 13.779" x 3.149"	915 x 200 x 120 mm 36.02" x 7.87" x 4.72"
Dimension of the loading plate	420 mm 16.535"	520 mm 20.472"	580 mm 22.834"	1040 mm 40.944"
Turning of the grinding wheels	2x 2,20 kW asynchronous	2x 7,5 kW asynchronous	2x 11 kW asynchronous	2x 18,5 kW asynchronous
Vertical movements of the grinding wheels	0,55 kW servo + 0,80 kW asynchronous	0,55 kW servo + 0,80 kW asynchronous	1,5 kW servo + 2,2 kW asynchronous	1,5 kW servo + 2,2 kW asynchronous
Turning of the loading plate	1,20 kW servo	3,6 kW servo	3,6 kW servo	5 kW servo
Machine dimensions (L x W x H) ca:	1500 x 1200 x 2050 mm 59,055" x 47,244" x 78,740"	1500 x 1850 x 2150 mm 59,055" x 72,834" x 84,645"	1850 x 2300 x 2720 mm 72,834" x 90,551" x 107,086"	3000 x 2800 x 3000 mm 118,110" x 110,236" x 118,110"
Electrical cabinet dimensions (L x W x H) ca:	800 x 500 x 1200 mm 31,496" x 19,685" x 47,244"	800 x 500 x 1200 mm 31,496" x 19,685" x 47,244"	800 x 500 x 1200 mm 31,496" x 19,685" x 47,244"	800 x 500 x 1200 mm 31,496" x 19,685" x 47,244"
Weight ca:	2.100 kg 4,629 lbs	4.300 kg 9,749 lbs	7.000 kg 15,432 lbs	11.000 kg 24,250 lbs

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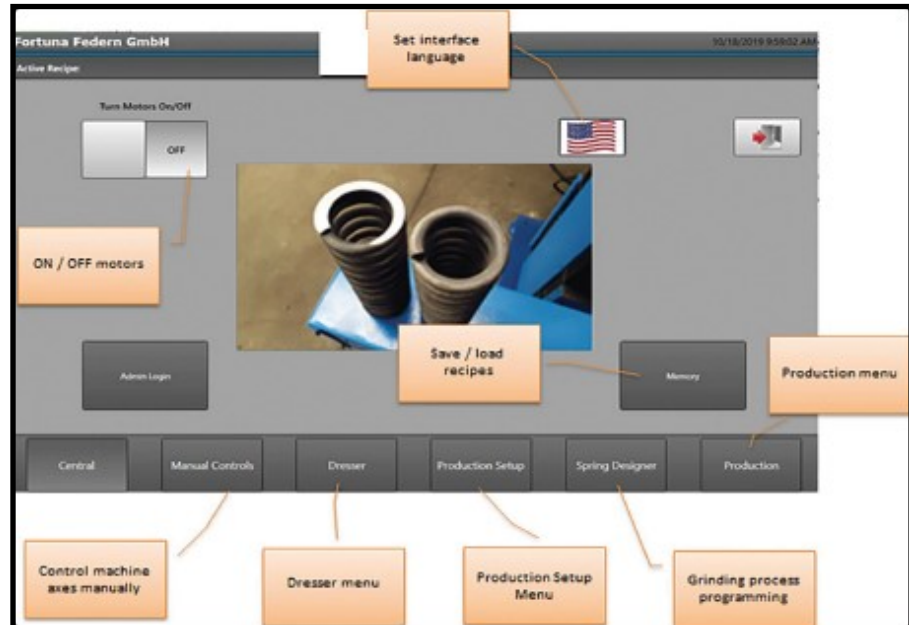
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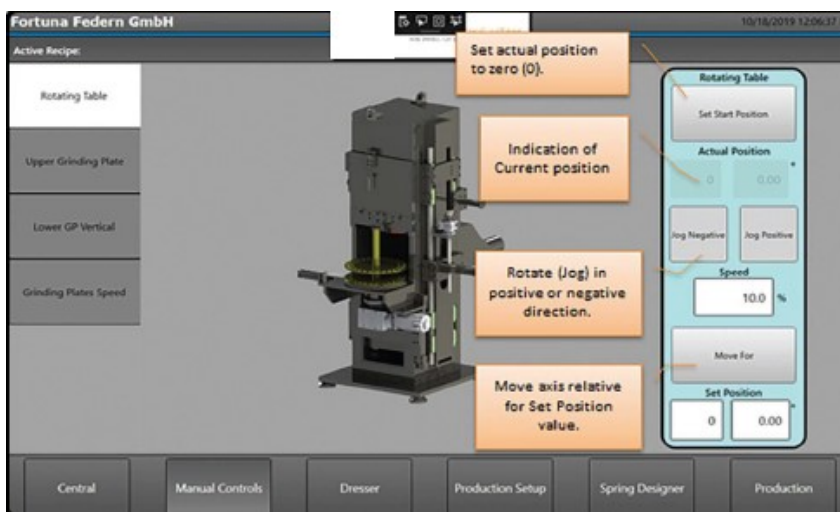
## PRODUCT FOCUS

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### HMI CNC Control Unit / Spring End Grinding Machines Manual Control



- The 13" Touch Screen has big, clear command buttons
- It is very easy to load or save programs
- The control unit can store several hundred programs
- The software provides the operator maximum flexibility in programming



*The software is designed to give the operator maximum flexibility in programming.*



- Each axis can be controlled in the "Manual Control" Mode
- When selected, the left side tab menu appears
- Within each tab, the operator can select which axis will be controlled
- The picture above shows an example of the axis manual control

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## PRODUCT FOCUS

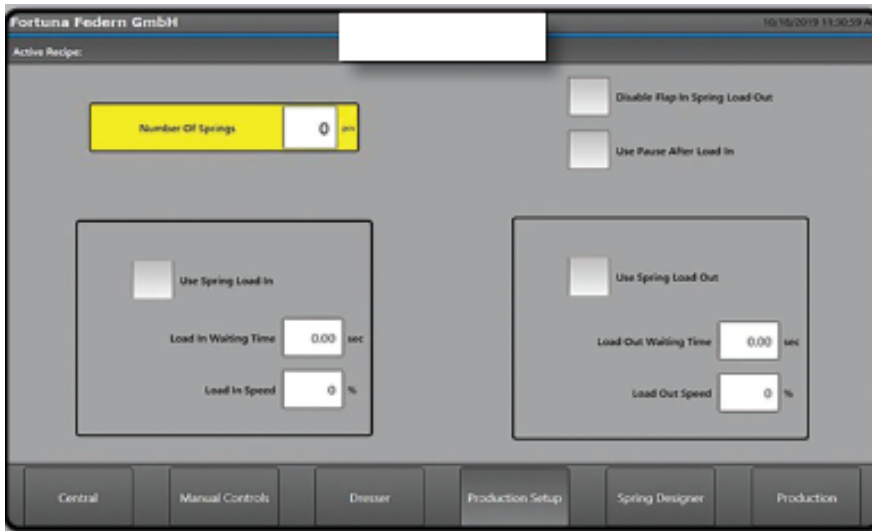


### HMI CNC Control Unit / Spring End Grinding Machines

#### Programming Menu

*The Programing menu includes all key points for a fast and smooth set up:*

- Grinding speed
- Spring loading speed
- Spring loading time
- Number of spring positions in disc
- Spring unload speed
- Spring unloading time



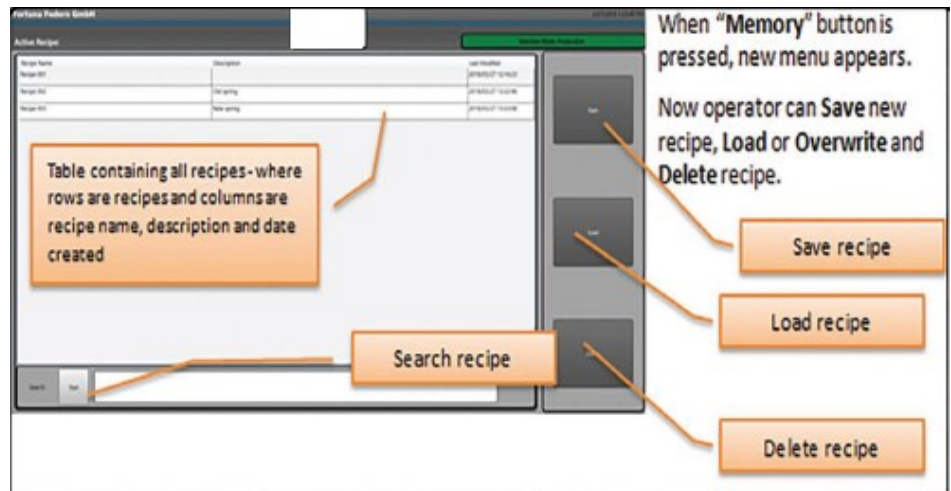
*Even with the most complicated grinding requirements for springs, the programming menu gives the operator the ability to make fine adjustments to achieve the desired results.*

#### Memory Menu

*The Memory menu gives the operator the ability to :*

- Save a program by name
- Overwrite a program
- Load and delete a program
- Search by keyword
- Preview a program without loading all parameters

As the operator loads the program parameters, it is important to set up the home position of the axes before saving.



*When all of the programming steps are set up correctly and saved in the memory menu, the process of repeating the production for the same spring in the future is fast and easy.*



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## PRODUCT FOCUS

**FF**

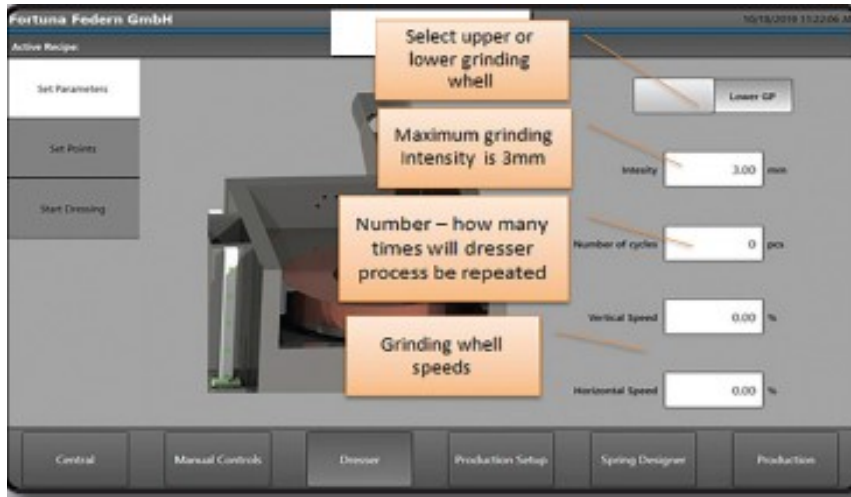
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### Automatic / Manual Dressing / Spring End Grinding Machines

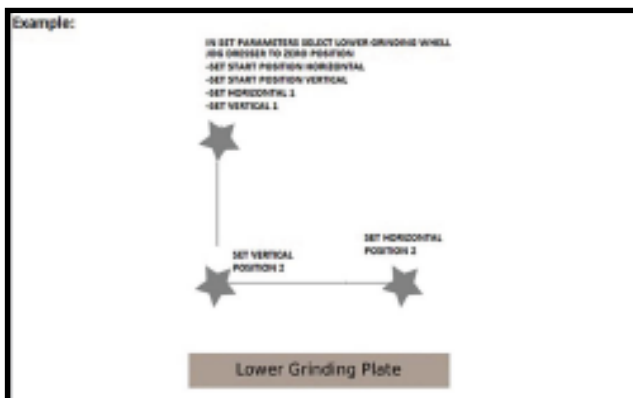
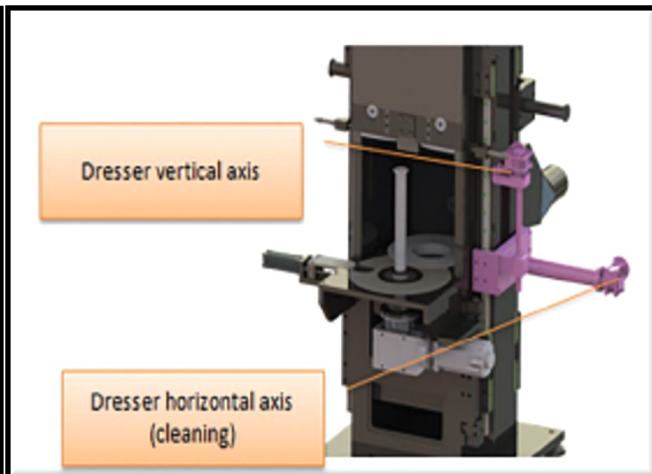
#### Dressing Menu

*Grinding wheel dressing can be done in automatic or manual modes. Setup includes:*

- Number of cycles
- Upper grinding wheel
- Lower grinding wheel
- Intensity of dressing



*Grinding wheel dressing is important to ensure good grinding results.*



#### Dressing program example

- Number of repetitions: 5
- Intensity: 2.5
- Intensity / Number of repetitions = 0.5
- After each dressing cycle, dresser vertical axis will move 0.5 mm towards the grinding wheel and will repeat the cycle 5 times in total.

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 **Coiling Equipment**

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**Linear Guide / Exhaust System / Spring End Grinding Machines**



### Linear Guide

*The linear bearing guiding system in combination with the spindle axes ensures the precise movement of the machine and smooth setting for the spring grinding process.*

### Exhaust System

*An external filtration unit has to be connected to the grinding machine.*

*Your connection tube's inside diameter should be 150 mm.*



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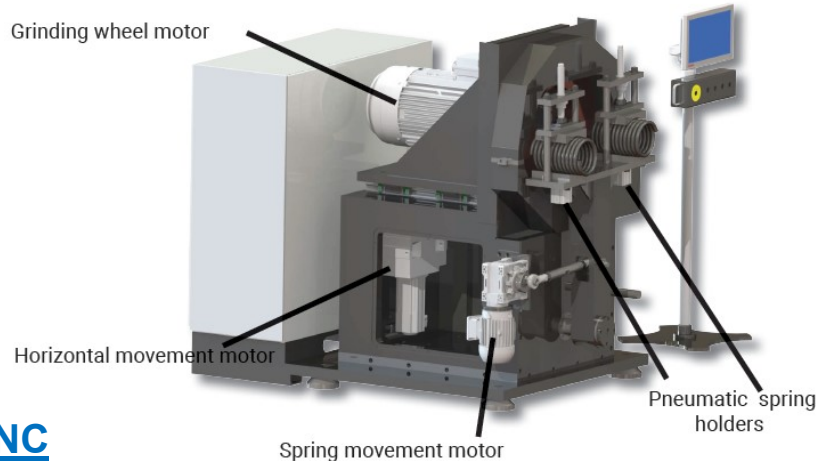


## PRODUCT FOCUS



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### NEW! / GRM-20-V CNC Single End Dry Grinder



#### GRM-20-V CNC

- **Wire Diameter (EN 10270-1 ph):**
  - 10-20 mm (0.394"—0.787")
- **Max spring outside diameter:**
  - 170 mm (6.692")
- **Dimension of the grinding wheel:**
  - 660 / 350 / 80 mm
  - (25.984" / 13.149")
- **Driving:**
  - Turning of the grinding wheel 15 kW
  - Horizontal movement of the grinding wheel
  - Spring movement
- **Machine Weight and Dimensions:**
  - 2500 kg (5,512 lbs.)
  - 165 x 120 x 160 cm (L x W x H)
  - 64.96" x 47.244" x 62.992" (L x W x H)

## Upcoming Event: CASMI SHOW



### Join us at Booth 1220

October 12th—14th 2022

Donald E. Stephens Convention Center  
Rosemont, IL

### 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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