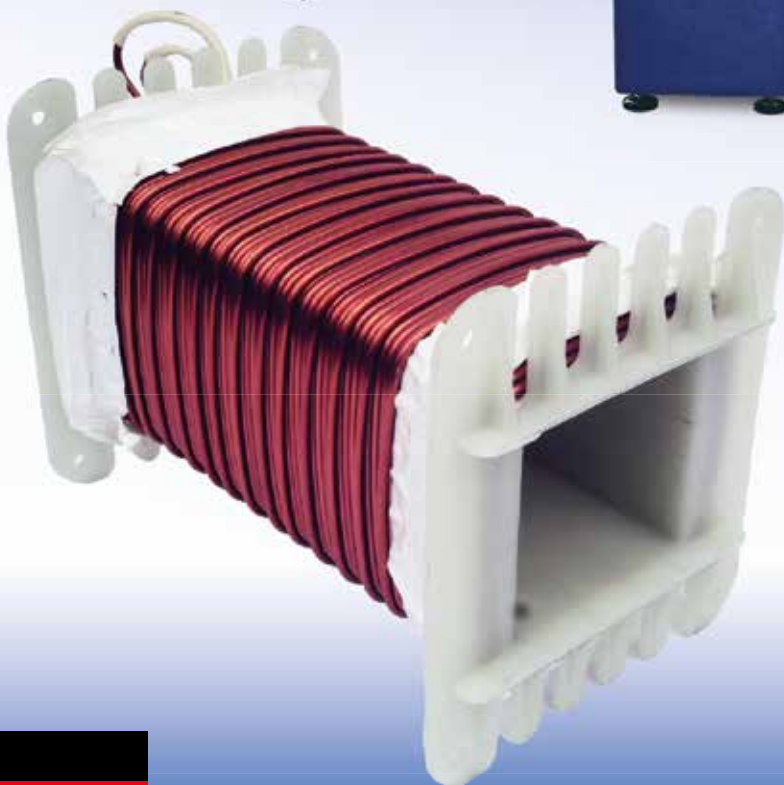


平型绕线机



Linear winding machines



空心线圈

air coils



马达线圈

motor coils



扁线空心线圈

edge windings of flat wire



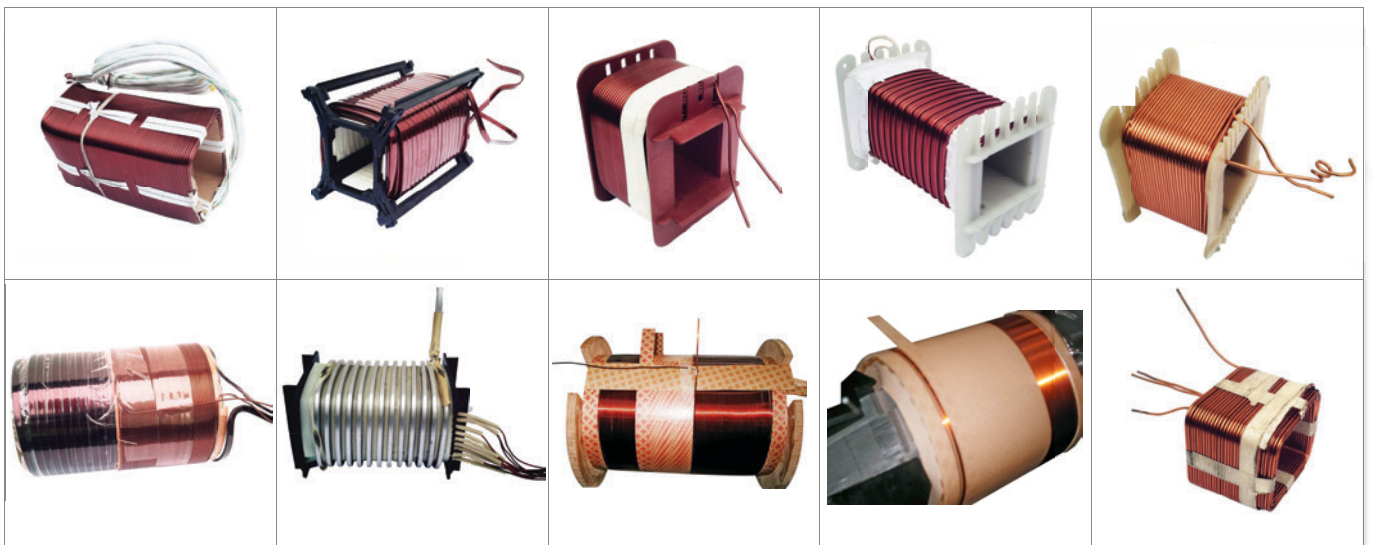
各种绕法样品

various winding examples



变压器线圈

transformer windings



目录

Index

RUFF 全球代理商	Worldwide RUFF representative offices	4
THE RUFF GROUP - 公司简介	THE RUFF GROUP - Introduction to our company	5
LWM 迷你机型系列	MINI machine line - LWM	6
LW 05	Model LW 05	6
LW 10 / 11	Models LW 10 / 11	8
LW 15 / 16	Models LW 15 / 16	10
LW 20 / 21	Models LW 20 / 21	12
LW 25-S	Model LW 25-S	14
LWM 立式机型系列	BENCH machine line - LWM	
LW 30	Model LW 30	16
LW 45	Models LW 45	18
LW 90	Model LW 90	20
LWM 落地机型系列	FLOOR machine line - LWM	
LW 120-S	Model LW 120-S	22
LW 150	Model LW 150	24
LW 120-RS / 180-RS	Models LW 120-RS / 180-RS	26
LW 1000	Model LW 1000	28
LW 150 Progressive	Model LW 150 Progressive	30
HKW 空心扁线绕线机	HKW Edge winding machine line - HKW	
Modell HKW	Modell HKW	32
Modell HKW R	Modell HKW R	34
附件	Accessories	
导线架	Wire guide	36
张力器/刹车	Wire brake	37
线桶张力器	Wire brake unit for wire containers	38
亚克力线桶	Wire containers	38
放线架	Wire dereeler	39
绝缘纸及胶带放线架	Dereeler for insulation and tape material	40
转轴工装	Tools for spindle	42
设备配置询问表	Questionnaire for machine configuration	43



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All other countries will be served directly by RUFF.

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THE RUFF GROUP

公司简介

正如很多企业一样，中小企业也可以孕育出一些很新奇有创意的产品，而RUFF正是这样的一家公司。

RUFF起源于70多年前慕尼黑附近的一个小仓库，多年来一直专注于生产高品质的线圈绕线机，并成为该领域的世界领先品牌。

我们生产的超过15000多台设备，销往全世界超过100个国家，这些设备受到客户的高度赞扬。

客户普遍认为，我们的机器具有高品质，标准性，同时耐用度极高，RUFF已成为高科技线圈绕线机行业规范的代名词。

1. 我们的市场地位及制造条件

- 拥有超过70年的线圈生产经验，以及先进的绕线行业专有技术。
- 拥有超过6000平米的欧洲标准化产房，配备现代化CNC数控车床，所有机械零部件自己生产。

2. 我们的智慧理念

- 利用现有的电子零部件，比如先进的PLC控制器，伺服驱动系统，自主研发控制系统及人机操作软件。
- 标准电子元器件在所有的RUFF绕线机上均采用统一的通讯协议。
- 采用模块化设计，便于对当前或以后的设备进行改装。
- 紧凑及坚固的机械结构设计。

3. 我们的市场及客户服务系统

- 全球范围内销售，服务及技术支持人员。
- 全球范围内48小时零配件服务。
- 全球范围内超50个国家和地区的销售代表。

基于以上这些理由，以及其他因素决定了我们能站在创新发展的前沿，并能为客户提供面向未来的具有开拓性的技术。

您可以充分地相信我们！相信RUFF！



迷你型系列

MINI machine line

LW 05

LW05 是轻型桌面型机型，采用集成式电箱设计，适用于所有的平型绕线应用。拥有迷你型的体积和轻量化结构，可轻松地移动到不同的工作场所。绕线速度和扭矩范围可通过预装的传动齿轮调整。

LW05 配置简单的控制器及4行文本的LCD 显示屏。支持所有的标准平型绕法，系统支持所有拉丁语言。

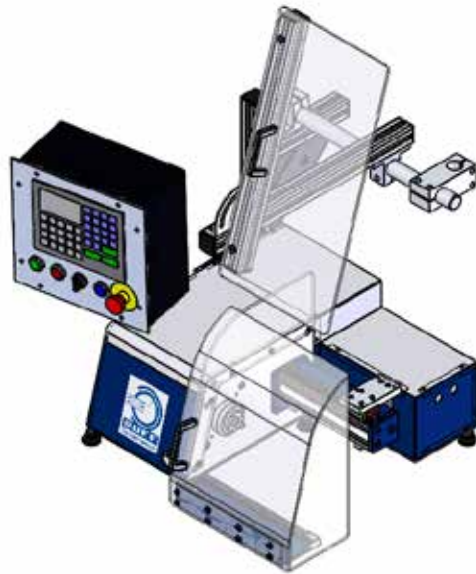
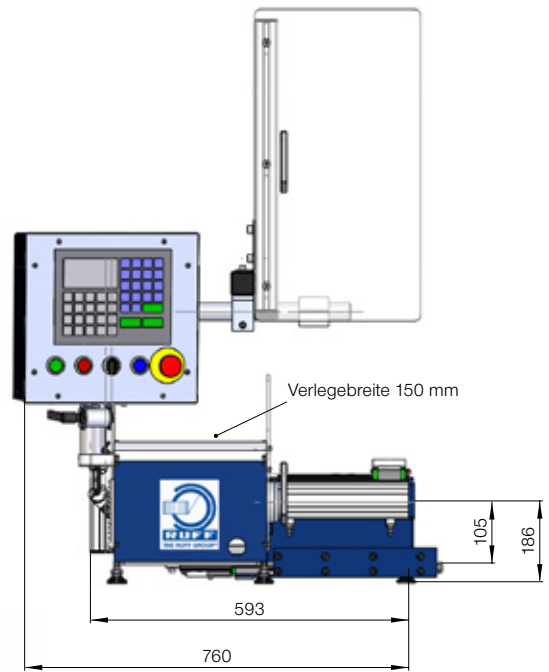
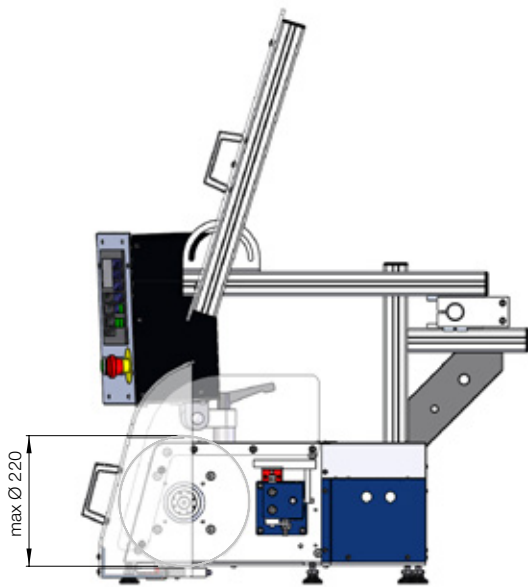
可选配多种附件比如：送线器，线桶，导线架等等。

The LW05 is a light designed bench top machine with an integrated electrical cabinet for all type of linear winding applications. Given small dimension and light construction, it can easily be carried to different working places. Required speed and torque range can be changed by the pre installed transmission gears.

The LW05 has a simple controller with a 4 line LCD display. All standard winding methods are available. All languages with Latin characters can be displayed on the controller.

A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 0,8 mm
 有效行程: 150 mm
 最大旋转直径: 220 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 400W
 行程马达: 100W
 显示屏: 4 行单色液晶显示屏
 PC 连接: 不支持
 系统语言: 所有拉丁语言
 绕线精度: 0,001 mm
 机身重量: 约 38 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 0,8 mm
traverse length	150 mm
max. coil diameter	220 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	400 W
traverse motor brushless	100 W
display	4 line LCD display
PC connection	no
software languages	latin characters
accuracy of pitch	0,001 mm
weight	approx. 38 kg
supply voltages	1 Ph / 230 V / 16 A

LW 10 / LW 11

LW10/11 是轻型桌面型机型，采用独立式电箱设计，适用于所有的平型绕线应用。拥有迷你型的体积和轻量化结构，可轻松地移动到不同的工作场所。绕线速度和扭矩范围可通过预装的传动齿轮调整。

LW10 配置简单的控制器及5.7" 单色触摸屏显示器。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。

LW11 配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

可选配多种附件比如：送线器，线桶，导线架等等。

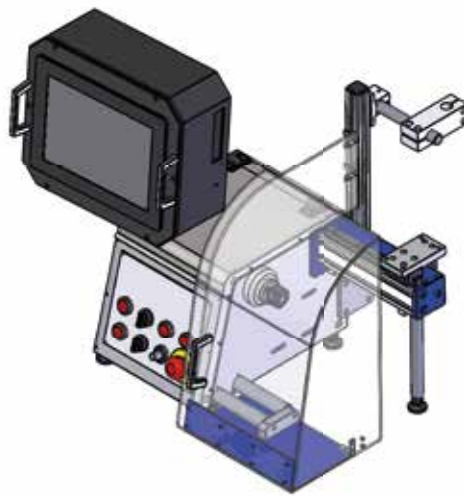
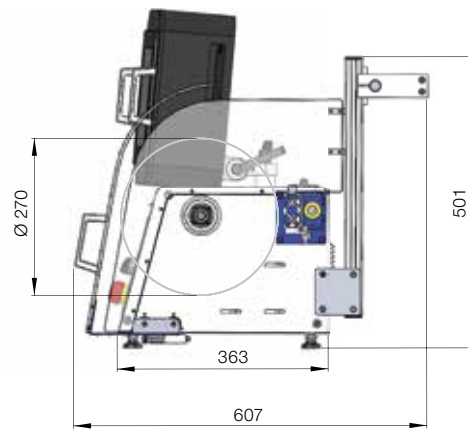
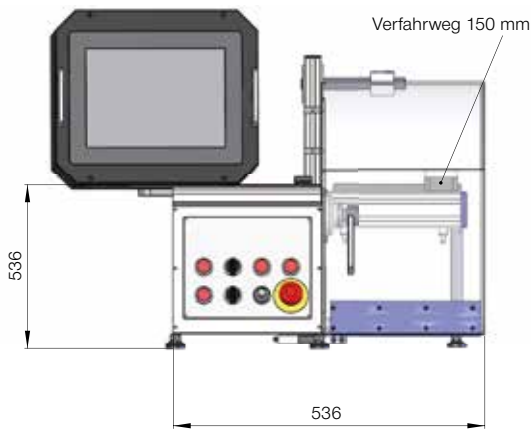
The LW 10 and LW 11 are light designed bench top machines with a separate electrical box for all type of linear winding applications. Given small dimension and light construction, it can easily be carried to different working places. Required speed and torque range can be changed by the pre installed transmission gears.

The LW 10 has a simple controller with 5.7" monochrom touch screen. All standard winding methods are available. All languages with Latin characters can be displayed on the controller. It also has an USB connection for import or export winding programs.

The LW 11 with a hi-tech controller is available in all languages. The programs can easily be created by a 10.4" colour touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued in Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 1 mm
 有效行程: 150 mm
 最大旋转直径: 270 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 750W
 行程马达: 100W
 显示屏: 10.4" 或 5.7" 彩色触摸屏
 PC 连接: 10.4" 版本支持
 程序下载: USB
 系统语言: 10.4" 支持所有语言 (不含中文)
 5.7" 支持所有拉丁语言
 绕线精度: 0,001 mm
 机身重量: 约 32 kg
 电箱重量: 约 30 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 1 mm
traverse length	150 mm
max. coil diameter	270 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	750 w
traverse motor brushless	100 w
display	10.4" or 5.7" touch screen
PC connection	only with 10.4"
downloading program	USB
software languages	10.4" all languages 5.7" latin characters
accuracy of pitch	0,001 mm
machine weight	approx. 32 kg
electrical cabinet weight	approx. 30 kg
supply voltages	1 Ph / 230 V / 16 A

LW 15 / LW 16

LW15/16 是轻型桌面型机型，采用独立式电箱设计，适用于所有的常规及高精度平型绕线应用。绕线速度和扭矩范围可通过预装的传动齿轮调整，典型的应用有多圈数高速绕线。LW15和LW16的区别在于使用的控制器不同。

LW15 配置简单的控制器及5.7" 单色触摸屏显示器。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。

LW16 配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

可选配多种附件比如：张力器，线桶，导线架等等。

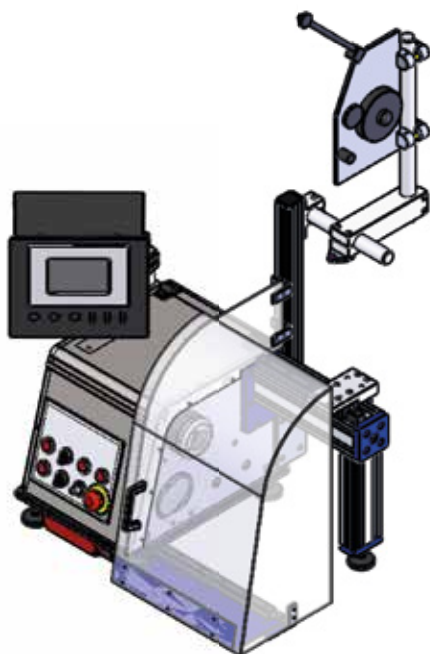
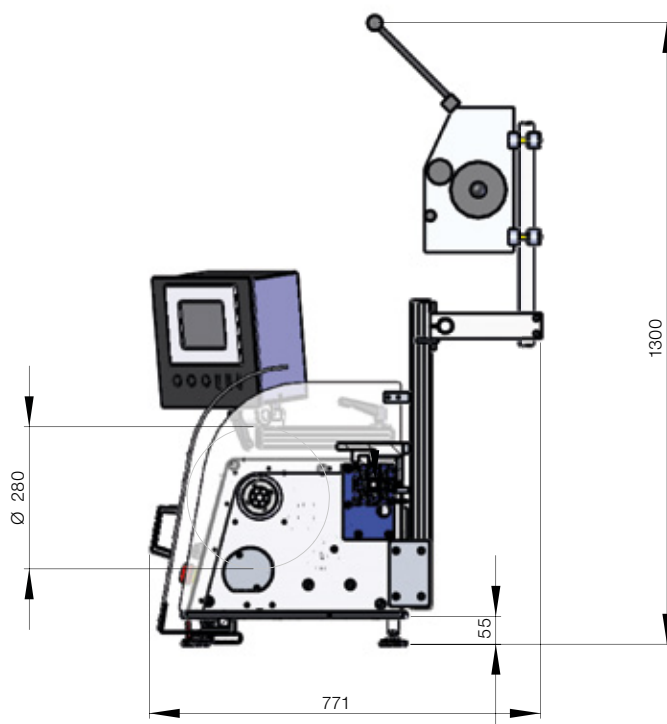
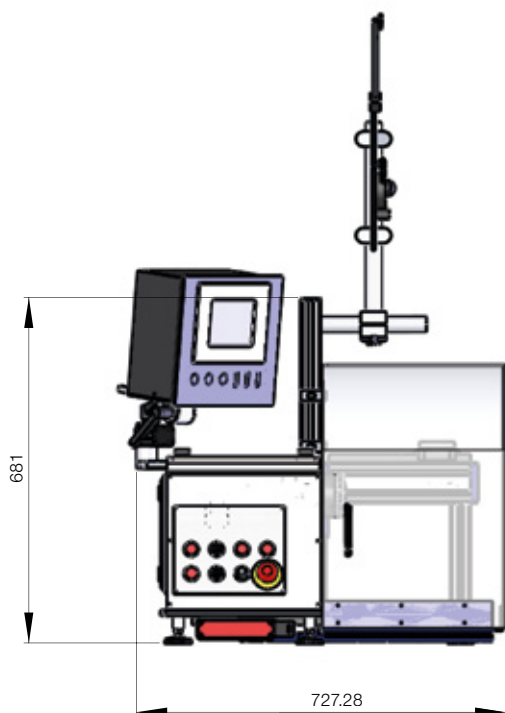
The LW 15 and LW 16 are bench top machines for all general and high precision linear winding applications. Required speed and torque range can easily be changed by the pre installed transmission gears. These machines are small winding machines with a separate electrical box. Typical applications are winding jobs with a high number of turns. The difference between the LW 15 and LW 16 is the controller.

The LW 15 has a simple controller with 5.7" monochrome touch screen. All standard winding methods are available. All languages with Latin characters can be displayed on the controller. It also has a USB-connection for import or export of winding programs.

The LW 16 has a hi-tech controller. It is in all languages available. The programs can easily be created by a 10.4" colour touch screen. The machine has a USB connection for import or export of winding programs. The programs can also be read and issued in Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personnel.

A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 3 mm
 有效行程: 150 mm
 最大旋转直径: 280 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 1kW
 行程马达: 200W
 显示屏: 10.4" 或 5.7" 彩色触摸屏
 PC 连接: 10.4" 版本支持
 程序下载: USB
 系统语言: 10.4" 支持所有语言 (不含中文)
 5.7" 支持所有拉丁语言
 绕线精度: 0,001 mm
 机身重量: 约 50 kg
 电箱重量: 约 30 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 3 mm
traverse length	150 mm
max. coil diameter	280 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	1 kW
traverse motor brushless	200 W
display	10.4" or 5.7" touch screen
PC connection	only with 10.4"
downloading program	USB
software languages	10.4" all languages 5.7" latin characters
accuracy of pitch	0,001 mm
machine weight	approx. 50 kg
control cabinet weight	approx. 30 kg
supply voltages	1 Ph / 230 V / 16 A

LW 20 / LW 21

LW20/21 是轻型桌面型机型，采用独立式电箱设计，适用于所有的常规及高精度平型绕线应用。绕线速度和扭矩范围可通过预装的传动齿轮调整，独立尾座适用多种工装。这两款是迷你系列使用最普遍的小线圈、多圈数、高精度高速绕线机。LW20和 LW21的区别在于使用的控制器不同。

LW20 配置简单的控制器及5.7" 单色触摸屏显示器。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。

LW21 配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。支持所有的标准平型绕法，系统支持所有拉丁语言。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

可选配多种附件比如：张力器，线桶，导线架等等。

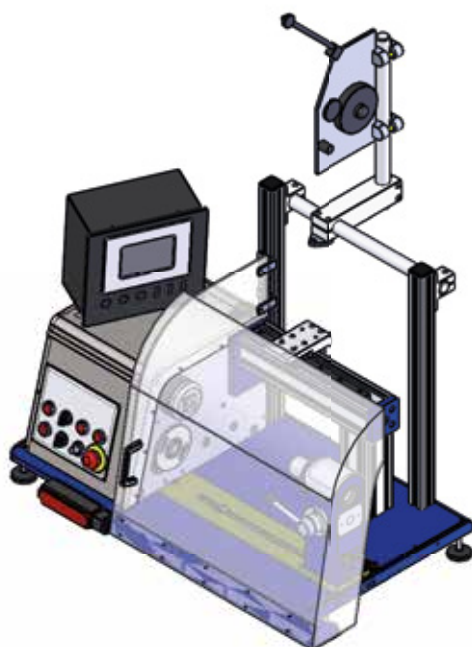
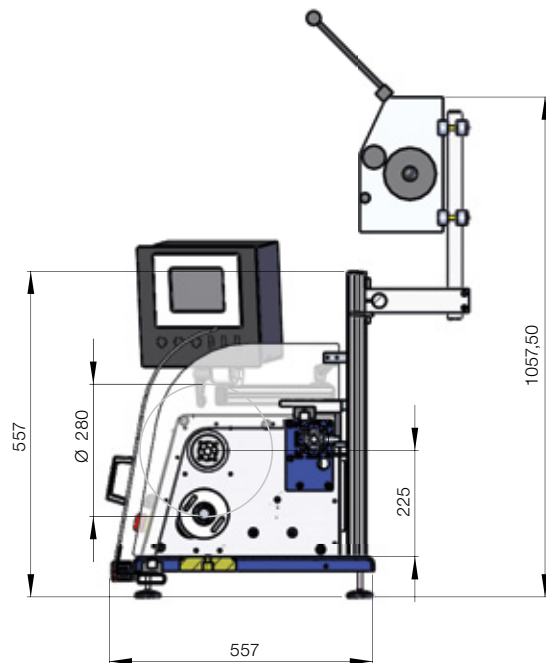
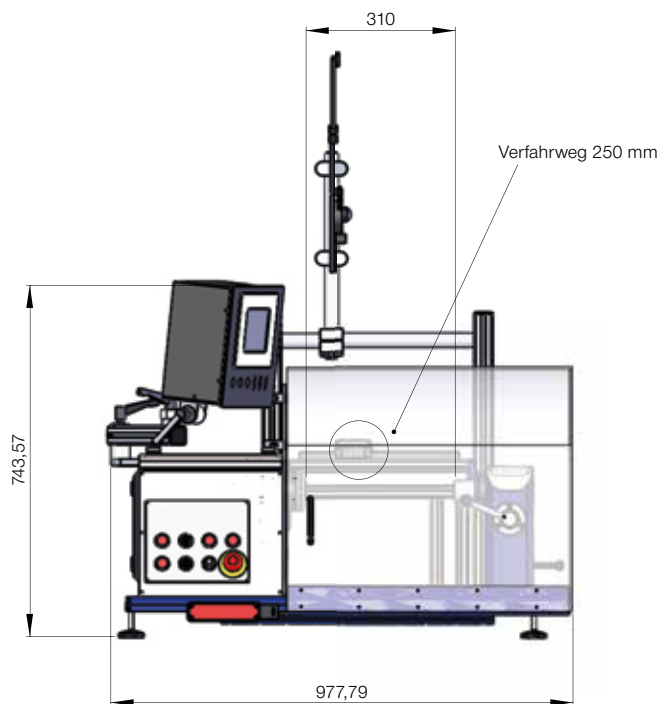
The LW 20 and LW 21 are small designed bench top machine for all general and high precision linear winding applications. Required speed and torque range can easily be changed by the pre installed transmission gears. These models are small winding machines with a separate electrical box and tailstock. They are mostly used as an economical bench top machine for small size coils with high numbers of turns. The difference between the LW 20 and LW 21 is the controller.

The LW 20 has a simple controller with 5.7" monochrom touch screen. All standard winding methods are available. All languages with Latin characters can be displayed on the controller. It also has a USB-connection for import or export winding programs.

The LW 21 with a hi-tech controller is available in all languages. The programs can be easily created by a 10.4" colour touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued in Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 3 mm
 有效行程: 250 mm
 最大旋转直径: 280 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 1kW
 行程马达: 200W
 显示屏: 10.4" 或 5.7" 彩色触摸屏
 PC 连接: 10.4"版本支持
 程序下载: USB
 系统语言: 10.4" 支持所有语言 (不含中文)
 5.7" 支持所有拉丁语言
 绕线精度: 0,001 mm
 机身重量: 约 65 kg
 电箱重量: 约 30 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 3 mm
traverse length	250 mm
max. coil diameter	280 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	1 kW
traverse motor brushless	200 W
display	10.4" or 5.7" touch screen
PC connection	only with 10.4"
downloading program	USB
software languages	10.4" all languages 5.7" latin characters
accuracy of pitch	0,001 mm
machine weight	approx. 65 kg
electrical cabinet weight	approx. 30 kg
supply voltages	1 Ph / 230 V / 16 A

LW 25-S

LW25-S 是轻型桌面型机型，采用独立式电箱设计，适用所有的常规及高精度平型绕线应用，其优势是最高转速可达到12000 RPM。机身焊接完成后再经过铣床整体加工。最普遍的应用是小线圈、多圈数、高精度快速绕线。机箱底板下方有可移动工作平台，必要时可拉出或收起。

LW25-S 配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

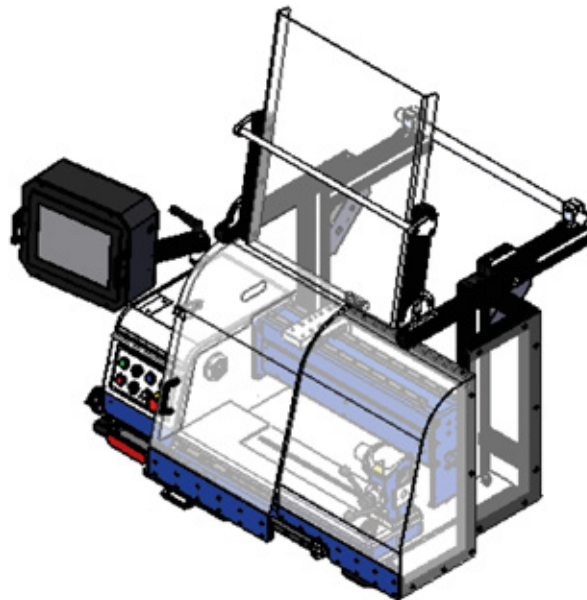
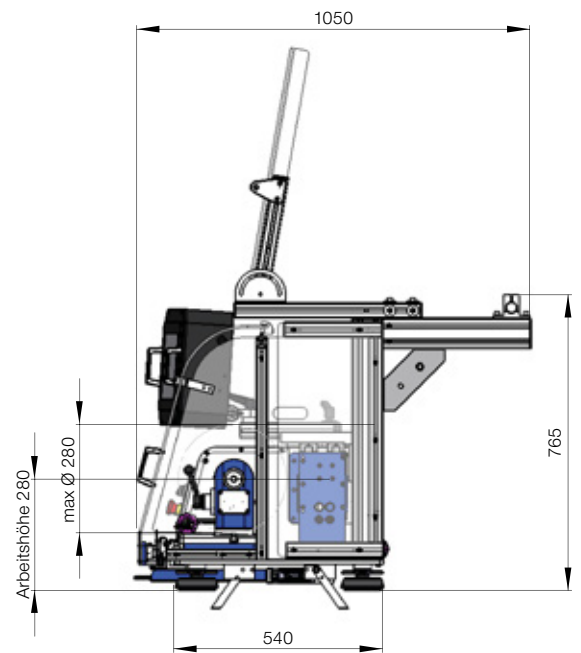
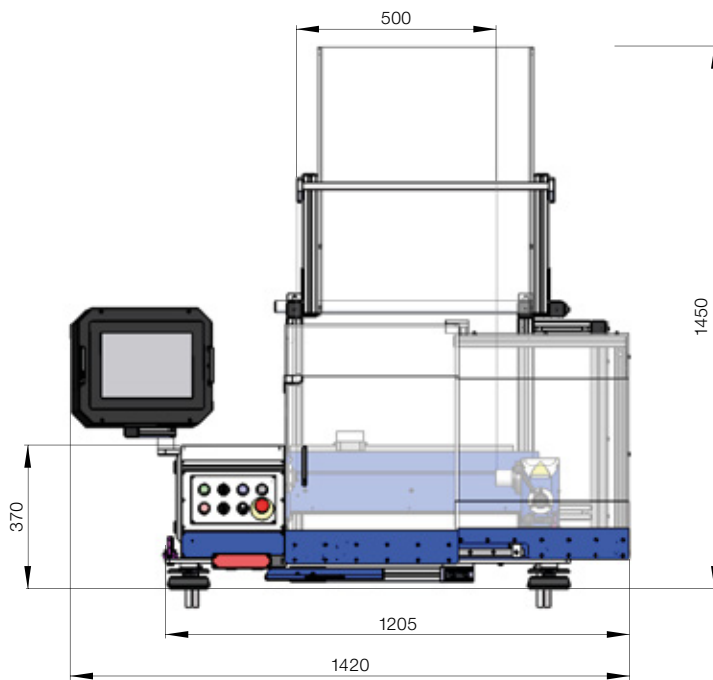
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 25-S are our high top machine for all general and high precision linear winding applications. The speed up to 12.000 rpm is one of the high lights. The machine base is welded and after with a milling machine finally machined. These model has a separate electrical box and tailstock. They are mostly used for small size coils with high numbers of turns. Especially is the moveable working plate under the base plate of the machine. It is swingable for need or to backs swing if not.

The LW 25-S with a hi-tech controller is available in all languages. The programs can be easily created by a 10.4" colour touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued in Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 1.5 mm
 有效行程: 450 mm
 最大旋转直径: 280 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 1kW
 行程马达: 200W
 显示屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 120 kg
 电箱重量: 约 30 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 1,5 mm
traverse length	450 mm
max. coil diameter	280 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	1 kW
traverse motor brushless	200 W
display	10.4" touch screen
PC connection	yes
downloading program	USB
software languages	10.4" all languages
accuracy of pitch	0,001 mm
machine weight	approx. 120 kg
electrical cabinet weight	approx. 30 kg
supply voltages	1 Ph / 230 V / 16 A

立式机型系列

BENCH machine line

LW 30

LW30 是标准立式机型，适用于所有的常规及高精度平型绕线应用。绕线速度和扭矩范围可通过预装的传动齿轮调整。LW30 是典型的带独立尾座的中等行程机型。典型的应用有多圈数、高精度绕线、空心自粘线圈绕线。LW30 也是适用于中小尺寸线圈绕线最具性价比的机型。

LW30 同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv 格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

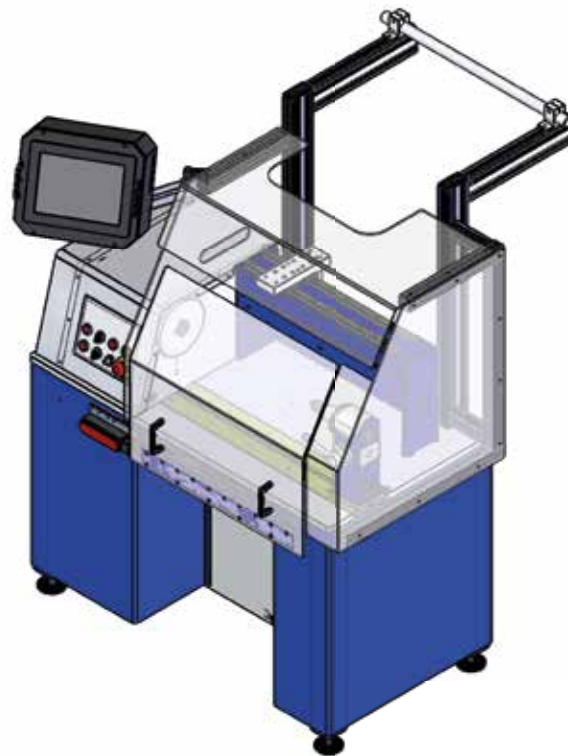
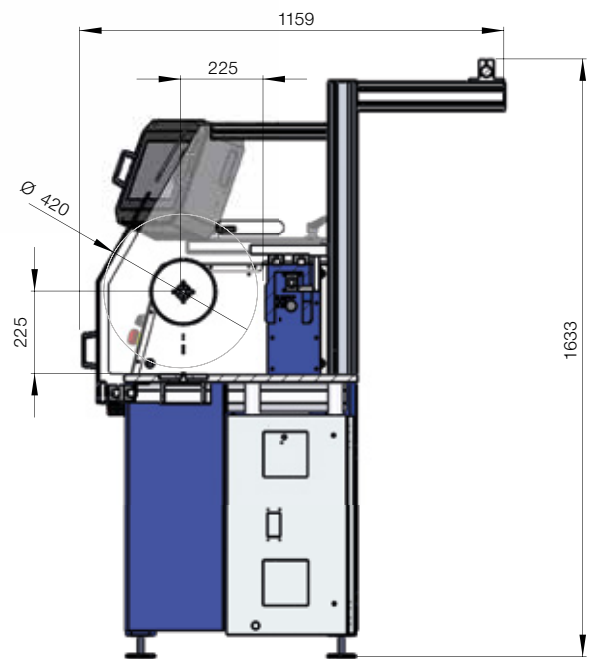
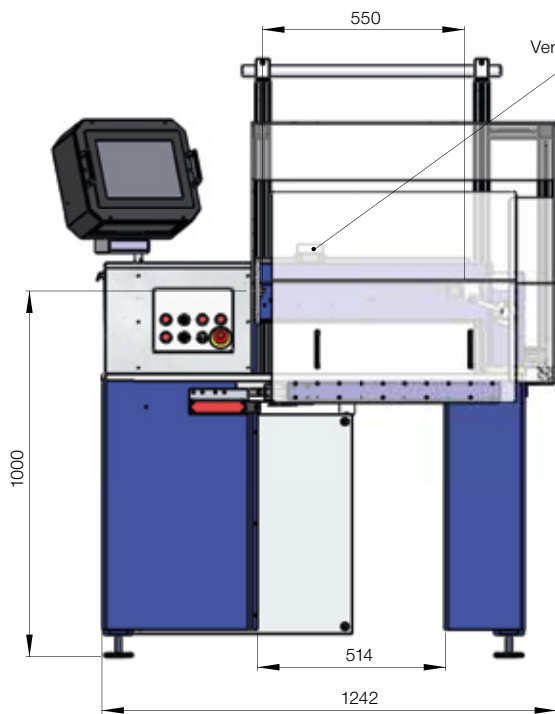
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 30 is designed for all general and high precision linear winding applications. Required speed and torque range can easily be changed by the pre installed transmission gears. The LW 30 is a typical universal winding machine with medium traverse width and tailstock. Typical applications are winding jobs with a high number of turns. The LW 30 is mostly used as an economical table machine for small and medium size coils.

The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine too.





线径范围: 0,01 - 3 mm
 有效行程: 450 mm
 最大旋转直径: 420 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 1.5 kW
 行程马达: 200W
 显示屏: 10.4"彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 250 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 - 3 mm
traverse length	450 mm
max. coil diameter	420 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	1,5 kW
traverse motor brushless	200 W
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 250 kg
supply voltages	1 Ph / 230 V / 16 A

LW 45

LW45 是标准立式机型，适用于所有的常规及高精度平型绕线应用。绕线速度和扭矩范围可通过机身的2 段式齿轮箱调整，也可以通过齿轮箱内的同步皮带转速比调节。LW45 是典型的通用型中等绕线行程，带独立尾座的机型。典型的应用有多圈数、高精度绕线、空心自粘线圈绕线。LW45 也是适用于中小尺寸线圈绕线最具性价比的机型。

LW45 同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv 格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

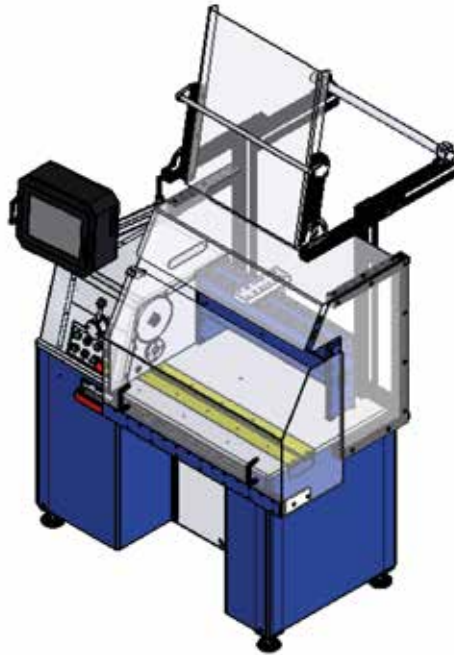
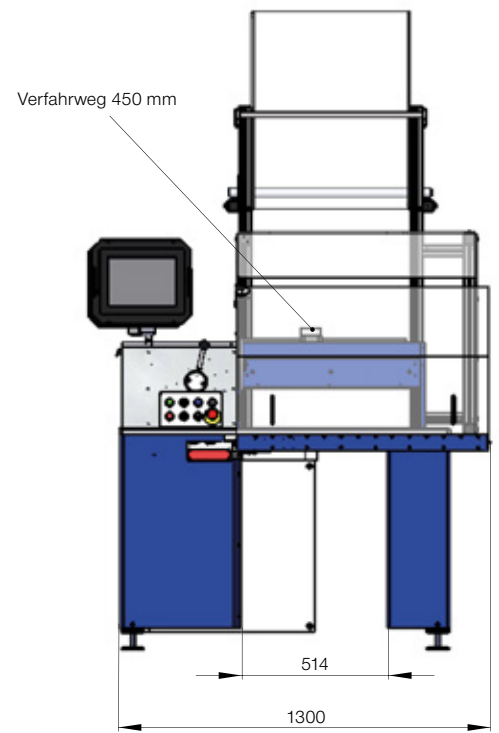
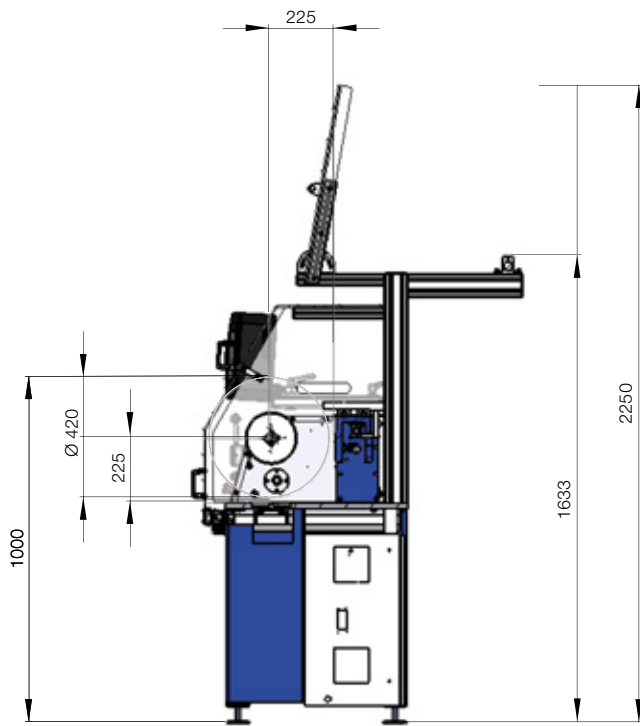
可选配多种附件比如：张力器，线桶，导线架等等。

The LW45 is designed for all general and high precision linear winding applications. Required speed and torque range can easily be changed by the 2 step switch gear box, moreover the belt ratio can be simply changed with the pre installed transmission gears too. The LW45 is a typical universal winding machines with medium traverse width and tailstock. Typical applications are winding jobs with a high number of turns.

The LW45 is mostly used as an economical table machine for small and medium size coils.

The LW 45 with a hi-tech controller is available in all languages. The programs can be easily created by a 10.4" colour touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued in Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal. A wide range of accessories like wire dereeler, wire containers etc. are available for this machine too.





线径范围: 0,01 - 4.5 mm
 有效行程: 450 mm
 最大旋转直径: 420 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 2.0 kW
 行程马达: 200W
 可调齿轮箱: 2 段可调
 显示屏: 10.4" 或 5.7" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 300 kg
 电源供应: 1 Ph / 230 V / 16 A

wire range	0,01 – 4,5 mm
traverse length	450 mm
max. coil diameter	420 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	2,0 kW
traverse motor brushless	200 W
switch gear box	2 step
display	10.4" or 5.7" touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 300 kg
supply voltages	1 Ph / 230 V / 16 A

LW 90

LW90 是稳固立式机型，适用于高精度含初级和次级平型绕线应用。绕线速度和扭矩范围可通过机身的2 段式齿轮箱调整，也可以通过齿轮箱内的同步皮带转速比调节。LW90 是典型的稳固型通用行程范围并带独立尾座的机型。典型的应用有包含不同粗细线径的初级和次级线圈绕线。

LW90 同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv 格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

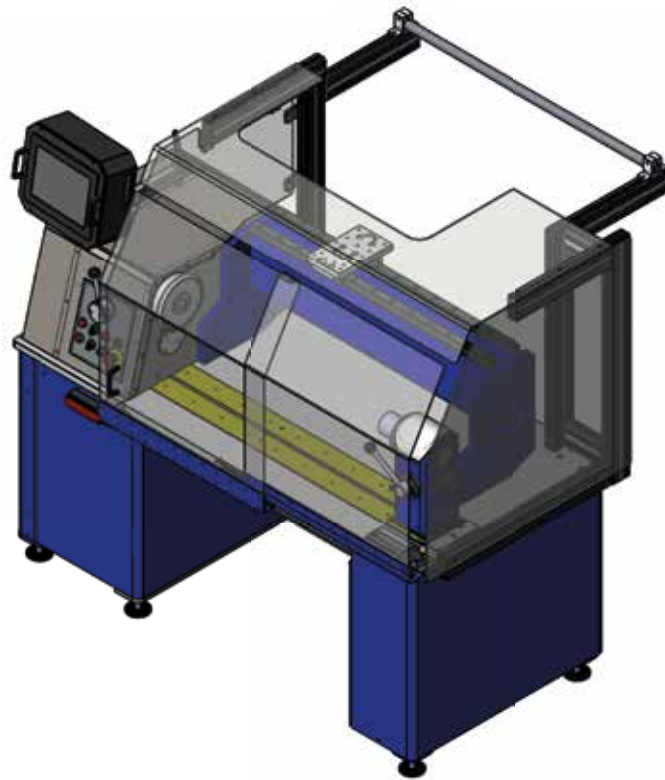
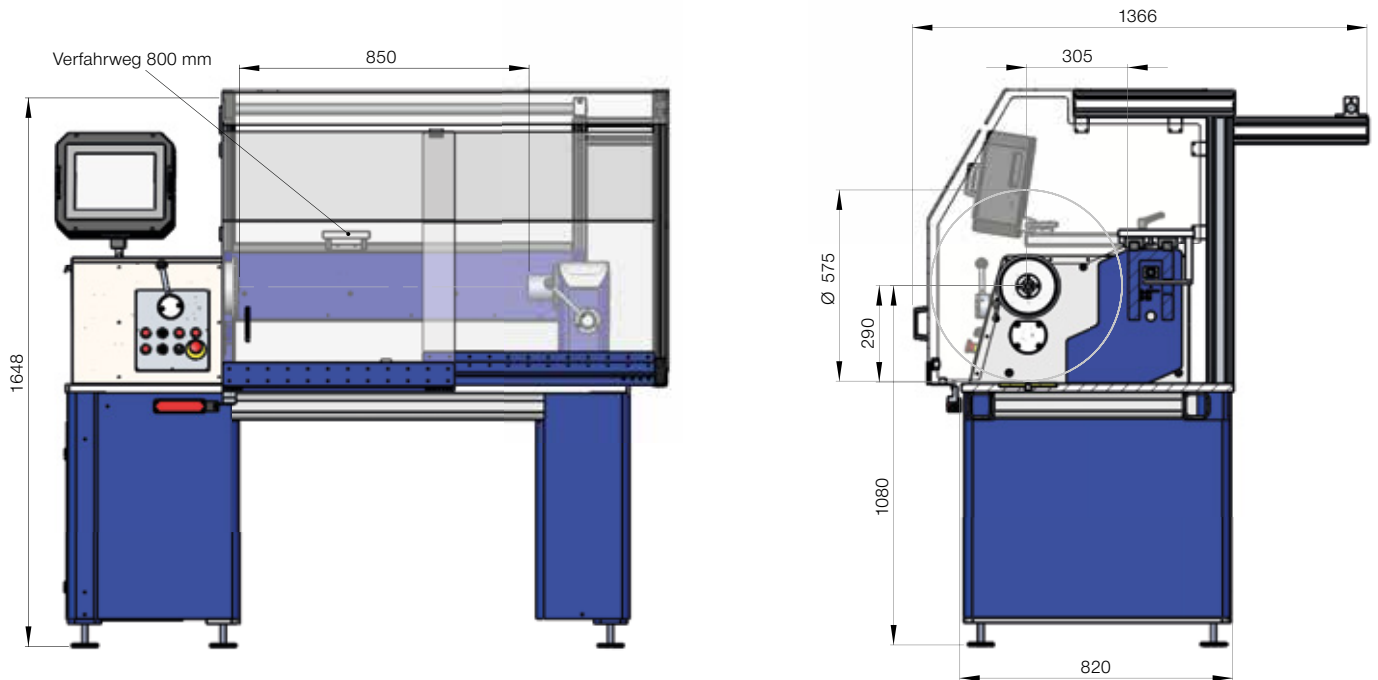
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 90 is a sturdy table winder for all high precision linear winding applications, with primary and secondary winding. Required speed and torque range can easily be changed by the 2 step switch gear box, moreover the belt ratio can be simply changed with the pre installed transmission gears too. The LW 90 is a strong universal winding machine with tailstock. Typical applications are winding jobs with thin and thick wire windings.

The controller is available in all languages. The programs can easily be generated by a 10.4" touch screen. The machine is fitted with an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine too.





线径范围: 0,01 - 6 mm
 有效行程: 800 mm
 最大旋转直径: 575 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 3 kW
 加强版 5 kW 适用于粗线径或重型线圈
 行程马达: 200W
 可调齿轮箱: 2 段可调
 显示屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 950 kg
 电源供应: 3 Ph / 400 V / 16 A

wire range	0,01 - 6 mm
traverse length	800 mm
max. coil diameter	575 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	3 kW
	5 kW strong version
traverse motor brushless	200 W
switch gear box	2 step
display	10.4 " colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 950 kg
supply voltages	3 Ph / 400 V / 16 A

落地机型系列

FLOOR machine line

LW 120

LW120 是重型落地式绕线机，机身采用全金属整体焊接。这种结构设计主要针对高精度重型初级和次级线圈绕线。绕线速度和扭矩范围可通过机身的3 段式齿轮箱调整，如有必要，也可根据客户需求另外选配附加的减速箱。LW120 是非常稳固的通用行程范围并带独立尾座的机型。典型的应用有包含不同粗细线径的初级和次级线圈绕线，以及多种扁平线绕线。

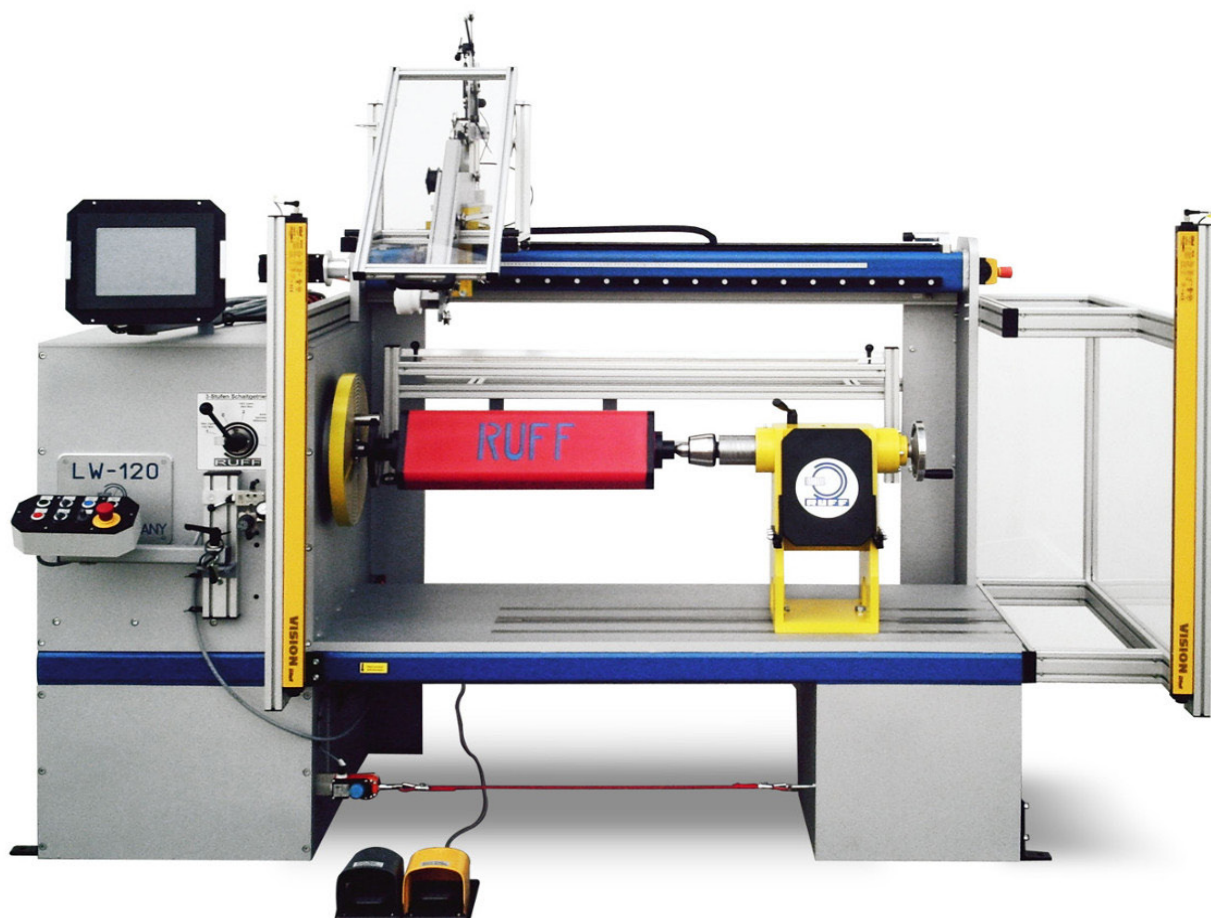
LW120 同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

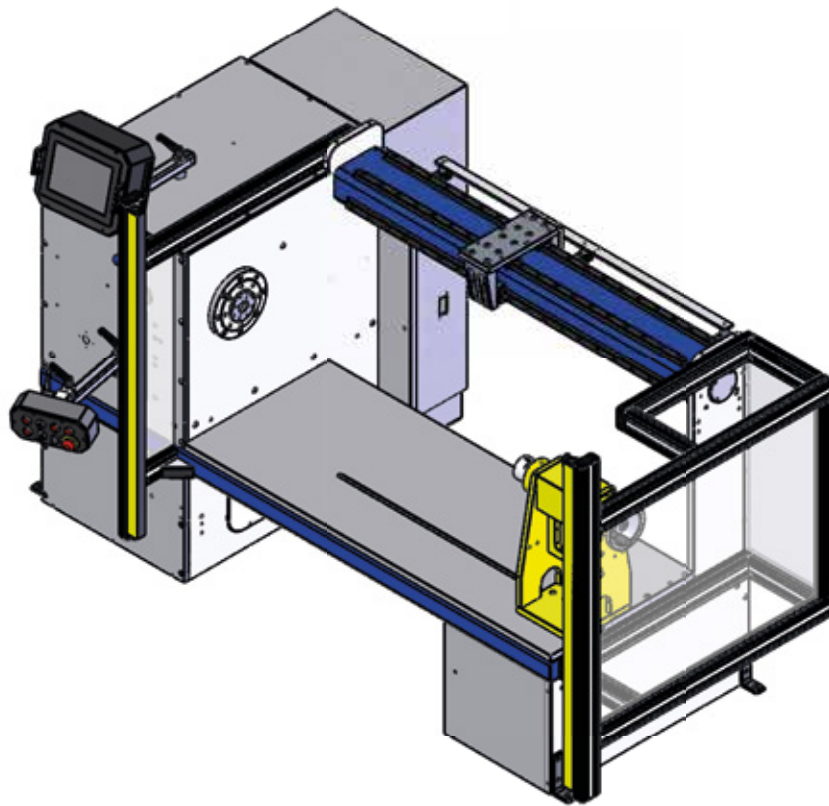
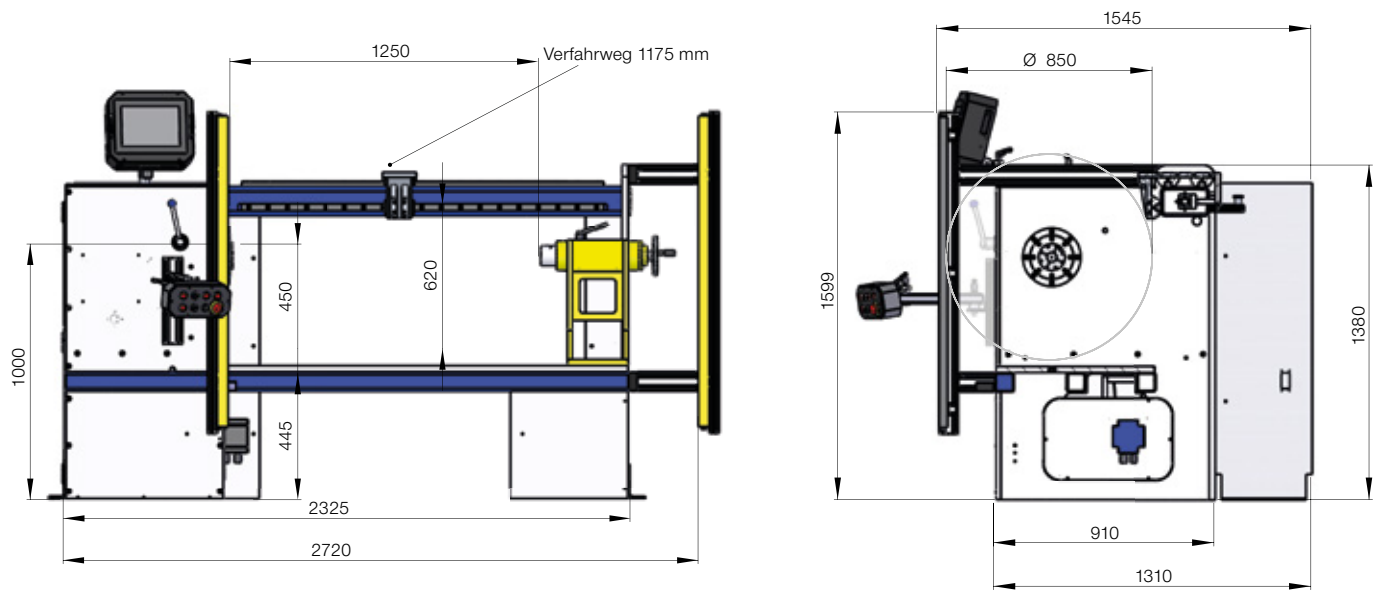
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 120 is a heavy duty floor winder, with a welded iron body. This design is for heavy and high precision linear winding applications with primary and secondary winding. Required speed and torque range can be easily changed by the 3 step switch gear box, and if required the machine can be equipped with an additional reduction gear box too. The LW 120 is a very strong universal winding machine with tailstock. Typical applications are winding jobs with thin, thick and multi flat wire windings.

The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine too.





线径范围: 300 mm² 以下
 有效行程: 1175 mm
 最大旋转直径: 850 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 7.5 kW
 行程马达: 750W
 可调齿轮箱: 3 段可调
 显示屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 1600 kg
 电源供应: 3 Ph / 400 V / 16 A
 气压供应: 6 bar

wire range	up to 300 mm ²
traverse length	1175 mm
max. coil diameter	850 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	7,5 kW
traverse motor brushless	750 W
switch gear box	3 step
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 1600 kg
supply voltages	3 Ph / 400 V / 16 A
supply compressed air	6 bar

LW 150

LW150 是重型落地式绕线机，机身采用全金属整体焊接。这种结构设计主要针对高精度重型初级和次级线圈绕线。绕线速度和扭矩范围可通过机身的3 段式齿轮箱调整，如有必要，也可根据客户需求另外选配附加的减速箱。LW150 是非常稳固的通用行程范围并带独立尾座的机型。典型的应用有包含不同粗细线径的初级和次级线圈绕线，以及多种扁平线绕线。

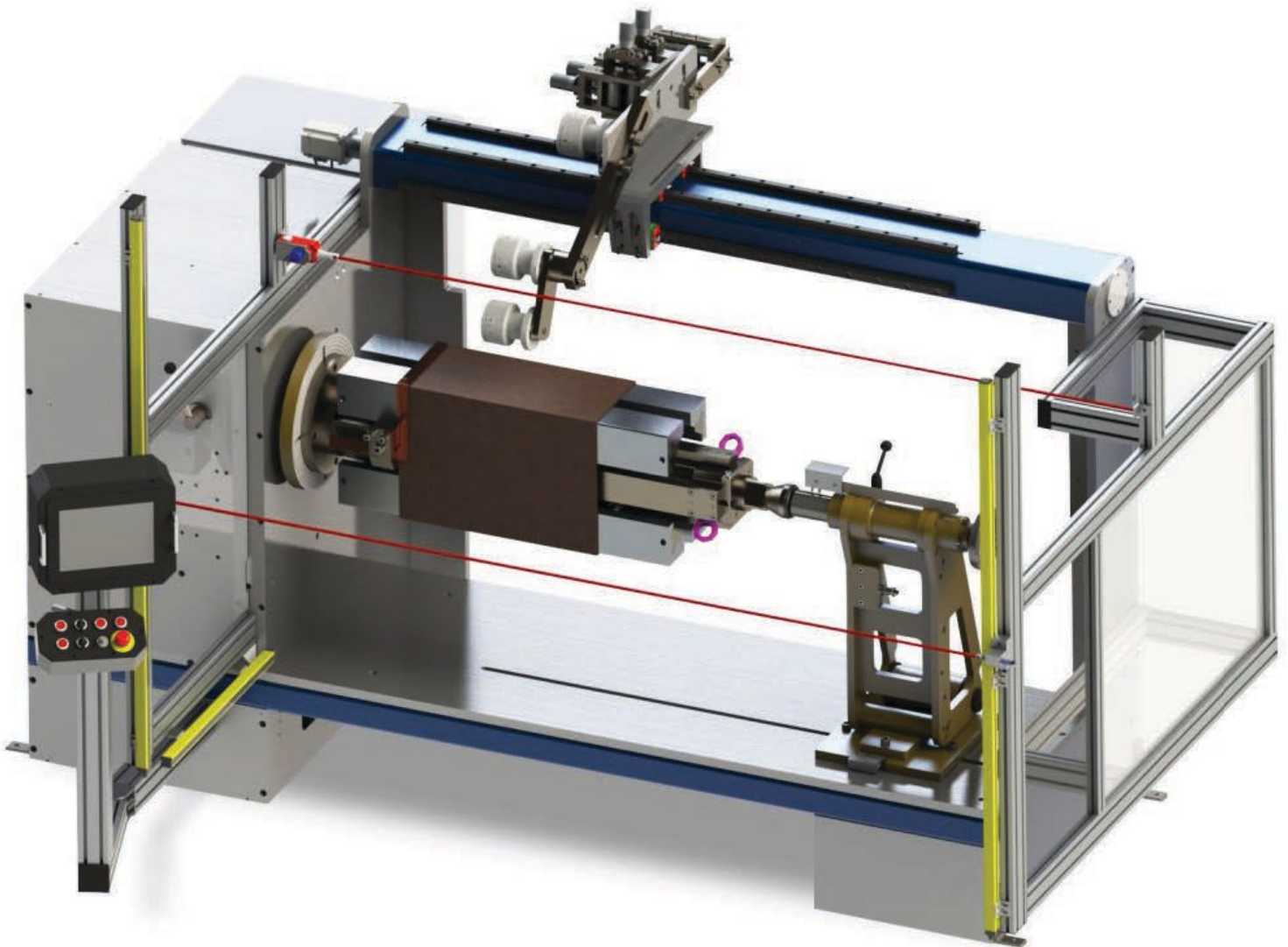
LW150 同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

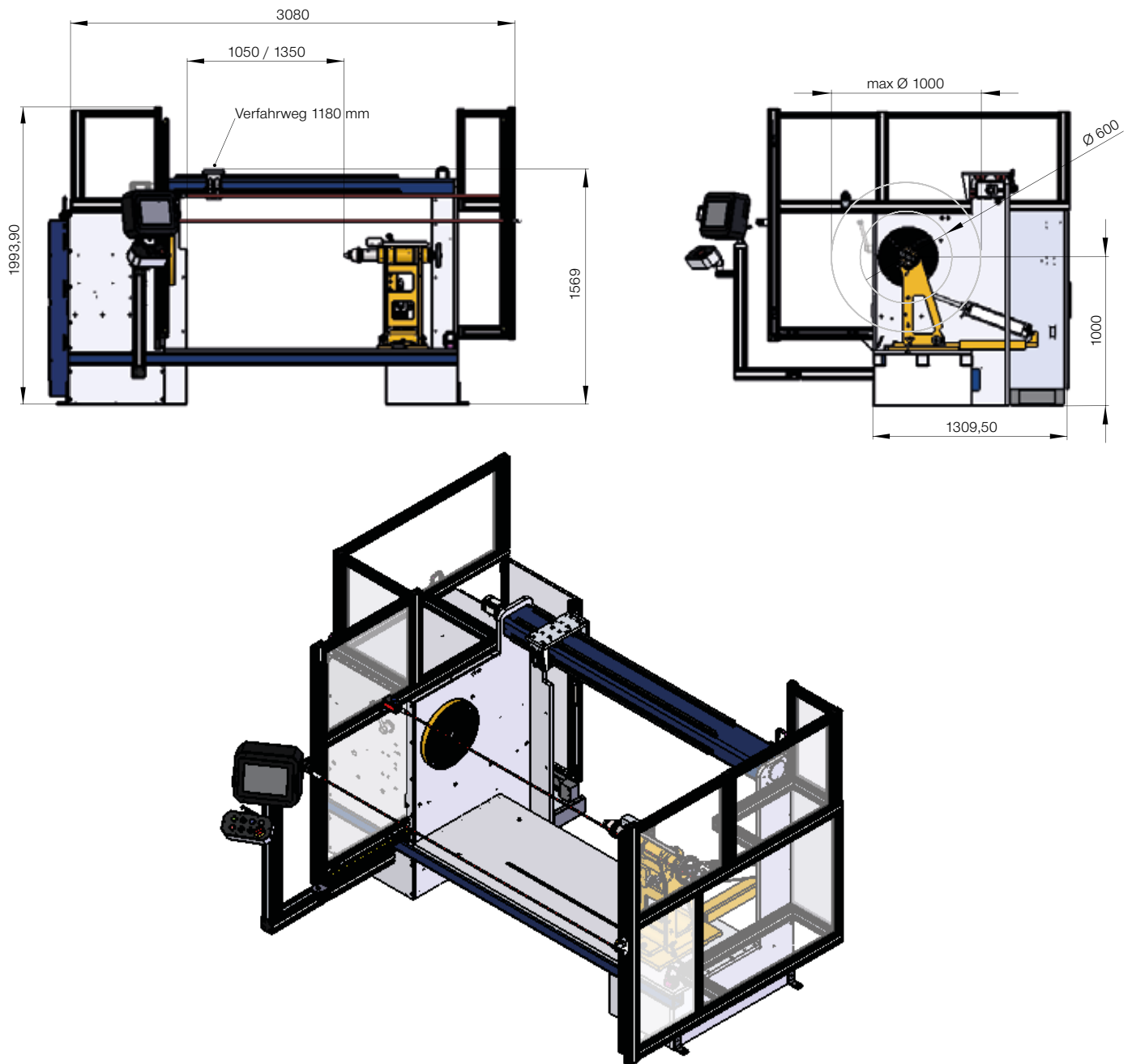
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 150 is a heavy duty floor winder, with a welded iron body. This design is for heavy and high precision linear winding applications with primary and secondary winding. Required speed and torque range can be easily changed by the 3 step switch gear box, and if required the machine can be equipped with an additional reduction gear box, too. The LW 150 is a very strong universal winding machine with tailstock. Typical applications are winding jobs with thin, thick and multi flat wire windings.

The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has a USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine





LW 150

线径范围: 300 mm² 以下
 有效行程: 1180 mm
 最大旋转直径: 1100 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 5 kW
 行程马达: 750W
 可调齿轮箱: 3 段可调
 显示屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 1700 kg
 电源供应: 3 Ph / 400 V / 16 A
 气压供应: 6 bar
 尾座: 手轮开启/关闭, 气动移动或锁紧

wire range	up to 300 mm ²
traverse length	1180 mm
max. coil diameter	1100 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	5 kW
traverse motor brushless	750 W
switch gear box	3 step
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 1700 kg
supply voltages	3 Ph / 400 V / 16 A
supply compressed air	6 bar
tailstock	handwheel for open / close, pneumatic swivable tailstock or rigid

LW 120-RS / LW 180-RS

这两款是重型落地式绕线机，机身采用全金属整体焊接。这种结构设计主要针对高精度重型初级和次级线圈绕线。绕线速度和扭矩范围可通过机身的3段式齿轮箱调整，如有必要，也可根据客户需求另外选配附加的减速箱。这两款是非常稳固的通用行程范围并带独立尾座的机型。典型的应用有包含不同粗细线径的初级和次级线圈绕线，以及多种扁平线绕线。

机箱同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4"彩色触摸屏显示器可实现轻松编程。并配有USB接口可上传下载绕线程序。程序文件以csv格式保存，可用Excel打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

两个型号的区别在于扭矩输出和转速不同，该机型最大的特点在于排线行程装置可调，可根据绕线旋转直径调节。

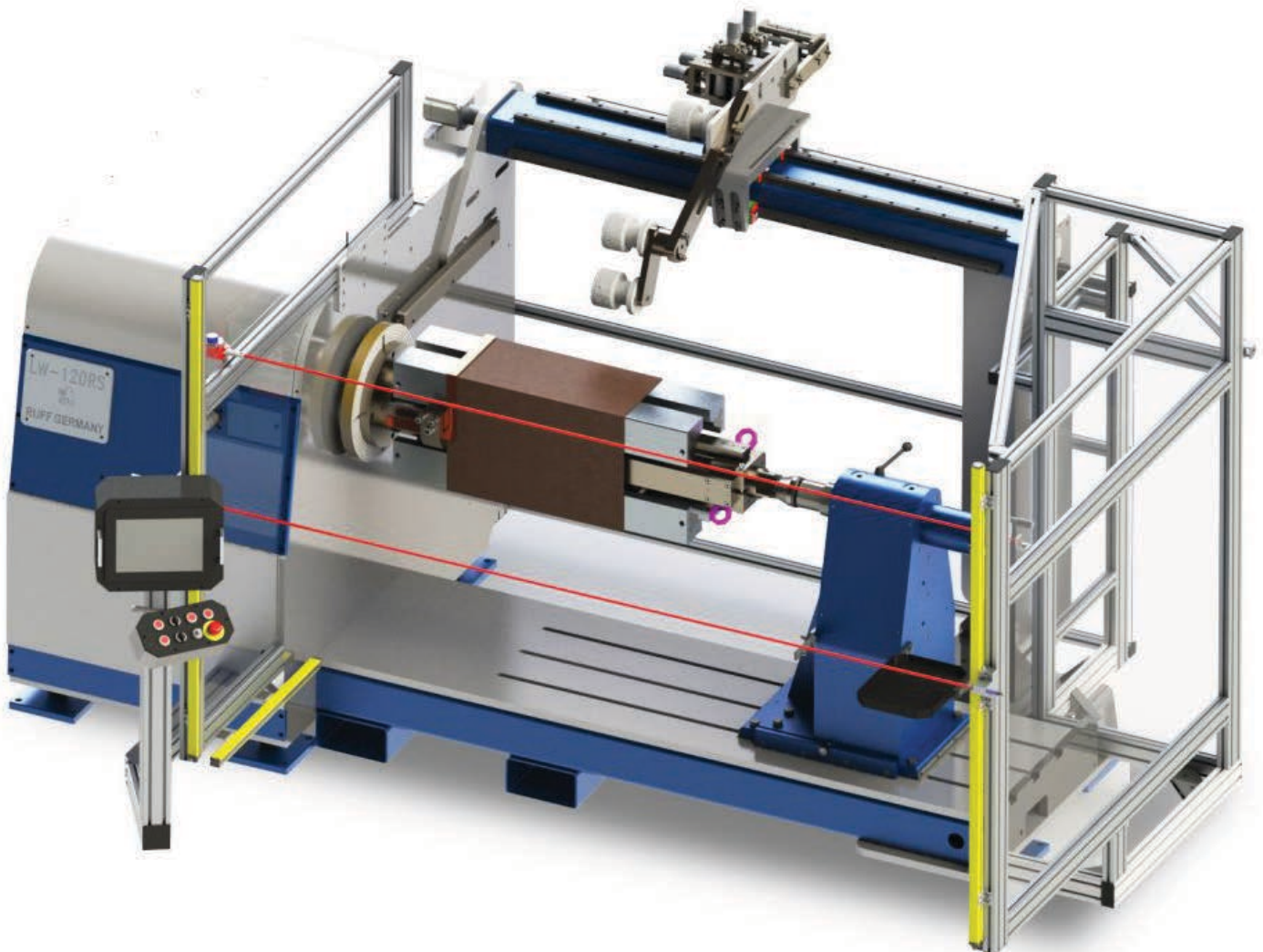
可选配多种附件比如：张力器，线桶，导线架等等。

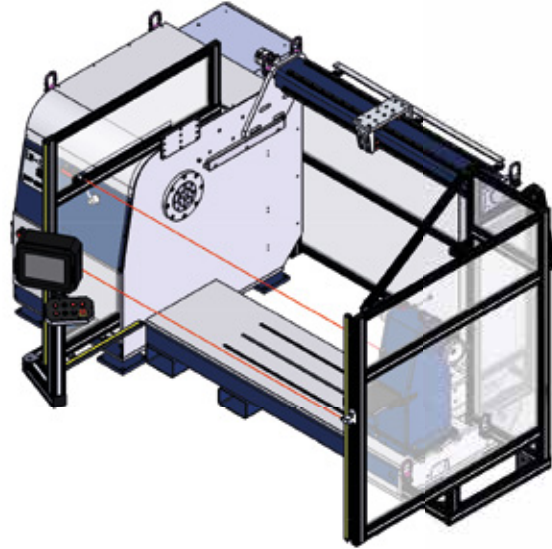
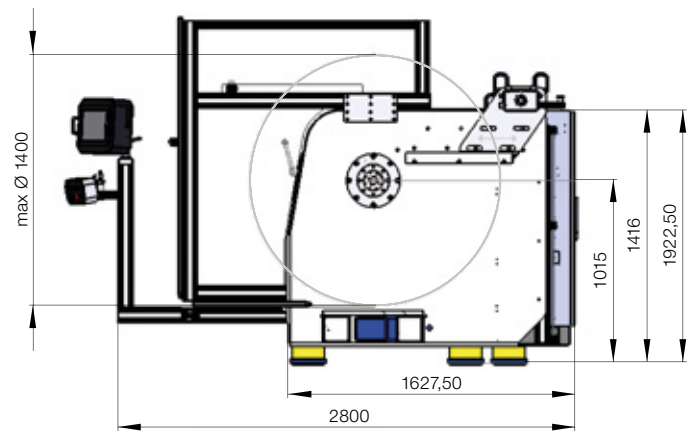
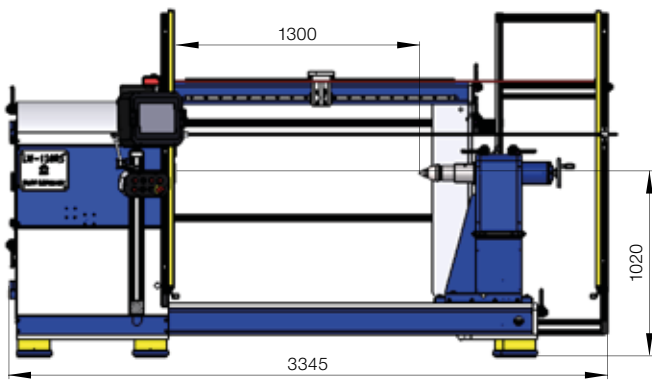
The LW 120-RS / LW 180-RS is a heavy duty floor winder, with a welded iron body. This design is for heavy and high precision linear winding applications with primary and secondary winding. Required speed and torque range can be easily changed by the 3 step switch gear box, and if required the machine can be equipped with an additional reduction gear box too. The LW 120-RS / LW 180-RS is a very strong universal winding machine with tailstock.

Typical applications are winding jobs with thin, thick and multi flat wire windings. The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has a USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

The difference between LW 120-RS and LW 180-RS is the torque and the speed. One high light of this machine base is adjustable traverse unit. The traverse can be adjusted to the winding diameter.

A wide range of accessories is available for this machine too.





LW 120-RS (LW 180-RS)

线径范围: 300 mm² 以下

有效行程: 1300 mm

最大旋转直径: 1400 mm

最大绕线节距: 99 mm

马达驱动: 双伺服

转轴马达: LW 120RS 5 kW
LW 180RS 11 kW

行程马达: 750 W

可调齿轮箱: 3 段可调

显示屏: 10.4" 彩色触摸屏

PC 连接: 支持

程序下载: USB

系统语言: 支持所有语言 (不含中文)

绕线精度: 0,001 mm

机身重量: 约 LW 120RS 3100 kg
LW 180RS 3500 kg

电源供应: 3 Ph / 400 V / 16 A
(3 Ph / 400 V / 50 A)

气压供应: 6 bar

扭矩: 125 / 250 / 500 (2659 / 1329 / 665)

转速: 392 / 191 / 96 (39,5 / 79 / 158)

wire range	up to 300 mm ²
traverse length	1300 mm
max. coil diameter	1400 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	LW 120RS 5 kW LW 180RS 11 kW
traverse motor brushless	750 W
switch gear box	3 step
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	LW 120RS ca. 3100 kg LW 180RS ca. 3500 kg
supply voltages	3 Ph / 400 V / 16 A (3 Ph / 400 V / 50 A)
supply compressed air	6 bar
Torque	125 / 250 / 500 (2659 / 1329 / 665)
speed	392 / 191 / 96 (39,5 / 79 / 158)

LW 1000

LW1000是重型落地式绕线机，机身采用全金属整体焊接。这种结构设计主要针对超粗线径的线圈精密绕线应用。绕线速度和扭矩范围可通过机身的3段式齿轮箱调整，LW1000是非常稳固的机型，转轴具有2400Nm 扭矩输出。典型的应用有较大旋转直径的粗线径及扁线圈绕线。

机箱同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv 格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

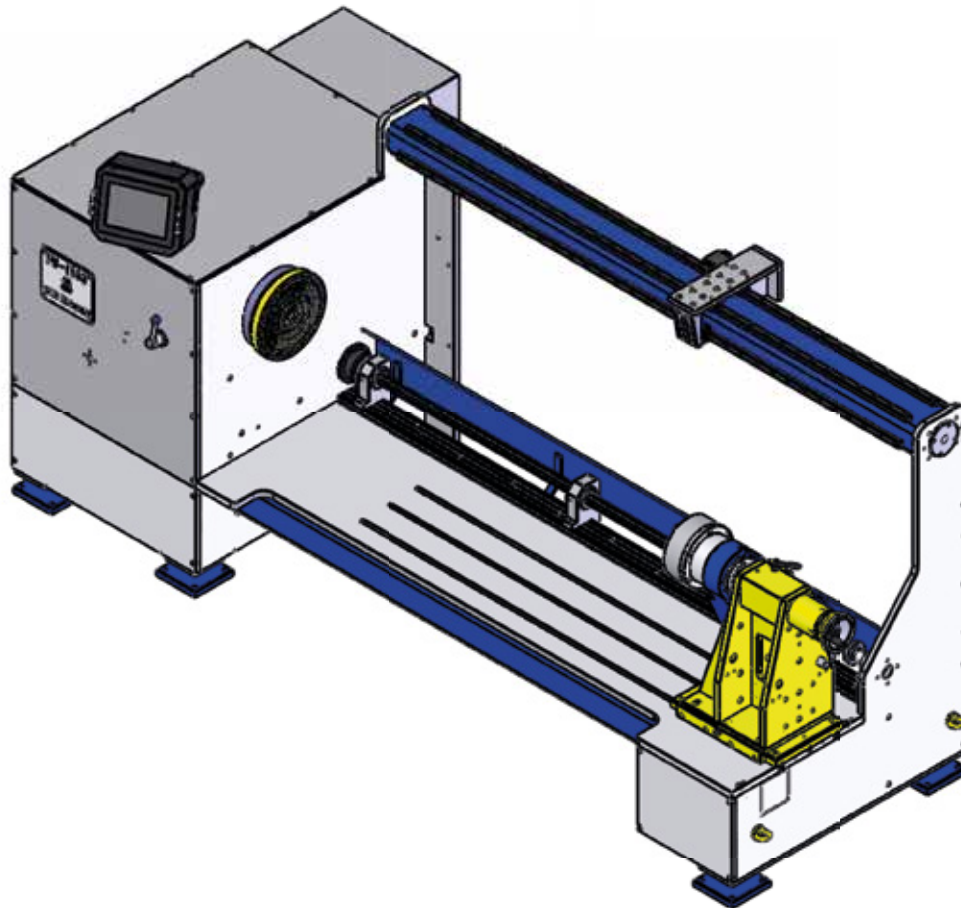
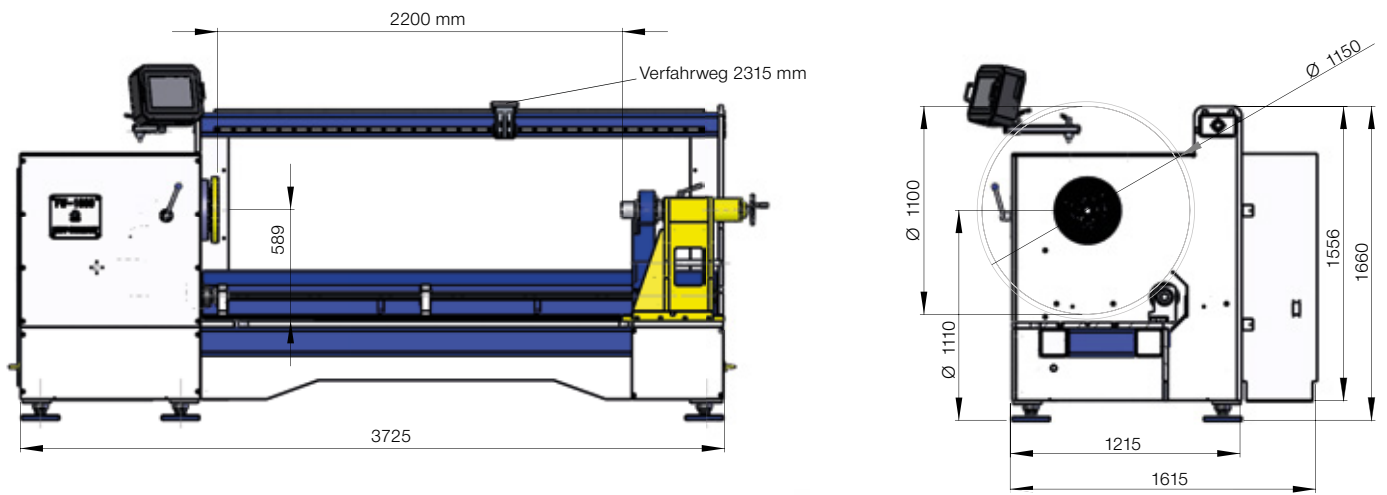
可选配多种附件比如：张力器，线桶，导线架等等。

The LW 1000 is a big heavy duty floor winder, with a welded iron body. This design is for very heavy applications with very strong wires. Required speed and torque range can easily be changed by the 3 step switch gear box. The LW 1000 is a very strong universal winding machine with more than 2400 Nm torque on the spindle. Typical applications are winding jobs with very large winding diameter and multiflat wire windings.

The controller is available in all languages. The programs can easily be generated by a 10.4" touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine





线径范围: 600 mm² 以下
 有效行程: 2200 mm
 最大旋转直径: 1150 mm
 最大绕线节距: 99 mm
 马达驱动: 双伺服
 转轴马达: 11 kW
 行程马达: 750 W
 可调齿轮箱: 3 段可调
 显示屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 3600 kg
 电源供应: 3 Ph / 400 V / 50 A
 气压供应: 6 bar

wire range	up to 600 mm ²
traverse length	2200 mm
max. coil diameter	1150 mm
max. pitch	99 mm
drive motors	2 servos
main motor brushless	11 kW
traverse motor brushless	750 W
switch gear box	3 step
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 3600 kg
supply voltages	3 Ph / 400 V / 50 A
supply compressed air	6 bar

LW 150 Progressive

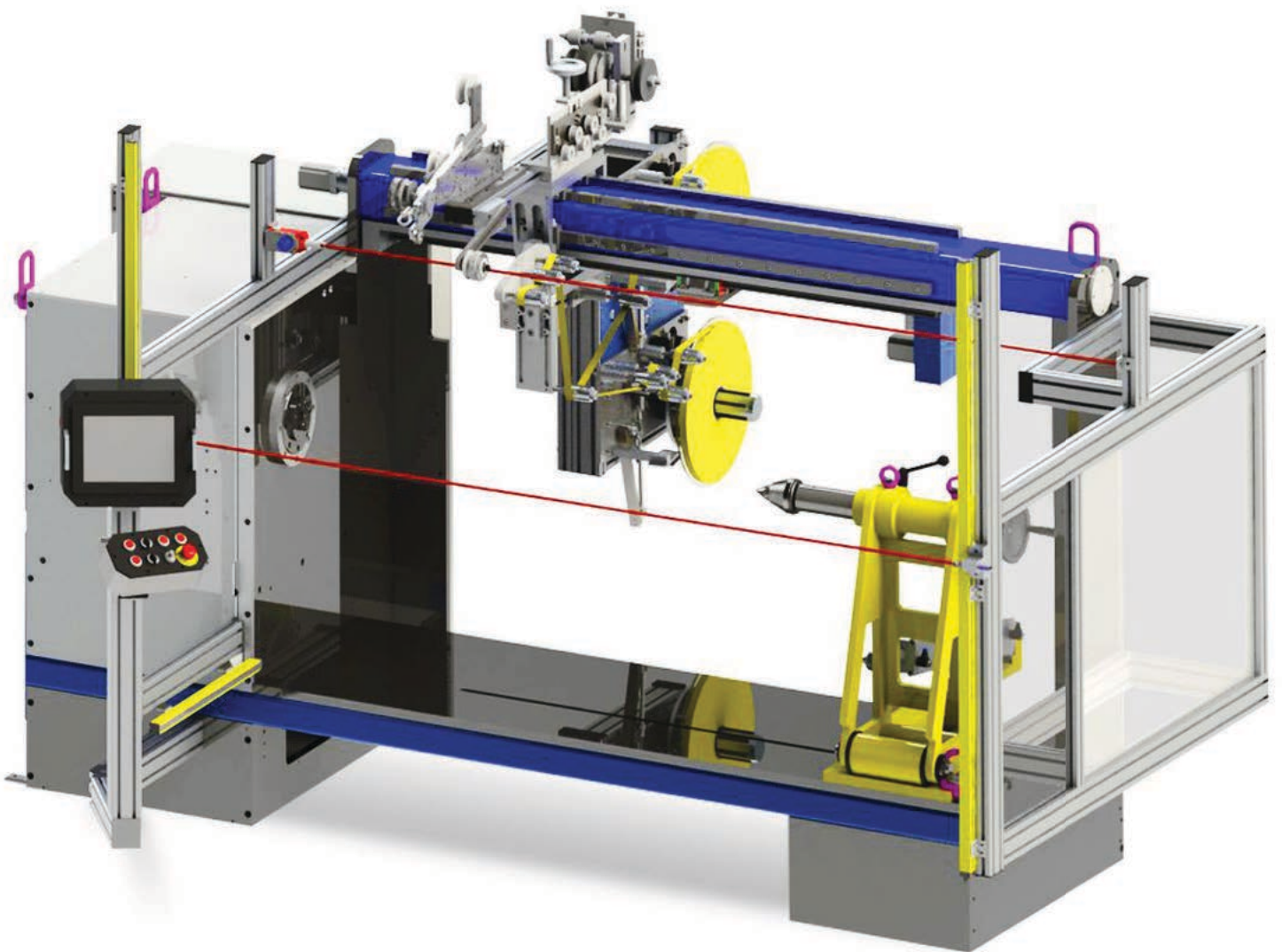
LW150-Pro 绕线机主要用于高压配电变压线圈的绕线。绕线的同时，利用一个或两个圆柱形或圆锥形绝缘导辊，将绝缘纸包裹在每层线圈之间。

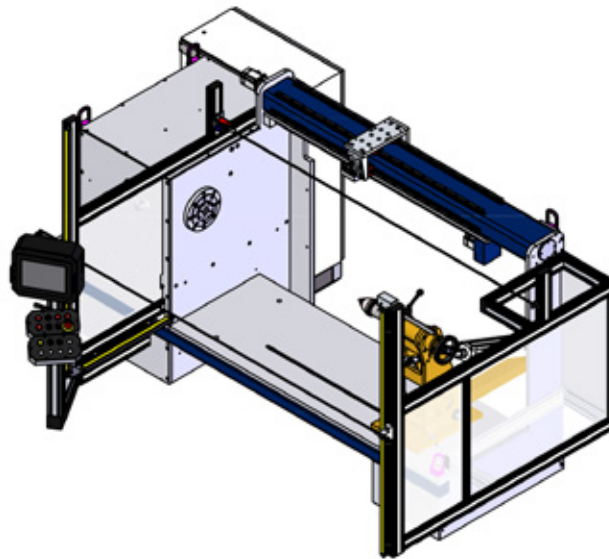
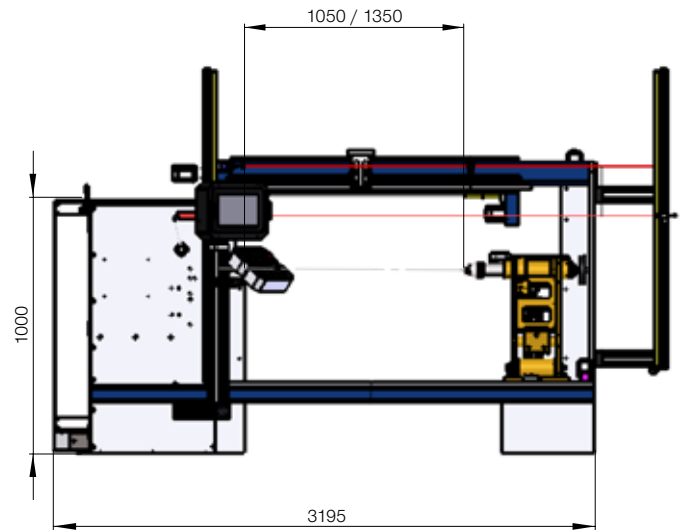
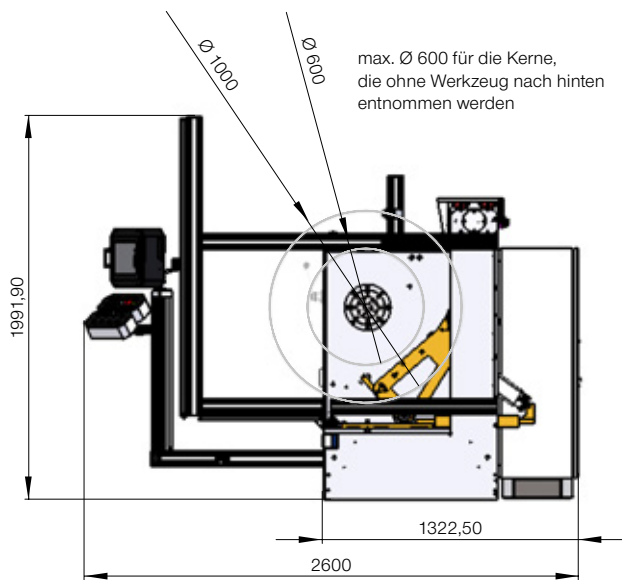
依靠合理的机构设计和排线装置，自动绕线及结束停机，手动固定绝缘纸，自动缠绕完成停机手动切断绝缘纸。纸带张力通过一组马达驱动的跳动轴杆控制在设定范围。通过光电传感器监测导线器与芯轴的相对位置，并显示在10.4"屏幕上，以方便快速简单的设置参数。自动停止点既手动操作点通过程序自动计算，也显示在触摸屏上。

The LW150-progressive-wire-winding-machine is used to wind high voltage coils for distribution transformers. Simultaneously to the wire winding the layer insulation is built up either cylindrically or conically with one or two insulation strips.

Depending on the design and wire cross section the machine is automatically building up the end filler with stop and manually cutting and fixing of the strip on the coil. A motor driven constant insulation strip tension regulated on a dancer controlled shaft. The machine setup is made quick and simple by a light sensors which shows the position of wire guide on the mandrel.

As well automatic calculation of stop points for manual hand work on the strips for cutting and guidance shown on a 10,4" touch screen.





线径范围: 5 mm 以下
 有效行程: 1175 mm
 绝缘纸行程: 1000 mm
 最大旋转直径: 600 mm
 最大绕线节距: 99 mm
 绝缘层数: 单层或双层
 绝缘厚度: 0.05mm-0.5 mm
 绝缘卷轴直径: ID 75 mm / OD max. 400 mm
 绝缘纸上料: 手动操作气动卷纸系统进行上料
 尾 座: 手轮开启/关闭, 气动移动或锁紧
 马达驱动: 5 套伺服马达
 转轴马达: 5 kW
 行程马达: 2 x 750 W
 卷纸马达: 2 x 1.5 kW
 可调齿轮箱: 3 段可调
 最高转速: 750 rpm
 显 示 屏: 10.4" 彩色触摸屏
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 电源供应: 3 Ph / 400 V / 32 A
 气压供应: 6 bar

wire range	up to 5 mm
traverse length	1175 mm
traverse length paper	1000 mm
max. coil diameter	600 mm
max. pitch	99 mm
insulation	single and double layer
insulation thickness	min. 0,05 mm up to max. 0,5 mm
insulation roll diameter	ID 75 mm / AD max. 400 mm
loading of paper	manually with pneumatical clamping system
tailstock	handweel for open / close, pneumatic swivable tailstock or rigid
drive motors	5 servos
main motor brushless	5 kW
traverse motor wire / paper	2 x 750 W
paper dereeler	2 x 1,5 kW
switch gear box	3 step
max. speed	750 rpm
display	10.4" colour touch screen
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
supply voltages	3 Ph / 400 V / 32 A
supply compressed air	6 bar

扁平线绕线机

EDGE winding machine line

HKW系列

HKW800 是重型落地平绕机，机身采用全金属整体焊接。其功能设计是特别针对扁平线空心线圈绕线，可适应多种圆形几何形状的线圈绕制。

绕线速度和扭矩范围可通过机身的3 段式齿轮箱调整，如有必要，也可根据客户需求另外选配附加的减速箱。HKW800 是一款结构稳固，并带有特殊导线系统及特殊尾座的自动平型绕线机。

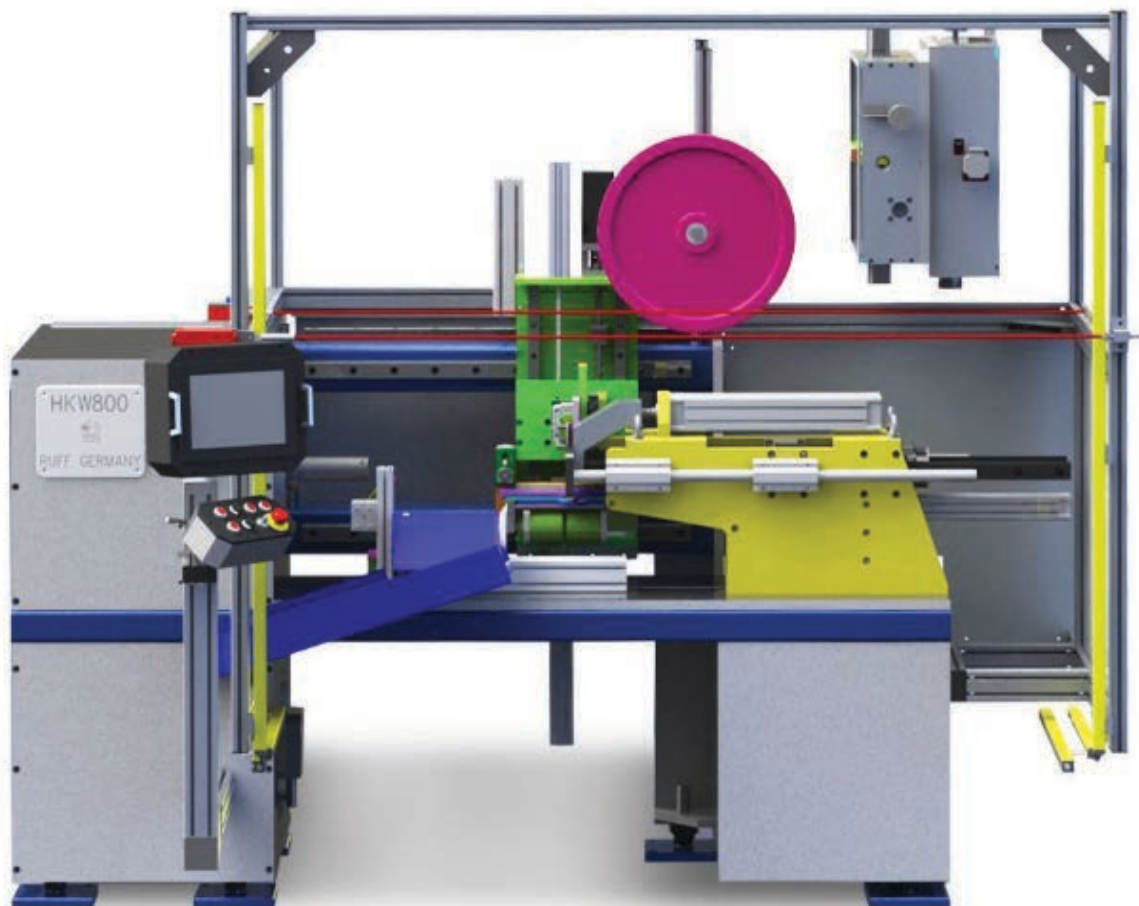
机箱同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv.格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

可选配多种附件比如：送线器，线桶，导线架等等。

The HKW 800 is a heavy duty floor winder, with a welded iron body. This design is special constructed for edge winding applications. This machine can be used for edge winding product with round geometric. Required speed and torque range can be easily changed by the 3 step switch gear box, and if required the machine can be equipped with an additional reduction gear box too. The HKW 800 is a very strong edge winding machine a special guide system and special tailstock.

The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine too.



HKW 800半自动型 / HKW 800 semi automatic



HKW 800全自动型 / HKW 800 full automatic



基于LW90机箱的 HKW机型 / HKW on basic of LW 90



HKW-R

HKW-R 是特殊的重型落地式机型，其机构设计特别针对内孔为非圆形几何形状的扁平线圈绕线，配备特殊的导线器和特殊尾座，适应特殊形状的线圈绕线。

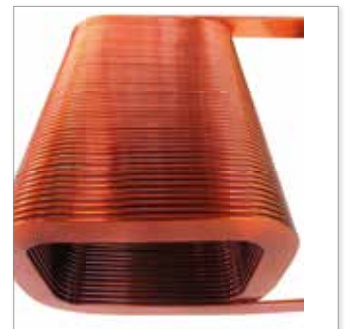
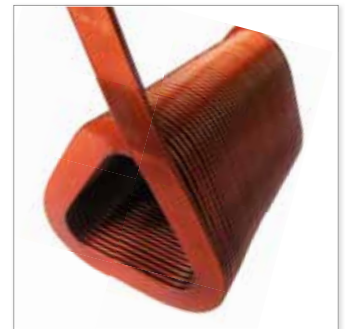
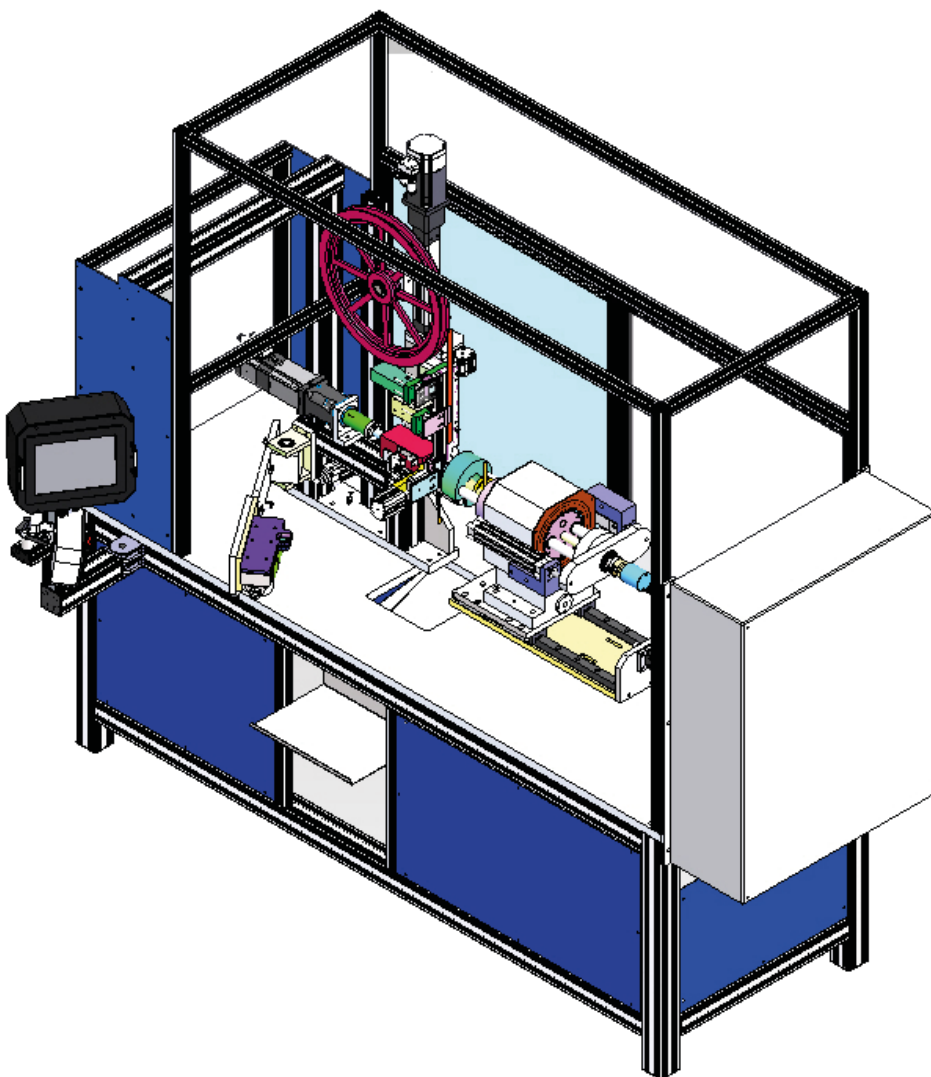
机箱同样配置了高科技的PLC控制器，支持所有语言（不含中文），10.4" 彩色触摸屏显示器可实现轻松编程。并配有USB 接口可上传下载绕线程序。程序文件以csv 格式保存，可用Excel 打开并编辑。可通过以太网连接局域网，再通过局域网接入互联网，实现互联网远程设备诊断及程序更新。

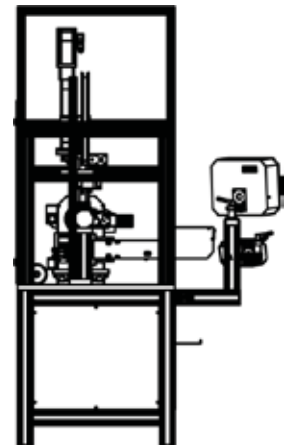
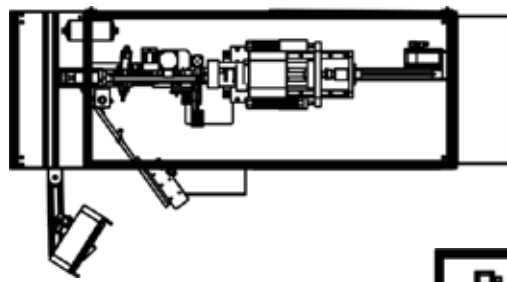
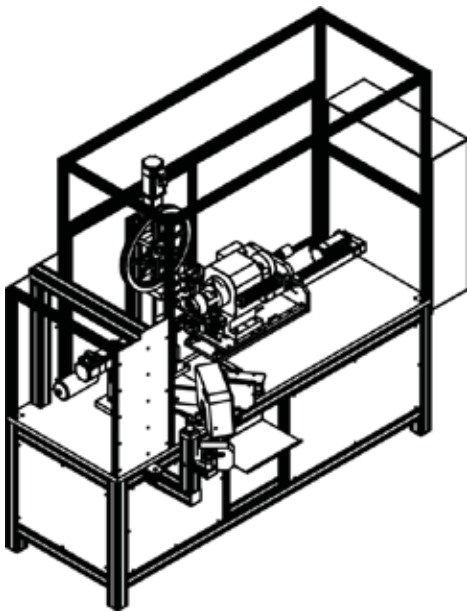
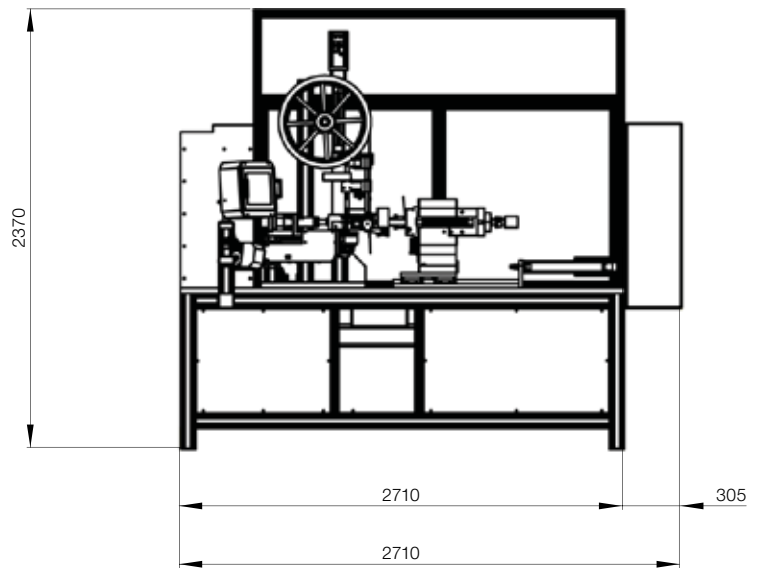
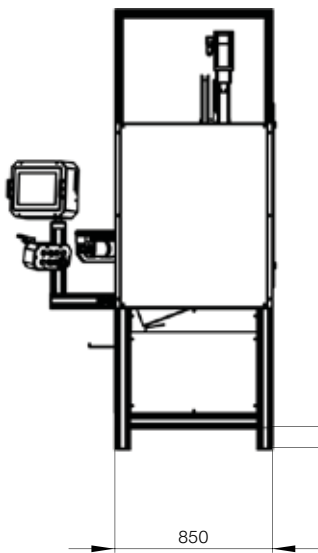
可选配多种附件比如：送线器，线桶，导线架等等。

The HKW-R is a heavy duty special floor winder. This design is a special construction for edge winding applications with not round geometrics inside of the winding product. The HKWR is a very special edge winding machine with a special guide system and special tailstock.

The controller is available in all languages. The programs can be easily generated by a 10.4" touch screen. The machine has an USB connection for import or export of winding programs. The programs can also be read and issued by Excel. A connection to a network is possible, as well as an internet connection by a modem for remote system check of our service personal.

A wide range of accessories is available for this machine too.





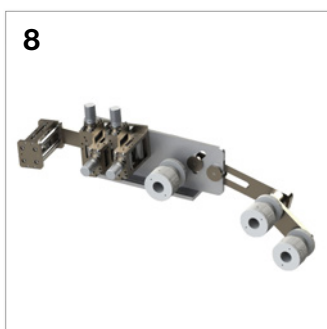
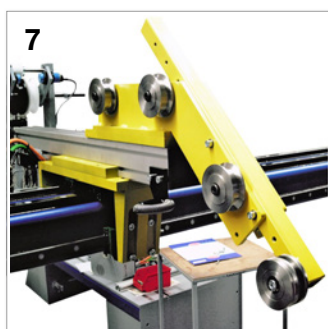
线径范围: 5mm x 14mm 以下
 马达驱动: 5 套伺服马达
 显示屏: 10.4" 彩色触摸屏
 剪线器: 程序设定自动切断
 PC 连接: 支持
 程序下载: USB
 系统语言: 支持所有语言 (不含中文)
 绕线精度: 0,001 mm
 机身重量: 约 2000 kg
 电源供应: 3 Ph / 400 V / 16 A
 气压供应: 6 bar

wire range	up to 5 mm x 14 mm
drive motors	5 servos
display	10.4" colour touch screen
	automatic programable cutting unit
PC connection	yes
downloading program	USB
software languages	all languages
accuracy of pitch	0,001 mm
weight	approx. 2000 kg
supply voltages	3 Ph / 400 V / 16 A
supply compressed air	6 bar

附件 / Accessories

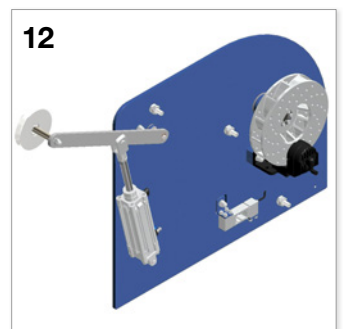
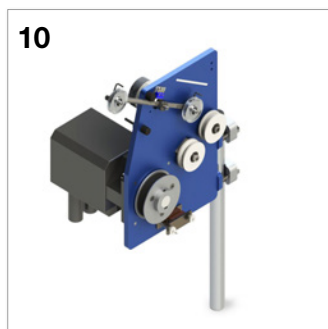
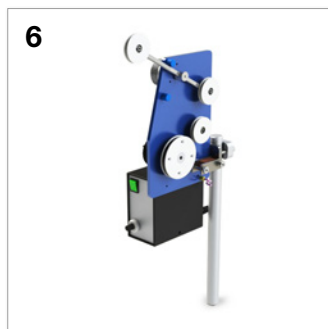
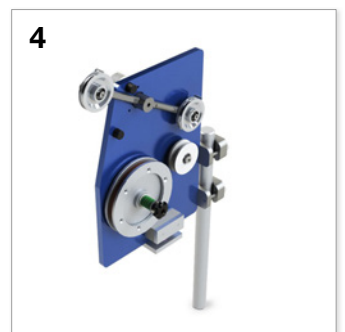
导线器 Wire guide

图片编号 picture no.	导线器类型 wire guide		铜线直径 wire range	快速摆臂 swingable	兼容机箱型号 compatible machines
1	超轻型 super light	mm AWG	0,05 - 0,5 44 - 24	选购 option	LW 05 / LW 10 / LW 11 / LW 15 / LW 16 / LW 20 / LW 21 / LW 25 / LW 30 / LW 45
1	轻型 light	mm AWG	0,1 - 1,0 38 - 18	选购 option	LW 05 / LW 10 / LW 11 / LW 15 / LW 16 / LW 20 / LW 21 / LW 25 / LW 30 / LW 45 / LW 90
1	标准型 standard	mm AWG	0,2 - 2,0 32 - 12	选购 option	LW 05 / LW 10 / LW 11 / LW 15 / LW 16 / LW 20 / LW 21 / LW 25 / LW 30 / LW 45 / LW 90 / LW 120
2	滑动型 slide	mm AWG	0,05 - 0,8 44 - 20	包含 incl.	LW 05 / LW 10 / LW 11 / LW 15 / LW 16 / LW 20 / LW 21 / LW 25 / LW 30 / LW 45 / LW 90
3	导管型 tube	mm AWG	0,2 - 1,0 32 - 18	包含 incl.	LW 05 / LW 10 / LW 11 / LW 15 / LW 16 / LW 20 / LW 21
4	导管型 tube	mm AWG	0,2 - 1,0 32 - 18	包含 incl.	LW 25 / LW 30 / LW 45 / LW 90
5	气动型 pneumatic	mm AWG	0,5 - 5,0 24 - 4	选购 option	LW 21 / LW 25 / LW 30 / LW 45 / LW 75 / LW 90
6	大型 heavy	mm AWG	0,5 - 5,0 24 - 4	无 no	LW 30 / LW 45 / LW 90 / LW 120 / LW 150 / LW 180 / LW 1000
7	加大型 extra heavy	mm AWG	ab 0,5 up from 24	无 no	LW 120 / LW 150 / LW 180 / LW 1000
8	气缸型 cylinder	mm AWG	for flat wires	无 no	LW 120 / LW 150 / LW 180 / LW 1000



张力器 Wire brake

图片编号 picture no.	张力器型号 wire tensioner	铜线直径 mm wire Ø in mm cooper	张力值 (克) tension in gram	张力器类型 Version / version	备注 Bemerkung / note
1	WT 1.1	0,008 - 0,026	1 - 8	Mechanical /机械刹车	
1	WT 1.2	0,02 - 0,08	1,5 - 50	Mechanical /机械刹车	
1	WT 2.0	0,06 - 0,24	35 - 360	Mechanical /机械刹车	
2	WT 3.0	0,11 - 1,2	100 - 3500	Mechanical /机械刹车	
3	MMF -1.2	0,02 - 0,08	1,5 - 50	Mechanical /机械刹车	With digital display of wire tension /数字张力显示
3	MMF -2.0	0,06 - 0,24	35 - 360	Mechanical /机械刹车	With digital display of wire tension /数字张力显示
3	MMF -3.0	0,11 - 1,2	100 - 3500	Mechanical /机械刹车	With digital display of wire tension /数字张力显示
4	RMWT 4.0	0,6 - 4,0	1800 - 54000	Mechanical /机械刹车	
5	RPWT 4.0	0,8 - 4,8	3100 - 75000	Pneumatical /气动刹车	
6	CTE -2	0,11 - 1,2	100 - 4500	Magnet powder brake /电磁刹车	Closed loop version optimal /闭环控制型可供选购
7	CTE -5	0,5 - 1,8	200 - 6000	Magnet powder brake /电磁刹车	Closed loop version optimal /闭环控制型可供选购
8	CTE -120	0,8 - 3,0	850 - 28000	Magnet powder brake /电磁刹车	Closed loop version optimal /闭环控制型可供选购
9	TE 1	0,02 - 0,12	5 - 120	Electronical /电子刹车	Closed loop version /闭环控制型
9	TE 2	0,1 - 0,19	80 - 250	Electronical /电子刹车	Closed loop version /闭环控制型
9	TE 3	0,17 - 0,3	200 - 565	Electronical /电子刹车	Closed loop version /闭环控制型
9	TE 4	0,25 - 0,6	400 - 2000	Electronical /电子刹车	Closed loop version /闭环控制型
10	MTE-5.2	0,25 - 2,5	300 - 13500	Servo motor controlled /伺服马达刹车	Closed loop version /闭环控制型
11 / 12	Special tailor tensioner made on inquiry /定制化张力器				



线桶张力器 Wire brake unit for wire containers

CG-M为加强型线桶张力器，适用线径 0.4-2.50 mm
 CG-S为小型型线桶张力器，适用线径 0.06-0.40 mm
 以上两种张力器适配符合 IEC 60264-3-5 标准，从线轴上方放线的线桶。

Strong wire brake unit type CG-M for wire range 0,40 - 2,50 mm and small wire brake unit type CG-S for wire range 0,06 - 0,40 mm, adaptable on wire containers IEC 60264-3-5, for overhead dereeling of enamelled copper wire.



线桶 Wire container

线桶以优质的透明合成树脂制成，轻质牢固，随线桶配置毛毡及导轮刹车系统。毛毡受到弹簧的压力作用于铜线，压力大小通过弹簧顶端的螺母调节，以适应不同线径范围。线桶底部有螺丝孔，方便将线桶固定于工作台面比如机箱。

The wire containers are made of transparent and non-breakable plexiglass. They will be supplied with a felt brake system and a wire guide roller on the top. The felt pressure is fitted with a spring system, which can be adjusted by a knurled head screw. The containers have a bore on the downside for the possibility to fix them e.g. on a machine.

图片编号 picture no.	1	2
线桶规格	K 250	K 350
桶身内径 Ø inside in mm	290	290
桶身外径 Ø outside in mm	300	300
桶身高度 height in mm	250	350



放线架

针对重型全金属焊接机箱结构和扁线超大线轴的应用，以及轻型或标准立式机箱的小线轴应用，有不同版本的放线架供应。重型放线架含液压刹车盘，每个线轴的刹车力独立控制，刹车力度通过气动调节装置进行调节。

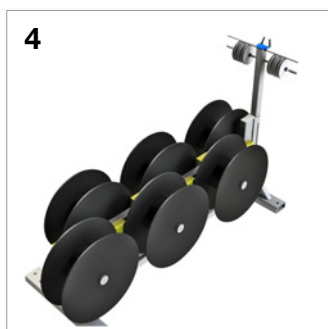
开放式轴杆设计可快速安装和卸下线轴，也有侧移式放线架可供选择。另外，有可设置水平/垂直向线轴位置的放线架可供选购。

Wire dereeler

The wire dereelers are available in different versions. In sturdy welded steel constructions for heavy flat wire spools, as well as in a light design mobil version for several small wire spools. The heavy dereelers have hydraulic disc brake systems and each spool has its own brake with a separate controller. The brake control is made by a pneumatic regulation unit.

The open shaft allows a simple and quick loading and unloading of spools. The dereeler are optional also available in sideward moveable version. Further a vertical and horizontal positioning of the spool can be offered for the dereelers too.

图片编号 picture no.	线轴数量 no. of spools	线轴直径 spool Ø in mm	线轴最大重量 kg weight of spool max. in kg	线轴数量 sideward moveable	线轴位置调节 spool position	
					水平 Horizontal	垂直 Vertical
1	1	1000	200	option	standard	option
2	2	1000	200	option	standard	option
3	4	1000	200	option	standard	option
4	6	1000	200	option	standard	option
5	12	300	15	option	standard	option



绝缘纸及胶带送料架

1) 绝缘带送料架

针对中小尺寸的绝缘带卷轴，我们提供带机械式滑动离合器的送料架，以避免绝缘胶带粘连松脱。

2) 绝缘带放料架

针对较宽的绝缘带卷轴，可选择安装在机箱背面的送料架，此装置带有刹车皮带，可手动调节刹车松紧。

3) 绝缘纸放料工作站

对于非常大的绝缘带卷轴，可选择独立的送料工作站。此工作站可容纳外径 400-1300 mm 的卷轴，并带有气动刹车盘系统可调节送料松紧度。另有圆刀裁切装置，可在送料过程中对绝缘材料按照设定宽度进行裁切。

4) 绝缘带切断装置

圆刀裁切装置，可按照设定宽度对绝缘材料进行裁切。

5) 末端胶带送料架

用来对线圈的左右两端进行包带，最大支持250mm 外径料盘，机械式刹车可调松紧，可安装于机身或排线器上随排线器一起移动。

6) 热风装置

针对适用自粘线材的线圈，可在绕线时对线圈进行加热使其产生粘性并粘连定型，热风温度无级可调。

7) 传送带

空心线圈绕线完成后通过传送带自动传送到下一工段。

Dereeler for insulation and tape material

1) Dereeler for layer insulation

For small and medium size insulation rolls, we offer a dereeler with mechanically adjustable slipping clutch, which avoids a follow-up of the insulation material.

2) Dereeler for layer insulation

For wide insulation material, a dereeling unit on the back side of the machine can be mounted. This unit has a belt brake device, which is manually adjustable.

3) Dereeling station for insulation material

For large and heavy insulation rolls, a stand alone dereeling station is available. This station is suitable for up to 1300 mm wide and 400 mm outer diameter rolls. It has a pneumatic disc brake system. A round blade cutting device, to cut the paper during unwind in a preset width is an option available.

4) Insulation cutting unit

Insulation material cutting unit with round blade.

5) Endfiller strip

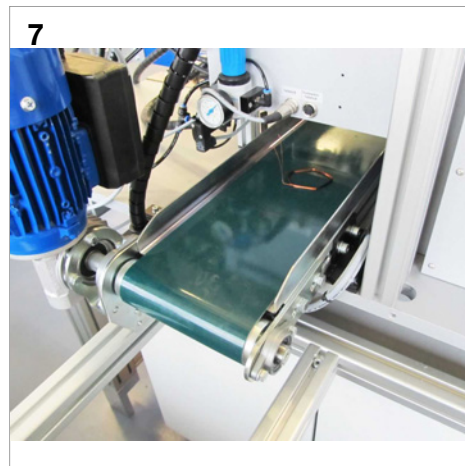
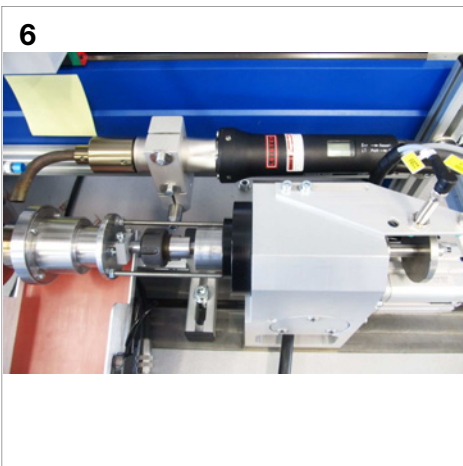
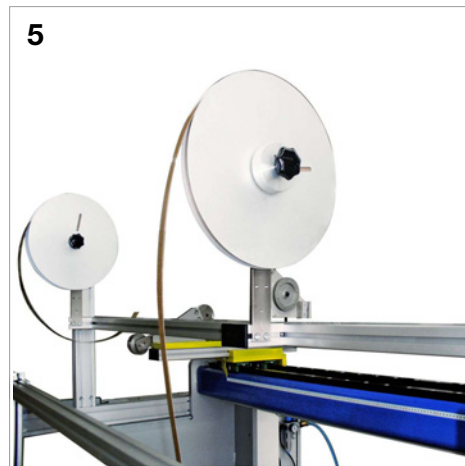
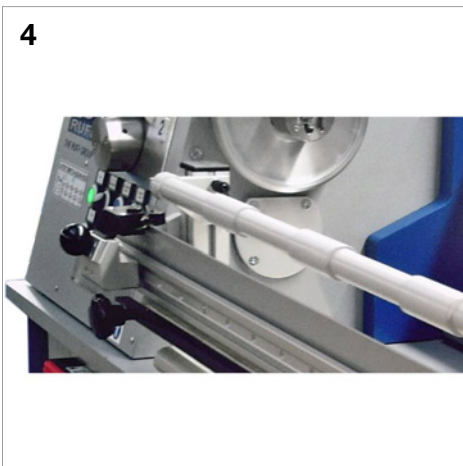
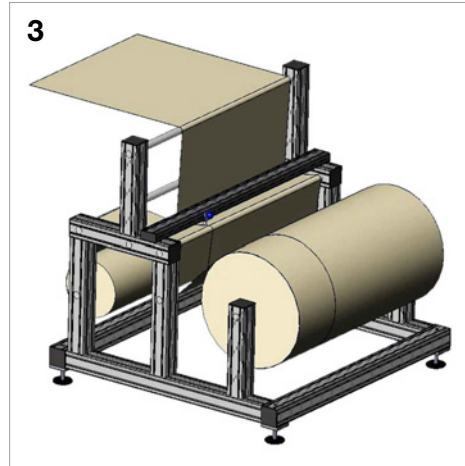
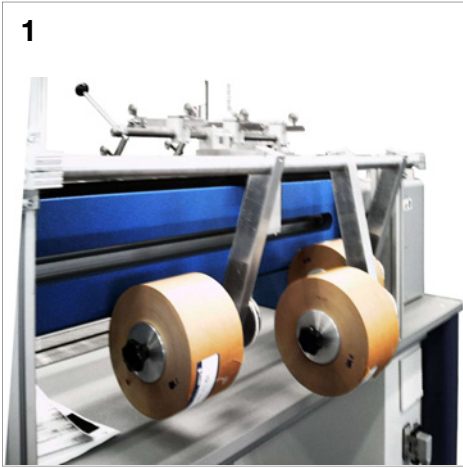
Edge strip taping dereeler for max. out diameter 250 mm and mechanical brake device: This unit can be mounted on the machine stand or on the traverse unit.

6) Hot Air Unit

For winding applications with heated bondable wire. The wire gets bonded during winding by hot air.

7) Conveyor belt

For transport of finished wound coils by automatic winding process.



转轴工装

RUFF的桌面型机器配有均匀分度盘，这使得尾座适配器配有均匀分度手轮，这使得现有的尾座适配器和绕线工装可以与最新机型通用。

RUFF的立式和落地型机器基本上左侧都有安装面板，这允许机器可以适配尽可能多的绕线工装。

RUFF的平绕机支持多种类型的转轴适配器，以搭配不同的绕线工装，标准的转轴适配器类型详见下表。特殊规格适配器不在下表范围之内的，请联系我们咨询。

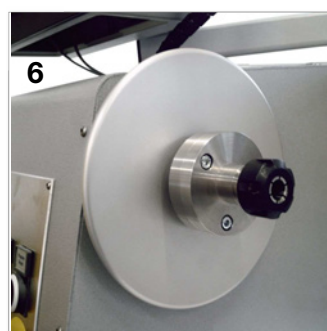
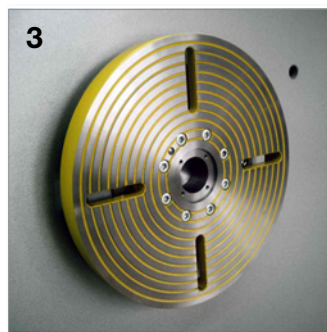
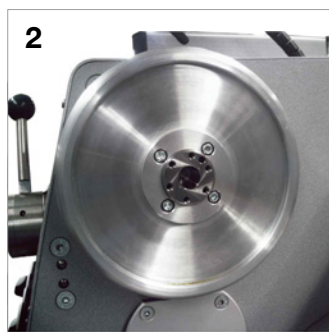
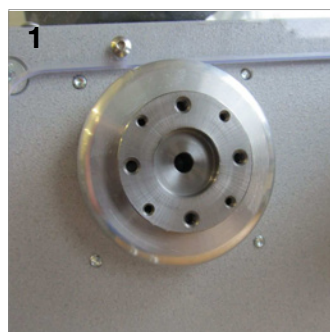
Tools for spindle

The RUFF table linear winding machines have hand wheels with uniform fixing plate. This enables to use adapters and winding tools of existing RUFF machines on the latest version too.

The RUFF floor winding machines are basically with face plates. This offers the highest flexibility for fixing winding tools.

For all our machines are several clamping possibilities as options available, which means the machine can be equipped with 3- or 4-jaw chuck in different dimensions, as well as with a drill chuck. Collets are available in several sizes from 8 - 20 mm. Other sizes on inquiry, please do not hesitate to contact us.

图片编号 picture no.	转轴适配器类型 Aufnahmen für Spindel	适用机箱型号 compatible machines
1	迷你机型分度盘 hand wheel mini machines	LW 05 / LW 10 / LW 11
2	桌面机型分度盘 hand wheel table machines	LW 15 / LW 16 / LW 20 / LW 21 / LW 25-S / LW 30 / LW 45 / LW 75 / LW 90
3	落地机型分度盘 faceplate floor machines	LW 120 / LW 150 / LW 120RS / LW 180-RS / LW 1000
4	3分或4分内嵌式转轴夹头 3-/4-jaw chuck with spindle adapter	LW 10 / LW 15 / LW 16 / LW 20 / LW 21 / LW 30 / LW45 / LW 75 LW 90 / LW 120 / LW 150 / LW 120-RS / LW 180-RS / LW 1000
5	钻头式转轴夹头 drill chuck with spindle adapter	LW 10 / LW 15 / LW 16 / LW 20 / LW 21 / LW 30 / LW45 / LW 75 / LW 90
6	8-20mm 套入式转轴夹头 collet with spindle adapter	LW05 / LW 10 / LW 15 / LW 16 / LW 20 / LW 21 / LW 30 / LW45 / LW 75 / LW 90



需求咨询表

请您仔细填写以下表格，谢谢！

客户名称 _____

产品类型 _____

绕线圈数 _____

线径mm _____

绝缘带宽 _____

Questionnaire

Please fill in the following table carefully:

customer _____

product type _____

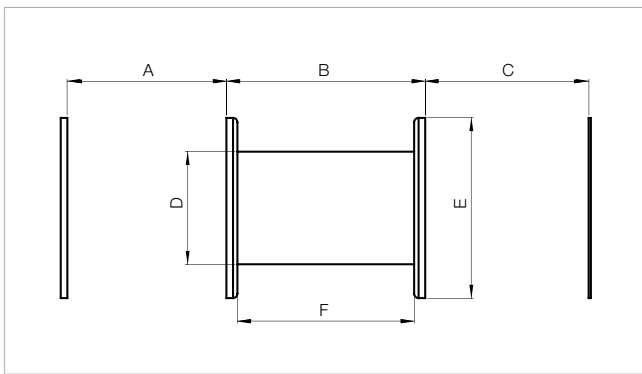
no. of turns _____

wire Ø _____

taping _____

骨架尺寸

Bobbin dimension before winding



A _____

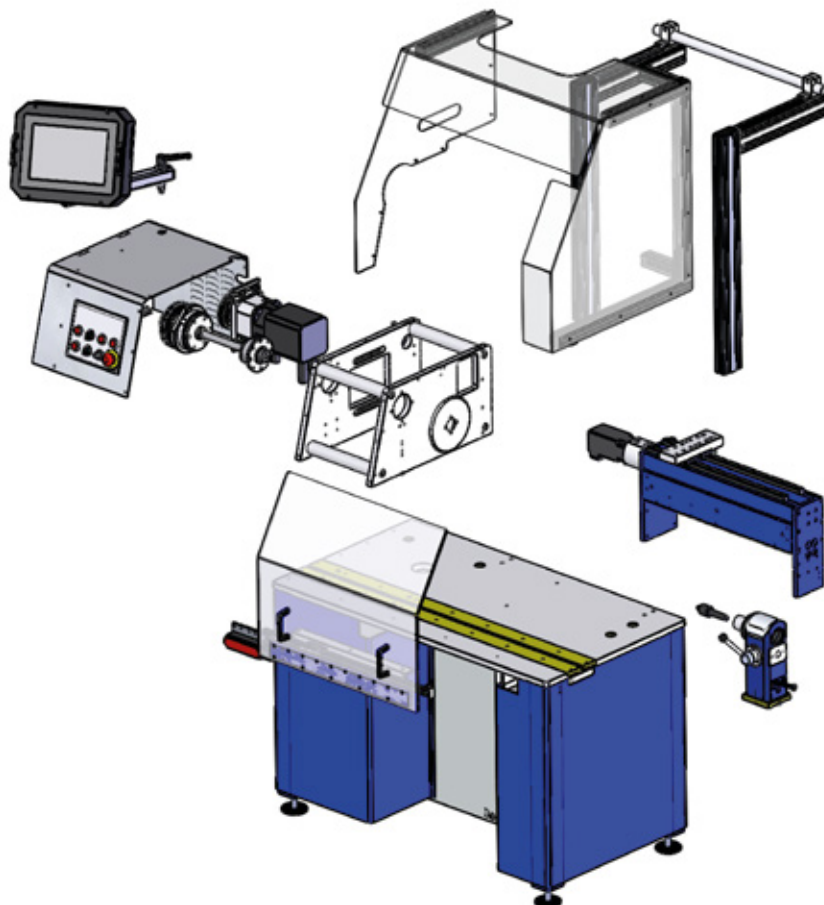
B _____

C _____

D _____

E _____

F _____



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