

目录

公司简介.....	2
系统优势.....	2

第一部分：VYS 大圆机智能送纱系统使用说明

一、主画面及操作说明.....	3
二、纱长设置画面及操作说明.....	4
三、班组参数画面及操作说明.....	5
四、故障信息画面及操作说明.....	6
五、测纱轮设置画面及操作说明.....	8
六、成分比例画面及操作说明.....	9
七、收卷布架画面及操作说明.....	9
八、系统参数画面及操作说明.....	10

第二部分：VIS 大圆机智控系统使用说明

一、主画面及操作说明.....	12
二、设置画面及操作说明.....	15
三、纱长设置画面及操作说明.....	16
四、喷油喷气设置及操作说明.....	18
五、测纱轮设置画面及操作说明.....	18
六、班组参数画面及操作说明.....	19
七、数据统计画面及操作说明.....	20
八、故障信息画面及操作说明.....	21
九、物联网说明.....	22
十、系统参数及操作说明.....	22
十一、收卷设置画面及操作说明.....	23
十二、维护画面及操作说明.....	24

第三部分：VAWS 伺服自动收卷系统使用说明

一、伺服自动收卷系统背景简介.....	25
二、主画面及操作说明.....	25
三、参数设置画面及操作说明.....	27
四、收卷压辊画面及操作说明.....	27
五、故障信息画面及操作说明.....	28
六、IO 监控画面及操作说明.....	28
七、布架参数画面及操作说明.....	29

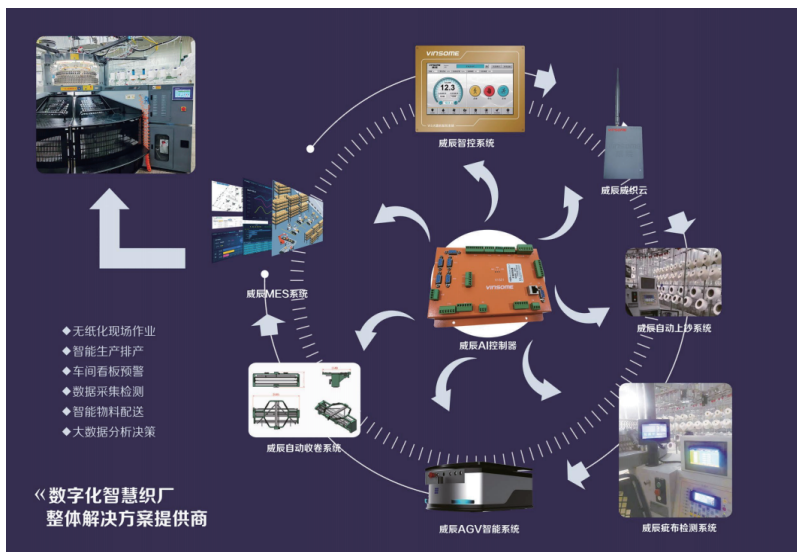
附录一 VIS 大圆机智控系统电路图.....	30
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一. 公司简介

广州威辰自动化技术有限公司，成立于 2017 年 9 月，从一家专业研发、销售高性能伺服控制系统、变频器高技术企业，逐渐蜕变成数字化智慧织厂整体解决方案提供商。主要产品有：VIS 大圆机智控系统、VYS 大圆机智能送纱系统、VAWS 自动收卷系统、VFDS 疵布检测智能系统、VIS21 圆筒织机控制系统、VBPS 经编机防断纱保护系统、威织云物联网、MES 系统、SDJ200 系列伺服驱动器、VIFR150A 系列变频器等。

二. 系统优势

威辰 VIS 系统系列大圆机智控系统，集运动控制、PLC 控制和网络控制于一体，包含控制系统、伺服驱动器及伺服电机、物联网等人机一体化集成系统；具有大圆机自动送纱和自动收卷以及物联网一体化等功能，系统稳定性高、功能强大、开放性好、操作便捷、维护简单及成本低等特点，目前已经广泛批量应用，是纺织行业机械电气化进程又一创新力作，具有大圆机主控系统、智能自动送纱系统、自动收放系统等。



第一部分：VYS 大圆机智能送纱系统使用说明

（一）主画面：



- 1.班组：显示当前生产班组，可在班组参数设置画面切换班组。
- 2.累计产品：显示当前选择班组累计完成数量，可在班组参数设置画面清零。
- 3.机器编号：显示当前机台的编号，可在系统参数画面修改。
- 4.员工编号：显示当前班组对应的员工编号，可以在班组参数画面修改。
- 5.机台速度:显示当前生产速度。
- 6.完成圈数:显示实际设备总共完成圈数数量，可在班组参数设置画面清零。
- 7.L1、L2、L3、L4、L5：显示每条纱轴的运行情况，黑色表示关闭状态，蓝色表示打开状态，红色表示故障状态。
- 8.mm:当电机打开时，显示每条纱轴的设定纱长值；当电机打开且运行时，显示每条纱轴的纱长监控值。
- 9.%：显示每条纱轴成分比例，点击每个显示框可以单独查看每轴的成分比例详细信息。
- 10.rpm：显示每条纱轴的电机速度。
- 11.系统状态框：系统状态包括，系统启动中、准备就绪、正在运转、测纱故障、伺服故障、电机设置异常等。
显示系统启动中时，设备正在加载数据请不要操作。
显示准备就绪时，系统可运行操作。
显示正在运转时，设备在运作。
显示测纱故障时，系统监控纱长与设定纱长超出偏差值故障停机。
显示伺服故障时，表示送纱伺服发生故障停机。
显示电机设置异常时，表示送纱电机启用或者通讯发生异常。
- 12.En:中英文显示切换按钮。
- 13.菜单栏：包括纱长设置界面按钮（权限管理员）、班组设置界面按钮、故障信息按钮、测纱设置按钮（权限管理员）、成分比例界面按钮（权限管理员）、收卷布架界面按钮（权限管理员）、主机参数界面按钮（权限后台）。管理员密码 8888。

(二) 纱长设置画面：

纱长设置						工艺管理
纱长设置		纱长校正		纱长当量	电机设置	
送纱1	0.0 mm	0.0 mm	0	启用		
送纱2	0.0 mm	0.0 mm	0	启用		
送纱3	0.0 mm	0.0 mm	0	启用		
送纱4	0.0 mm	0.0 mm	0	停止		
送纱5	0.0 mm	0.0 mm	0	停止		
总针数	0.0 针	总路数		0.0 路		
					返回	

1. 纱长设置：根据实际所需要纱长设定对应送纱轴纱长值，纱长单位为 MM(100 针)，若需修改为其他单位可联系厂家修改。
2. 纱长校正：根据实际测得纱长值进行微调校正，若实际偏长，则改负数；若实际偏短，则改为正数，更改数值大小依实际情况而定，该值若为 0 则不使用该功能。
3. 纱长当量：每个纱长对应一个纱长当量，每次更改纱长后，可以等待几秒观察该纱长当量是否发生变化，纱长值变大，该值也跟随变大；反之减小，则纱长更改有效。
4. 电机设置：按下对应按钮可以选择对应送纱轴是否工作，电机设置对应的送纱轴为停止时，当前送纱轴不工作。显示为启用且右边绿灯亮代表当前送纱轴工作，若启用后等待几秒钟，右边指示灯还是红色则操作失败，需重新关闭打开或者检查接线是否完好。
5. 总针数：设定机台总针数。
6. 总路数：设定机台总路数，与成分比例搭配使用。
7. 工艺管理按钮：按下 **工艺管理** 显示工艺管理画面。此画面可以记录、管理及发布相关的布种生产信息。通过“新增”按钮增加布种，“删除”按钮删除布种，以上两种操作后，点击“保存”方能将更改信息存盘。通过直接在表格中选取或者搜索布种名称，点击“下发”可以将布种纱长写入，无需在纱长设置画面更改。

工艺管理							0	搜索
序号	配方名称	纱长1	纱长2	纱长3	纱长4	纱长5		
0		0.0	0.0	0.0	0.0	0.0		
1		0.0	0.0	0.0	0.0	0.0		
2		0.0	0.0	0.0	0.0	0.0		
3		0.0	0.0	0.0	0.0	0.0		

删除
新增
保存
下发
返回

（三）班组参数画面：

班组产量信息			
班组选择	产量	员工编号	产量清零
A	0	a	A组清零
B	0	b	B组清零
C	0	c	C组清零
D	0	d	D组清零

产量全部清零
返回

1. 班组选择：如果主画面想监控哪一组参数就选择按钮哪一班组按钮，选择后班组按钮显示绿色。
2. 产量：显示各班组生产总量
3. 员工编号：设置每个班组的员工编号
4. 产量清零：按下对应班组的产量清零按钮后跳出权限登录（管理员）画面，登录权限后显示清零界面，按下清零按钮，对应班组产量清零。如图下图显示

班组产量信息			
班组选择	产量	员工编号	产量清零
A	A组数据是否清零?		A组清零
B			B组清零
C			C组清零
D			D组清零
		取消	清零
产量全部清零		返回	

5. 产量全部清零按钮：参考产量清零说明。

(四) 故障信息画面

报警信息			报警记录	
日期	时间	报警描述		
			上一页 刷新 下一页	
伺服故障复位		当前报警数 0	当前停机数 0	返回



- 故障信息：显示故障信息记录
- 上一页按钮：翻看上一页故障信息记录
- 刷新按钮：刷新故障信息
- 下一页按钮：翻看下一页故障信息记录
- 伺服故障复位按钮：伺服故障复位按钮只能在伺服发生故障时可以按下复位，伺服有些故障必须要断电复位，运行状态下禁止按故障复位按钮。
- 当前报警数：显示当前班组的报警次数。
- 当前停机数：显示当前班组的停机次数。
- 停车记录：点击 [报警记录](#) 显示停车记录窗口。该表格详细记录每次停车发生的时间、班

9.10 监控:该画面包含所有输入、输出的状态监控

7

(五) 测纱轮设置

测纱轮设置					
测纱轮直径	监控纱长修正	纱长误差设定	纱长监控设置	报警	
送纱1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/> 开
送纱2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/> 开
送纱3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/> 开
送纱4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input type="checkbox"/> 关
送纱5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input type="checkbox"/> 关
					 返回

1. 测纱轮直径：设定各送纱轴测纱轮直径，单位为 mm。**备注：**此参数不能随意修改，必须要在专业人员情况下修改。
2. 监控纱长修正：根据实际监控纱长值进行微调校正，若实际偏长，则改负数；若实际偏短，则改为正数，更改数值大小依实际情况而定，该值若为 0 则不使用该功能。
3. 纱长误差设定：设定各送纱轴纱长监控报警误差值，单位为 mm。
4. 纱长监控设置：设定各送纱轴监控纱长单位，单位为针。比如 100 针是代表监控纱长以 100 针为单位。**备注：**此参数不能随意修改，必须要在专业人员情况下修改。
5. 报警设定：设定各送纱监控纱长与设定纱长比较大于设定纱长误差设定值时是否报警停机。显示  时不报警，显示  时启动报警停机功能。

（六）成分比例画面

面料参数											
	成分	面料种类					单位规格		路数	比例	
送纱1	A	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	40.00	S	D	90.0	0.00%
送纱2	B	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00	S	D	0.0	0.00%
送纱3	C	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00	S	D	0.0	0.00%
送纱4	D	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00	S	D	0.0	0.00%
送纱5											

返回



1. 送纱 1-5：选择当前设置的送纱轴，每条送纱轴参数相互独立。
2. 成分 A-D：每条送纱轴支持 4 种不同材质的纱线，点击 A、B、C、D 选择启用。绿色表示启用，红色表示关闭。
3. 面料种类：每种纱线又分为 5 大类材料，根据工艺单选择其中 1 种材料。
4. 单位规格：根据工艺单的材料规格填写，单位有 S（英支）和 D（旦尼尔）两种。
5. 路数：当前纱线所占的路数数量，根据实际工艺单填写。
6. 比例：待填写完成上述信息，系统会自动计算该材料所占比例。

（七）收卷布架画面

收卷压辊			收卷设置		参数设置	
当前张力	0.00	kg				
设定张力	0.00	kg				
牵引速度	0.00	mm/r				
导布速度	0.00					
			牵引	开		
			导布	开		
			收卷	开		

返回

1. 当前张力：显示当前张力，单位 kg。

2. 设定张力：设置工艺所需的张力大小，单位 kg。若胚布收卷过紧，则调小该值；若胚布收卷过松，则加大该值。
3. 牵引速度：设置上段部分的牵引速度，该值越大则拉扯越紧。
4. 导布速度：设置中段部分的导布速度，该速度为牵引速度的百分比值。若牵引速度为 50，导布速度为 0.8，则中段导布速度实际为 $50 \times 0.8 = 40$ 。
5. 牵引、导布、收卷按钮： 表示启用该电机， 表示关闭该电机。根据实际需要选择启用或关闭。
6. 收卷压辊：可以设置收卷压辊的移动速度等参数，以及手动操作。

收卷压辊设置

压辊自动速度	0.00	mm/s	
			
压辊手动速度	0.00	mm/s	
			
压辊回原速度	0.00	mm/s	
			
压辊丝杠导程	0.00	mm	

 返回

(八) 系统参数画面

系统参数			
送纱轮直径	送纱轮齿数	伺服齿数	
送纱1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
送纱2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
送纱3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
送纱4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
送纱5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
传动比	<input type="text" value="0.0"/> i	机器编号输入	<input type="text" value="0"/>

 返回



1. 送纱轮直径：设置对应轴送纱轮直径。**备注：**此参数不能随便修改要厂家专业人员设定。
2. 送纱齿数：设置对应轴储纱器皮带轮齿数。**备注：**此参数不能随便修改要厂家专业人员设定。
3. 伺服齿数：设置对应轴伺服同步轮齿数。**备注：**此参数不能随便修改要厂家专业人员设定。
4. 传动比：设置系统送纱传动比。**备注：**此参数不能随便修改要厂家专业人员设定。
5. 机器编号输入：更改本设备的机台号。

第二部分：VIS 大圆机智控系统使用说明




（一）主画面：



- 1.班组：显示当前生产班组，可在班组参数设置画面切换班组。
- 2.累计产品：显示当前选择班组累计完成数量，可在班组参数设置画面清零。
- 3.机台总产量：显示当前机台总产量值。
- 4.机器编号：显示当前机台的编号，可在系统参数画面修改。
- 5.员工编号：显示当前班组对应的员工编号，可以在班组参数画面修改。
- 6.机台速度：显示当前生产速度。
- 7.已转圈数：显示实际设备已完成圈数数量。
- 8.设定圈数：设定圈数停机，最大设定值为 99999，当设定圈数与已转圈数相等时设备自动停机，无法再运行，必须把已转圈数清零或把设定值设定比已转圈数大才方可开机。
- 9.系统状态：系统状态包括，系统启动中、正在运行、变频器未通电、测纱故障、系统故障、圈数完成、准备就绪、停止、强制中、收卷故障等。
显示系统启动中时，设备正在加载数据请不要操作。
显示变频器未通电时，需要在控制系统按下电机按钮显示为黄色时变频器通电。
显示准备就绪时，系统可运行操作。显示正在运行时，设备在运作。
显示系统故障时，系统出现报警，排除故障显示消失。
显示测纱故障时，系统监控纱长与设定纱长超出偏差值故障停机，需按下停止按钮消除故障。
- 显示圈数完成时，已转圈数大于等于设定圈数时显示。
- 显示停止时，为停止按钮按下状态。
- 显示强制中时，断纱强制功能启用中。启用强制时，若有上下断纱、探针、探布、缺油等故障，可以慢车操作；当整机无故障时，可以快车操作。
- 显示收卷故障时，收卷机有故障发生，需排除对应的故障方能消除。（收卷机选配）
- 10.操作按钮：按钮包括启动按钮，点动按钮和停止按钮，按钮功能和机台按钮功能一样。
- 11.英文切换按钮 **En** 按下，可以切换英文显示。



12.上布灯：上布灯开关按钮，关闭状态时显示 ，打开上布灯时状态显示 





13.下布灯：下布灯开关按钮，关闭状态时显示 ，打开下布灯时状态显示 

14.风扇按钮：风扇按钮模式分为 3 种，分别为停止，手动和自动 3 种模式。按钮显示  时风扇为停止模式，按钮显示  时风扇为手动状态，设备运行就启动。按钮显示  时风扇为自动状态，设备运行转 3 圈后风扇自动开启，机器停止时，风扇停止。



15.电机按钮：在变频器不通电情况下按下按钮  后按钮显示  变频器通电，当变频器通电情况下显示 ，变频器通电时长按  2 秒，变频器断电。


16.清车按钮：按下按钮  后按钮显示  清车功能打开。

17.强制按钮：长按按钮  2 秒后按钮显示  系统强制功能打开。（强制功能打开后启用强制时，若有上下断纱、探针、探布、缺油等故障，可以慢车操作；当整机无故障时，可以快车操作。）

18.产品清零按钮：产品清零按钮  需要配合清车按钮  使用，当清车功能打开显示为  时，按下产量清零按钮 ，系统已转圈数清零。

19.设置按钮：按下  按钮进入设置画面。

20.机台速度设定：机台速度分快车，可以根据  或  按钮设定对应功能所需要频率，点动按一下频率加或减 0.5HZ，也可以直接输入频率，频率最大值出厂根据系统设定好。

21.状态指示按钮：点击该按钮  弹出主要输入状态窗口，点击窗口外任意位置，退出该窗口。当以下故障发生时，自动弹出该窗口。该窗口显示对应故障信息，指示灯显示绿色代表该功能正常，指示灯显示红色时代表该功能发生故障，请检查对应故障。



22. 纱长监控按钮：点击该按钮 **纱长监控** 弹出纱长监控窗口，点击窗口外任意位置，退出该窗口。文本送纱 L1-5 显示黑色时代表对应送纱轴处于禁止运行状态，显示为蓝色是送纱功能运行打开。中间一列为纱长值，单位 mm，当系统停止时显示设定纱长值，当设备运行时显示实际监控纱长值。右边一列为成分占比，单位%，点击每个显示框可以单独查看每轴的成分比例详细信息。

纱长监控		
	mm	%
L1	0.0	0.00
L2	0.0	0.00
L3	0.0	0.00
L4	0.0	0.00
L5	0.0	0.00

（二）设置画面



1. 纱长设置：按下纱长设置按钮进入纱长设置画面。（权限管理员，密码 8888）
2. 喷油喷气：按下喷油喷气按钮进入喷油喷气设置画面。
3. 测纱设置：按下测纱设置按钮进入测纱设置画面。（权限管理员，密码 8888）
4. 班组参数：按下班组参数按钮进入班组设置画面。
5. 设备维护：按下设备维护按钮进入维护画面。（权限管理员，密码 8888）
6. 产量统计：按下产量统计按钮进入统计监控画面。
7. 故障信息：按下故障信息按钮进入故障信息查看画面。
8. 物联网：按下物联网按钮进入监控设置画面。（权限管理员，密码 8888）
9. 收卷设置：按下收卷设置按钮进入收卷设置画面。（权限管理员，密码 8888）
10. 系统参数：按下系统参数按钮进入系统参数设置画面。（权限后台，密码 VINSOME）

备注：班组参数界面清零按钮（权限管理员）密码 8888

(三) 纱长设置画面

成分比例

纱长设置

工艺管理

	纱长设置		纱长校正		纱长当量	电机设置
送纱1	<input type="text" value="0.0"/>	<input type="text" value="0.0G"/>	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="停止"/>	
送纱2	<input type="text" value="0.0"/>	<input type="text" value="0.0G"/>	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="停止"/>	
送纱3	<input type="text" value="0.0"/>	<input type="text" value="0.0G"/>	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="停止"/>	
送纱4	<input type="text" value="0.0"/>	<input type="text" value="0.0G"/>	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="停止"/>	
送纱5	<input type="text" value="0.0"/>	<input type="text" value="0.0G"/>	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="停止"/>	
总针数	<input type="text" value="0.0"/> 针	总路数		<input type="text" value="0.0"/> 路		
					<input type="button" value="返回"/>	

- 1.纱长设置：根据实际所需要纱长设定对应送纱轴纱长值，纱长单位为 MM(100 针)，若需修改为其他单位可联系厂家修改。
- 2.纱长校正：根据实际测得纱长值进行微调校正，若实际偏长，则改负数；若实际偏短，则改成正数，更改数值大小依实际情况而定，该值若为 0 则不使用该功能。
- 3.纱长当量：每个纱长对应一个纱长当量，每次更改纱长后，可以等待几秒观察该纱长当量是否发生变化，若随纱长变化，则纱长更改有效。
- 4.电机设置：按下对应按钮可以选择对应送纱轴是否工作，电机设置对应的送纱轴为停止时，当前送纱轴不工作，但显示为绿色启用时代表当前送纱轴工作。
- 5.总针数：设定机台总针数。
- 6.总路数：设定机台总路数，与成分比例搭配使用。
- 7.成分比例：按下

成分比例

 显示面料参数设置画面。每轴支持 4 种不同材质的纱线，点击 A、B、C、D 选择启用。每种纱线又分为 5 大类材料，根据实际选择其中 1 种材料，填写材料规格和单位，所占路数，系统会自动计算该材料所占比例。若不启用此功能，则关闭相关轴的 A、B、C、D 选项。

面料参数

	成分	面料种类					单位规格	路数	比例
送纱1	A	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	40.00 S D	90.0	0.00%
送纱2	B	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00 S D	0.0	0.00%
送纱3	C	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00 S D	0.0	0.00%
送纱4	D	纯棉纱	纯化纤	涤棉纱	棉粘纱	维棉纱	0.00 S D	0.0	0.00%
送纱5									

 返回

8. 工艺管理：按下 **工艺管理** 显示工艺管理画面。此画面可以记录、管理及发布相关的布种生产信息。通过“新增”按钮增加布种，“删除”按钮删除布种，以上两种操作后，点击“保存”方能将更改信息存盘。通过直接在表格中选取或者搜索布种名称，点击“下发”可以将布种纱长写入，无需在纱长设置画面更改。

工艺管理

搜索

序号	配方名称	纱长1	纱长2	纱长3	纱长4	纱长5
0		0.0	0.0	0.0	0.0	0.0
1		0.0	0.0	0.0	0.0	0.0
2		0.0	0.0	0.0	0.0	0.0
3		0.0	0.0	0.0	0.0	0.0

<
>

删除
新增
保存
下发

 返回

(四) 喷油喷气设置

喷油喷气设置			
	起始圈数	运行圈数	停止圈数
喷油	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
喷油吹气	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
门口位吹气	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
中央吹气	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
备用吹气	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R



返回

1	2	3	
起始圈	运行圈	停止圈	备注
A=0	B=0	C=0	喷油或喷气不工作
	B>0		设备运行喷油或喷气启动一直工作
	B=0	C>0	喷油或喷气不工作
	B>0		设备运行喷油或喷气开始启动运行B圈后停止C圈后再启动
A>0	B=0	C=0	喷油或喷气不工作
	B>0		设备运行转A圈后喷油或喷气启动一直工作
	B=0	C>0	喷油或喷气不工作
	B>0		设备运行转A圈后喷油或喷气开始启动运行B圈后停止C圈后再启动

(五) 测纱轮设置

测纱轮设置					
测纱轮直径	监控纱长修正	纱长误差设定	纱长监控设置	报警	
送纱1 <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/>	
送纱2 <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/>	
送纱3 <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input checked="" type="checkbox"/>	
送纱4 <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input type="checkbox"/>	
送纱5 <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> 针	<input type="checkbox"/>	

返回

- 1.测纱轮直径：设定各送纱轴测纱轮直径，单位为 mm。**备注：**此参数不能随意修改，必须要在专业人员情况下修改。
- 2.监控纱长修正：根据实际监控纱长值进行微调校正，若实际偏长，则改负数；若实际偏短，则改为正数，更改数值大小依实际情况而定，该值若为 0 则不使用该功能。
- 3.纱长误差设定：设定各送纱轴纱长监控报警误差值，单位为 mm。
- 4.纱长监控设置：设定各送纱轴监控纱长单位，单位为针。比如 100 针是代表监控纱长以 100 针为单位。**备注：**此参数不能随意修改，必须要在专业人员情况下修改。
- 5.报警设定：设定各送纱监控纱长与设定纱长比较大于设定纱长误差设定值时是否报警停机。显示  时不报警，显示  时启动报警停机功能。

（六）班组参数画面：

班组产量信息			
班组选择	产量	员工编号	产量清零
	<input type="text" value="0"/>	<input type="text" value="a1"/>	
	<input type="text" value="0"/>	<input type="text" value="0"/>	
	<input type="text" value="0"/>	<input type="text" value="0"/>	
	<input type="text" value="0"/>	<input type="text" value="0"/>	
			

- 1.班组选择：如果主画面想监控哪一组参数就选择按钮哪一组按钮，选择后班组按钮显示按下状态。
- 2.产量：显示各班组生产总量
- 3.员工编号：设置每个班组的员工编号
- 4.产量清零：按下对应班组的产量清零按钮后跳出权限登录（管理员）画面，登录权限后显示清零界面，按下清零按钮，对应班组产量清零。如图下图显示

班组产量信息

班组选择

产量

员工编号

产量清零

A

B

C

D

A组数据是否清零?

取消

清零

A组清零

B组清零

C组清零

D组清零

产量全部清零

返回

5.产量全部清零按钮：参考产量清零说明。

(七) 数据统计画面

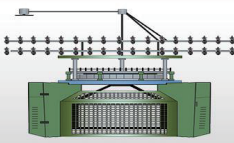
统计				
班组	A	B	C	D
员工号				
日产量				
月产量				
运行时间				
待机时间				
故障时间				
占比	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>	<div><div></div><div></div><div></div></div>
<div><div></div>运行<div></div>待机<div></div>故障</div>				
				返回

- 1.数据统计报表：报表实时显示当天各班组当日产量，当月产量，设备当天运行时间，待机时间，故障时间。
- 2.设备状态百分比：显示各当天各班组设备状态百分比率。

- 1.故障信息：显示故障信息记录
- 2.上一页按钮：翻看上一页故障信息记录
- 3.刷新按钮：刷新故障信息
- 4.下一页按钮：翻看下一页故障信息记录
- 5.伺服故障复位按钮：伺服故障复位按钮只能在伺服发生故障时可以按下复位，伺服有些故障必须要断电复位，运行状态下禁止按故障复位按钮。
- 6.当前报警数：显示当前班组的报警次数。
- 7.当前停机数：显示当前班组的停机次数。
- 8.停车记录：点击“[停车记录](#)”显示停车记录窗口。该表格详细记录每次停车发生的时间、班组、圈数位置、停车原因以及停机痕数量，可以通过“上一页”、“下一页”进行翻页查看。点击“清除全部记录”输入管理员密码后，弹出“确认”按钮，按下“确认”后清除全部记录。

21

(九) 物联网



物联网

班 组 运行时间 时 分 秒

员工编号 待机时间 时 分 秒

当班产量 故障时间 时 分 秒

机台转速

纱长设定

纱长监控

纱长1			
纱长2			
纱长3			
纱长4			
纱长5			

送纱1 送纱2 送纱3 送纱4 送纱5

本地: IP . . . Port 远程: IP . . . Port

返回

物联网功能必须要添加物联网模块才能使用，物联网可以实时监控设备生产状态，生产产量，可远程设定纱长，设定送纱轴工作模式。

(十) 系统参数

系统参数

	送纱轮直径	送纱轮齿数	伺服齿数
送纱1	<input type="text"/> 0.0 mm	<input type="text"/> 0.0	<input type="text"/> 0.0
送纱2	<input type="text"/> 0.0 mm	<input type="text"/> 0.0	<input type="text"/> 0.0
送纱3	<input type="text"/> 0.0 mm	<input type="text"/> 0.0	<input type="text"/> 0.0
送纱4	<input type="text"/> 0.0 mm	<input type="text"/> 0.0	<input type="text"/> 0.0
送纱5	<input type="text"/> 0.0 mm	<input type="text"/> 0.0	<input type="text"/> 0.0
传动比	<input type="text"/> 0.0 i	变频最大频率	<input type="text"/> 0.0 HZ
慢车频率	<input type="text"/> 0.0 HZ	机器编号输入	<input type="text"/> 11

返回

- 1.送纱轮直径：设置对应轴送纱轮直径。**备注：**此参数不能随便修改要厂家专业人员设定。
- 2.送纱齿数：设置对应轴储纱器皮带轮齿数。**备注：**此参数不能随便修改要厂家专业人员设定。
- 3.伺服齿数：设置对应轴伺服同步轮齿数。**备注：**此参数不能随便修改要厂家专业人员设定。

- 4.传动比：设置系统送纱传动比。**备注：**此参数不能随便修改要厂家专业人员设定。
- 5.慢车频率：设置系统慢车频率。
- 6.变频器最大频率：设置系统变频器最大频率。备注：此参数不能随便修改要厂家专业人员设定。
- 7.机器编号输入：更改本设备的机台号。

（十一）收卷设置画面

收卷压辊
收卷设置
参数设置

当前张力 kg

设定张力 ⊖ ⊕ kg

牵引速度 ⊖ ⊕ mm/r

导布速度 ⊖ ⊕ mm/r

牵引 开

导布 开

收卷 开

← 返回

- 1.当前张力：显示当前张力，单位 kg。
- 2.设定张力：设置工艺所需的张力大小，单位 kg。若胚布收卷过紧，则调小该值；若胚布收卷过松，则加大该值。
- 3.牵引速度：设置上段部分的牵引速度，该值越大则拉扯越紧。
- 4.导布速度：设置中段部分的导布速度，该速度为牵引速度的百分比值。若牵引速度为 50，导布速度为 0.8，则中段导布速度实际为 $50 \times 0.8 = 40$ 。
- 5.牵引、导布、收卷按钮：开 表示启用该电机，关 表示关闭该电机。根据实际需要选择启用或关闭。
- 6.收卷压辊：可以设置收卷压辊的移动速度等参数，以及手动操作。

收卷压辊设置

压辊自动速度

0.00

mm/s

正向点动

压辊手动速度

0.00

mm/s

反向点动

压辊回原速度

0.00

mm/s

回原

压辊丝杆导程

0.00

mm

返回

(十二) 维护画面

维护画面

收卷10

☐ 纱长监控1 (D48)

☐ 纱长监控2 (D35)

☐ 纱长监控3 (D39)

☐ 纱长监控4 (D44)

☐ 纱长监控5 (D36)

☐ 光电开关 (D19)

☐ 安全门 (D21)

☐ 启动 (D15)

☐ 停止 (D17)

☐ 点动 (D23)

☐ 变频器故障 (D31)

☐ 伺服1故障 (D61)

☐ 伺服2故障 (D55)

☐ 伺服3故障 (D57)

☐ 伺服4故障 (D59)

☐ 伺服5故障 (D63)

☐ 数据保存 (D16)

☐ 保险故障 (D30)

☐ 探针故障 (D51)

☐ 探布故障 (D52)

☐ 缺油故障 (D53)

☐ 上断纱 (D45)

☐ 探针带灯 (D47)

☐ 下断纱 (D49)

☐ 缺气故障 (D54)

☐ 备用

关

关

关

关

关

关

关

关

关

关

关

关

☐ 除尘风机 (D2)

☐ 照明灯 (D6)

☐ 照明布 (D9)

☐ 油机 (D10)

☐ 开幅 (D11)

☐ 变频器通电 (D12)

☐ 充电 (D13)

☐ 喷油吹气 (D14)

☐ 上断纱 (D40)

☐ 探针闪灯 (41)

关

关

关

关

关

关

关

关

关

关

☐ 下断纱 (D43)

☐ 三色灯红 (D56)

☐ 三色灯黄 (D58)

☐ 三色灯绿 (D60)

☐ 门口位吹气 (D62)

☐ 中央吹气 (D64)

☐ 变频器运行 (D32)

☐ 备用吹气 (D33)

☐ 备用 (D34)

☐ 备用

PIC版本: 0 0 0 底层版本: 0 0 0 HMI版本: 0 0 0 返回

进入该画面会自动停机，该画面包含所有输入、输出的状态监控，以及所有输出的点动测试操作。通过此画面还可以查看设备的版本号。

第三部分：VAWS 伺服自动收卷系统使用说明

（一）伺服自动收卷系统背景说明：

传统收卷采用齿轮箱调节传动比方式，调节步骤繁琐，过于依赖经验积累。针对要求不高的普通布种，效果尚可，但收卷高端布种时，往往存在水波纹、克重偏差大等一系列弊端。针对以上行业痛点，本公司推出了电子自动收卷系统，电子布架相对于传统机械式布架具有几大优势。本系统采用直观式数字调节，客户可根据布面实际情况调节收卷参数，调节便利快速，系统响应迅速、稳定，可有效改善水波纹、克重不一等现象。

（二）主画面：



- 1.当前张力：显示当前张力，单位 kg。
- 2.设定张力：设置工艺所需的张力大小，单位 kg。若胚布收卷过紧，则调小该值；若胚布收卷过松，则加大该值。
- 3.牵引速度：设置上段部分的牵引速度，该值越大则拉扯越紧。
- 4.导布比例：设置中段部分的导布速度，该速度为牵引速度的百分比值。若牵引速度为 50，导布速度为 0.8，则中段导布速度实际为 $50 \times 0.8 = 40$ 。
- 5.故障提示条：当机台发生故障时，会自动弹出提示条。提示条内容包括（布架上段）牵引伺服故障、（布架中段）导布伺服故障、（布架下段）收卷伺服故障、收卷布架急停按下、收卷胚布过紧、收卷胚布过松、收卷压辊左极限、收卷压辊右极限、剖布失败、左插销未插紧、右插销未插紧等故障信息。
（布架上段）牵引伺服故障：即上段牵引电机发生故障，需排除故障并复位后方可启动。
（布架中段）导布伺服故障：即中段导布电机发生故障，需排除故障并复位后方可启动。
（布架下段）收卷伺服故障：即下段收卷电机发生故障，需排除故障并复位后方可启动。
收卷布架急停按下：收卷机急停按钮按下提示，需复位急停后方可启动。
收卷胚布过紧:当启用张力上限后，若当前张力大于张力上限则会发生此故障。此时需检查机械结构排除故障，或者重新设定合适的上限值后方可启动。
收卷胚布过松:当启用张力下限后，若当前张力小于张力下限则会发生此故障。此时需检查

机械结构排除故障，或者重新设定合适的下限值后方可启动。

收卷压辊左极限：收卷压辊达到左限位，检查限位开关是否正常，并手动把收卷压辊点动至合适位置后方可启动。

收卷压辊右极限：收卷压辊达到右限位，检查限位开关是否正常，并手动把收卷压辊点动至合适位置后方可启动。

剖布失败：剖布刀若没切割到布会发生此故障，此时应检查并调整剖布刀位置，排除故障后方可启动。

左插销未插紧：收卷轴左边插销未插紧或者没有插，会报此故障，插紧后电眼亮灯后复位。

右插销未插紧：收卷轴右边插销未插紧或者没有插，会报此故障，插紧后电眼亮灯后复位。

6.首页：点击该按钮返回首页画面，在首页画面中可以进行中英文切换操作。

7.设置：点击该按钮打开设置画面，进入此画面需要管理员权限，密码 8888。

8.底层监视画面：点击右上角隐藏画面，输入管理员权限，密码 8888，可以进入底层监视画面。该画面可以查看通讯状态以及伺服电机运行状态，长按“恢复出厂”按钮 2S 可以恢复出厂值。若张力或者主轴速度波动较大，可以调节张力和主轴速度的波动允许值，一般按默认值即可。

底层监控画面

通讯状态	转速	负载率
牵引伺服 <input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
导布伺服 <input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
收卷伺服 <input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
收卷PLC <input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>	<input style="width: 50px;" type="text"/>
<div style="display: flex; justify-content: space-between;"> <div>张力显示波动允许 <input style="width: 80px;" type="text"/></div> <div>当前张力 <input style="width: 100px;" type="text"/></div> </div> <div style="display: flex; justify-content: space-between; margin-top: 5px;"> <div>主轴速度波动允许 <input style="width: 80px;" type="text"/></div> <div></div> </div>		

恢复出厂
↶ 返回

（三）参数设置画面：



1.收卷压辊：打开收卷压辊设置画面。

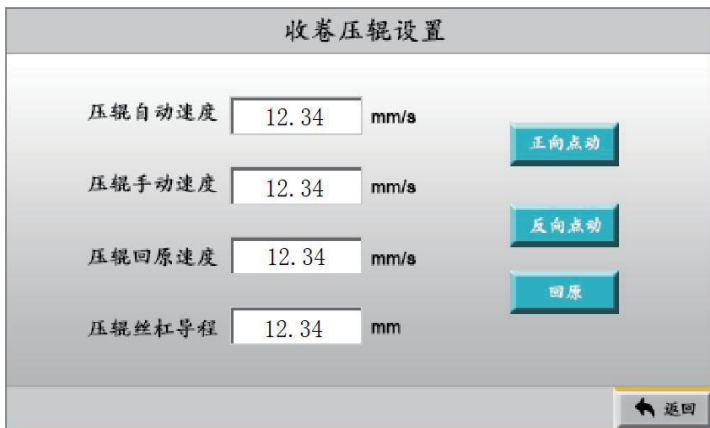
2.故障信息：打开故障信息画面。

3.IO 监控：打开 IO 监控画面。

4.布架参数：打开布架参数设置画面。（权限后台，密码 VINSOME）

5 电机启用和关闭： 表示关闭电机， 表示启用电机，正常默认  启用即可。

（四）收卷压辊画面：



1.收卷压辊自动运行速度设置，单位为 mm/s。

2.收卷压辊手动运行速度设置，单位为 mm/s。

3.收卷压辊回原运行速度设置，单位为 mm/s。

4.丝杠导程设置，根据实际导程设置即可，单位为 mm。

(五) 故障信息画面:

[illegible]

- 1.故障信息：显示故障信息记录
- 2.上一页按钮：翻看上一页故障信息记录
- 3.刷新按钮：刷新故障信息
- 4.下一页按钮：翻看下一页故障信息记录

(六) IO 监控画面:

	急停开关		收卷压辊原点		牵引电机
	正向点动		收卷压辊左极限		导布电机
	反向点动		收卷压辊右极限		收卷反向
	牵引报警		刮布失败		收卷压辊
	导布报警		左梢到位		压辊反向
	收卷报警		右梢到位		刮布刀
	牵引点动		压辊到位		运行允许

该画面包含所有输入、输出的状态监控。当维护设备时，可以打开此画面查看各个输入输出是否正常。

(七) 布架参数画面:

布架参数			
编码器分辨率	12	采样时间	12 ms
编码器减速比	12.34	比例增益	12 %
牵引电机减速比	12.34	积分时间	12 100ms
导布电机减速比	12.34	微分时间	12 10ms
牵引辊直径	12.34 mm	运算范围	12
导布辊直径	12.34 mm	控制死区	12
当前张力	12.34 kg	收卷转速	12 rpm
负载率	12.3 %	张力量程	12.34 kg
张力上限	12.34 kg	张力下限	12.34 kg
		<input type="checkbox"/> 关 <input checked="" type="checkbox"/> 开	
		<input type="checkbox"/> 关 <input checked="" type="checkbox"/> 开	
<input type="button" value="返回"/>			

1.编码器分辨率：根据编码器铭牌输入对应分辨率。

2 编码器减速比：编码器轴与大圆减速比。

3.牵引电机减速比：上段部分电机连接减速机减速比。

4.导布电机减速比：中间部分电机连接减速机减速比。

5.牵引辊直径：上段部分电机输出轴连接的胶辊直径。

6.导布辊直径：中间部分电机输出轴连接的胶辊直径。

7.系统增益调节参数：包括采样时间、比例增益、积分时间、微分时间、运算范围、控制死区。若需修改，请与厂家技术人员联系。

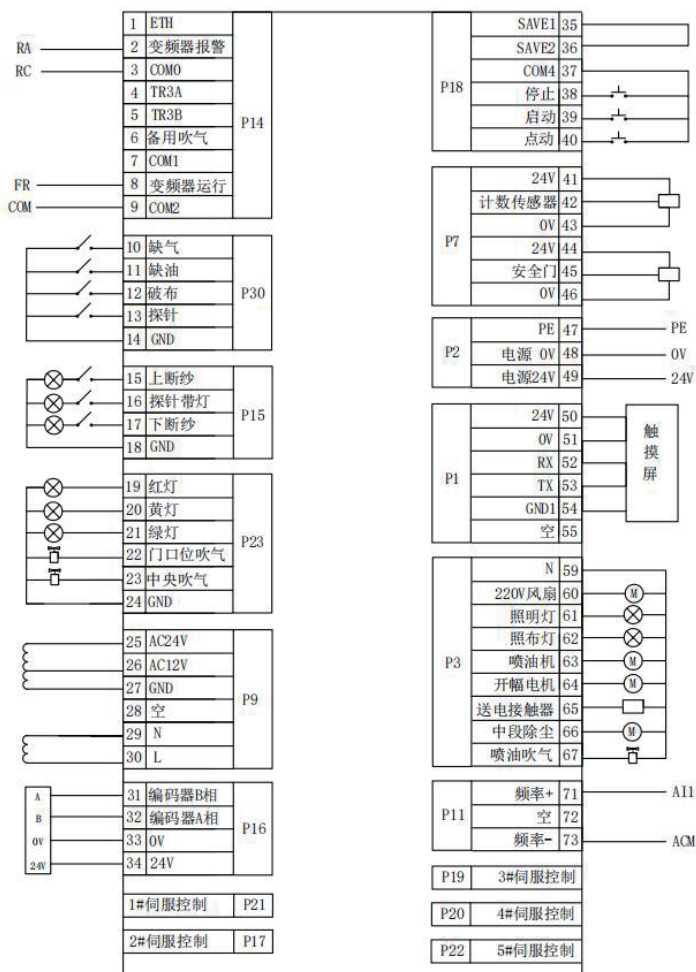
8.收卷辊当前状态显示：包括当前张力、收卷转速、负载率等无须设置。

9.张力量程：根据外部张力传感器量程设置。

10.张力上限：设置最大张力值，当实际张力超过该设定值一段时间后，报警停机。☐ 关 表示关闭此功能，☒ 开 表示打开此功能。

11.张力下限：设置最小张力值，当实际张力低于该设定值一段时间后，报警停机。☐ 关 表示关闭此功能，☒ 开 表示打开此功能。

附录一 VIS 大圆机智控系统电路图：



Catalog

Company profile.....	32
System Advantages.....	32

Part one: VYS Instructions for automatic yarn feeding system of knitting machine

1、Main screen and operation instructions.....	33
2、Yarn length setting screen and operation instructions.....	34
3、Class parameter screen and operation instructions.....	36
4、Setting screen and operation instructions of yarn measuring wheel.....	37
5、Fault information screen and operation instructions.....	39
6、Composition proportion menu and operating instructions.....	40
7、Winding cloth rack menu and operating instructions.....	41
8、System parameters menu and operating instructions.....	42

Part two: VIS Instructions for automatic control system of knitting machine

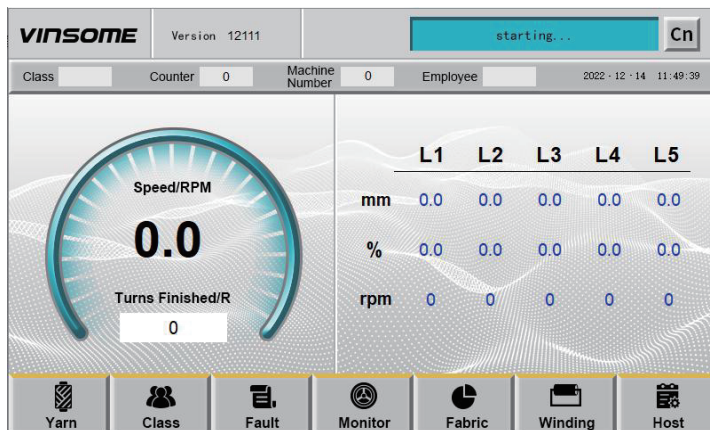
1、Main screen and operation instructions.....	43
2、Setting screen and operating instructions.....	46
3、Yarn length setting screen and operation instructions.....	47
4、Fuel injection setting and operating instructions.....	49
5、Setting screen and operation instructions of yarn measuring wheel.....	50
6、Team parameter screen and operation instructions.....	51
7、Data statistics screen and operation instructions.....	52
8、Fault information screen and operation instructions.....	52
9、Description of Internet of things.....	53
10、System parameters and operation instructions.....	54
11、Winding setting menu and operating instructions.....	55
12、Maintenance menu and operating instructions.....	56

Part Three: Instructions on VAWS servo automatic winding system

1、Background introduction of servo automatic winding system.....	57
2、Main menu and operating instructions.....	57
3、Parameters setting menu and operating instructions.....	59
4、Winding press roll menu and operating instructions.....	59
5、Fault information menu and operating instructions.....	60
6、I/O monitoring menu and operating instructions.....	60
7、Cloth rack menu and operating instructions.....	61
8、Appendix I control circuit diagram.....	62

Part one: VYS Instructions for automatic yarn feeding system of knitting machine

(I) Main menu:



1. Shift: displays current production shift. You can switch shifts in the shift parameter setting menu.
 2. Cumulative product: displays the cumulative completed quantity of the currently selected shifts, which can be zeroed in the shift parameter setting menu.
 3. Machine serial number: displays the number of the current machine, which can be modified in the system parameter menu.
 4. Employee Number: displays the employee number of current shift, which can be modified in the shift parameter menu.
 5. Machine Speed: displays the current production speed.
 6. Number of bolts completed: displays the total number of bolts completed by the equipment, which can be zeroed in the shift parameter setting menu.
 7. L1, L2, L3, L4, L5: displays the running condition of each yarn axis, black represents closed, blue represents open, and red represents fault.
 8. mm: When the motor is powered on, display the set yarn length value of every yarn axis; when the motor is powered on and in running state, display the monitoring value of yarn length of each yarn axis.
 9. %: displays the composition proportion of each yarn axis, click on each display frame to view the composition proportion details of each axis separately.
 10. rpm: displays the motor speed of each yarn axis.
 11. System state box: the system state includes: system starting, Ready, running, yarn measuring fault, servo fault, abnormal motor setting, etc.
- In case of system starting, the equipment is loading data. Please do not operate.
In case of Ready, the system can run the operation.

In case of running, the equipment is running.

In case of yarn measuring fault, the system monitoring yarn length and the set yarn length exceed the deviation value, and fault shutdown is triggered.

In case of servo fault, the machine is shut down due to the servo fault.

In case of abnormal motor setting, it indicates that the stitching motor is enabled or the communication is abnormal.

Cn: Switch button between Chinese and English display.

Menu bar: including yarn length setting menu button (permission administrator), shift setting menu button, fault information button, yarn measurement setting button(permission administrator), composition proportion menu button (permission administrator), winding cloth rack menu button (permission administrator), host parameter menu button (permission background). The administrator password is 8888.

(II) Yarn length setting menu:


Yarn Length Setting				Process
Yarn length setting	Yarn length correction	Yarn length equivalent	Motor setting	
Yarn 1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="Run"/>
Yarn 2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="Run"/>
Yarn 3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="Run"/>
Yarn 4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="Stop"/>
Yarn 5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	<input type="text" value="0"/>	<input type="button" value="Stop"/>
Total stitches	<input type="text" value="0.0"/> Stitches	Total routes	<input type="text" value="0.0"/> Routes	<input type="button" value="Back"/>

1.Yarn length setting: set the yarn length value of the corresponding stitching shaft according to the actual yarn length required, and the yarn length is in MM (100 stitches). If it needs to be modified, you may contact the manufacturer for modification.

2.Yarn length correction: fine tune and correct the yarn length according to the actual measured yarn length. If the actual value is too long, change it to a negative number; if the actual value is too short, change it to a positive number. The change of value should depends on the actual condition. If the value is zero, this function cannot be used.

3. Yarn length equivalent: each yarn length corresponds to a yarn length equivalent. After you change the yarn length, you can wait for a few seconds to see if the yarn length equivalent has changed. When the yarn length is greater, the equivalent value is greater; on the contrary, the equivalent value is smaller, then the change of yarn length is effective.

4.Motor setting: press the corresponding button to select whether to operate the corresponding stitching shaft. When the corresponding stitching shaft is set to stop by the motor, the current stitching shaft will not run. When it displays enabled and the green light

7. Process management button: press  to display the process management menu. This menu can record, manage and publish relevant cloth production information. Add cloth by “add” button, and delete cloth by “delete” button. After the above two operations, click “Save” to save the change information. Write in the cloth and yarn length by directly selecting or searching cloth name and clicking “distribute”. You don’t need to change it in the yarn length setting menu.

(III) Shift parameter menu:

Yarn Length Setting			
Class Selection	Capacity	Employee Number	Capacity Zeroing
A	0	0	Class A Zeroing
B	0	0	Class B Zeroing
C	0	0	Class C Zeroing
D	0	0	Class D Zeroing
Zero All Capacities			Back

- 1.Class selection: to monitor a group of parameters on the main screen, select the shift button. After selection, the shift button will be green.
- 2.Capacity: displays the total capacity of each shift
- 3.Employee number: set the employee number of each shift
- 4.Capacity Zeroing: press the capacity zeroing button of the corresponding shift, and then the menu of permission login (administrator) will pop up. After the permission log-in, the zeroing menu will be displayed. Press the zeroing button to zero the capacity of the corresponding shift. As shown in the figure below

Yarn Length Setting			
Class Selection	Capacity	Employee Number	Capacity Zeroing
A	Are Class A data cleared?		Class A Zeroing
B			Class B Zeroing
C			Class C Zeroing
D			Class D Zeroing
		Cancel	Zeroing
Zero All Capacities			Back

- 5.Zero-all- capacity button: refer to the description of capacity Zeroing.

(IV) Fault information menu

Date	Time	Description

Servo fault reset Current Alarm: 0 Current Shutdown: 0 Back

1. Fault information: displays the fault information record
2. Previous button: look through the fault information record on the previous page
3. Refresh button: refresh the fault information
4. Next button: look through the fault information record on the next page
5. Servo fault zeroing button: the servo fault reset button can only be pressed to reset when the servo fails. In case of some servo faults, it must be reset under power-off. It is forbidden to press the fault reset button in the running state.
6. Current number of alarms: displays the number of alarms of the current shift.
7. Current number of downtime: displays the number of downtime of the current shift.
8. Shutdown records: click **Record** to display the shutdown record window. This form records in detail the time, shift, bolt position, shutdown reason and the number of downtime marks of each shutdown, which can be viewed by turning pages through "Previous Page" and "Next Page". Click "clear all records", enter the administrator password, the "OK" button pops up, after press the "OK" button, all records will be cleared.

9. IO monitoring: This menu contains all input and output status monitoring

(V) Setting of measuring wheel

Measuring Wheel Setting					
	Measuring Wheel Diameter	Monitored Yarn Length Correction	Yarn Length Error Setting	Yarn Length Monitoring Setting	Alarm
Yarn 1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="checkbox"/> Off
Yarn 5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="checkbox"/> Off

Back

1. Measuring wheel diameter: set the measuring wheel diameter of each stitching shaft, in mm. Note: This parameter shall not be modified without authorization, and must be modified by dedicated professionals.

2. Monitor the yarn length correction: fine tune and correct the yarn length according to the actual monitored yarn length. If the actual value is too long, change it to a negative number; if the actual value is too short, change it to a positive number. The change of value should depends on the actual condition. If the value is zero, this function cannot be used.

3.Yarn length error setting: set the yarn length monitoring alarm error value of each stitching shaft, in mm.

4.Yarn length monitoring setting: set the monitoring yarn length unit of each stitching shaft, in stitch. For example, 100 stitches means the monitoring yarn length is in unit of 100 stitches. Note: This parameter shall not be modified without authorization, and must be modified by dedicated professionals.

5.Alarm setting: set whether to alarm and shut down when the monitored yarn length of each stitching is greater than the Set Tolerance Value of the set yarn length error when compared with the set yarn length. When is displayed, no alarm is triggered, and when is displayed, the alarm shutdown function is started.

(VI) Composition proportion menu

Fabric Parameters											
	Component	Fabric Type					Specification	Routes	Radio		
Yarn 1	A	Cotton	Polyester	T/C	Viscose	VCotton	0.00	S D	0.0	0.00%	
Yarn 2	B	Cotton	Polyester	T/C	Viscose	VCotton	0.00	S D	0.0	0.00%	
Yarn 3	C	Cotton	Polyester	T/C	Viscose	VCotton	0.00	S D	0.0	0.00%	
Yarn 4	D	Cotton	Polyester	T/C	Viscose	VCotton	0.00	S D	0.0	0.00%	
Yarn 5											

Back

1. Stitching 1-5: select the currently set stitching shaft, and the parameters of each stitching shaft are independent of each other.
2. Composition A-D: Each stitching shaft supports 4 yarns of different materials. Click A, B, C and D to select and turn on. Green indicates turning on while red indicates turning off.
3. Fabric type: Each kind of yarn is divided into 5 kinds of materials, and select one material according to the process sheet.
4. Unit specification: Fill in according to the material specification of the process sheet, and two kinds of unit are used, namely S (English count) and D (Denier).
5. Number of feeder: The number of feeder used by the current yarn. It shall be filled in according to the actual process sheet.
6. Proportion: After completing the above information, the system will automatically calculate the proportion of the material.

(VII) Winding cloth rack menu

Pressure Roller

Winding Settings

Set

Current Tension	0.00	kg	
Set Tension	0.00	kg	
Traction Speed	0.00	mm/r	
Guiding Ratio	0.00		
			Traction <input checked="" type="checkbox"/> On Guide <input checked="" type="checkbox"/> On Winding <input checked="" type="checkbox"/> On
			Back

1. Current tension: displays the current tension in kg.
2. Set tension: set the tension required by the process in kg. If the gray cloth is wound too tight, decrease the value; if the gray cloth is wound too loose, increase the value.
3. Traction speed: set the traction speed of the upper part. The greater the value, the tighter the pull.
4. Cloth guide speed: set the cloth guide speed of the middle part, which is the percentage of the traction speed. If the traction speed is 50 and the cloth guide speed is 0.8, the cloth guide speed of the middle part is $50 * 0.8 = 40$.
5. Traction, cloth guide and winding button: ☒ indicates turn on the motor, ☐ indicates turn off the motor. Select turn on or turn off according to actual needs.
6. Winding press roll: it can set the moving speed of winding press roll and other parameters, as well as manual operation.

Winding Pressure Roller

Automatic speed	<input style="width: 80%;" type="text" value="0.00"/>	mm/s	
Manual speed	<input style="width: 80%;" type="text" value="0.00"/>	mm/s	Forward jog
Return speed	<input style="width: 80%;" type="text" value="0.00"/>	mm/s	Reverse jog
Lead screw	<input style="width: 80%;" type="text" value="0.00"/>	mm	Return original

[← Back](#)

(VIII) System parameter menu

Alarm Information

Feeding wheel diameter	Number of feeding wheel teeth	Number of servo teeth
Yarn 1 <input style="width: 40%;" type="text" value="0.0"/> mm	<input style="width: 40%;" type="text" value="0.0"/>	<input style="width: 40%;" type="text" value="0.0"/>
Yarn 2 <input style="width: 40%;" type="text" value="0.0"/> mm	<input style="width: 40%;" type="text" value="0.0"/>	<input style="width: 40%;" type="text" value="0.0"/>
Yarn 3 <input style="width: 40%;" type="text" value="0.0"/> mm	<input style="width: 40%;" type="text" value="0.0"/>	<input style="width: 40%;" type="text" value="0.0"/>
Yarn 4 <input style="width: 40%;" type="text" value="0.0"/> mm	<input style="width: 40%;" type="text" value="0.0"/>	<input style="width: 40%;" type="text" value="0.0"/>
Yarn 5 <input style="width: 40%;" type="text" value="0.0"/> mm	<input style="width: 40%;" type="text" value="0.0"/>	<input style="width: 40%;" type="text" value="0.0"/>

Transmission Ratio <input style="width: 40%;" type="text" value="0.0"/>	Machine Number <input style="width: 40%;" type="text" value="0"/>
---	---

[← Back](#)

1. Stitching wheel diameter: set the diameter of stitching wheel of corresponding shaft. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
2. Number of stitching teeth: set the number of pulley teeth of the corresponding shaft storage device. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
3. Number of servo teeth: set the number of teeth of the corresponding shaft servo synchronous wheel. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
4. Transmission ratio: set the system stitching transmission ratio. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
5. Enter machine serial number: change the machine number serial number of this equipment.

Part two: VIS Instructions for automatic control system of knitting machine

(I) Main menu:



1. Shift: displays current production shift. You can switch shifts in the shift parameter setting menu.
 2. Cumulative capacity of the current shift: displays the cumulative completed quantity of the currently selected shifts, which can be zeroed in the shift parameter setting menu.
 3. Total machine output: displays the current total machine capacity value.
 4. Machine serial number: displays the number of the current machine, which can be modified in the system parameter menu.
 5. Employee number: displays the employee number of the current shift, which can be modified in the shift parameter menu.
 6. Machine speed: displays the current production speed.
 7. Finished bolts: displays the number of bolts finished by the equipment.
 8. Set the number of bolts: set the number of bolts for shutdown, with the maximum set value of 99999. When the set number of bolts is equal to the number of finished bolts, the equipment will automatically shut down and can no longer run. Only when the number of bolts is zeroed or the set value is larger than the number of finished bolts can the machine be started.
 9. System state: the system state includes: system starting, running, frequency changer not powered on, yarn measuring fault, system fault, bolt number completed, ready, stop, force and winding fault etc.
- In case of system starting, the equipment is loading data. Please do not operate.
- In case of frequency changer not powered on, power on the frequency changer when the MOTOR button is pressed in the control system and the button is green.
- In case of Ready, the system can run the operation.

In case of running, the equipment is running.

In case of system fault, the system gives an alarm and the troubleshooting display disappears.

In case of yarn measuring fault, the system monitoring yarn length and the set yarn length exceed the deviation value, and fault shutdown is triggered. Press the stop button to eliminate the fault.

In case of bolt number completed, the number of bolts is greater than or equal to the set number of bolts.

In case of stop, it is the state of pressing the stop button.



In case of force, the yarn breakage force function is turned on. When the force is turned on,



In case of faults like yarn breakage in the upper or lower part, probe detection, cloth detection or out of oil, you may operate in low mode; when the whole machine is trouble-free, you may operate in high mode.




In case of a winding fault, there is a fault in the winding machine. You need to eliminate the corresponding fault. (Winding machine optional configuration)





10. Operation buttons: buttons include RUN button, JOG button and STOP button, and the functions of buttons are the same as those of machine buttons.



11. Press the Chinese switch button , you can switch to Chinese display.

12. Cloth loading indicator: cloth loading indicator switch button, which displays  when it is turned off and  when it is turned on.

13. Cloth discharge indicator: cloth discharge indicator switch button, which displays  when it is turned off, and  when it is turned on.

14. Fan button: it includes 3 modes, namely Stop, Manual and Automatic. When the button displays , the fan is in Stop mode; when the button displays , the fan is in manual mode, and it will run when the equipment starts. When the button displays , the fan is in Automatic mode. After the equipment runs for 3 bolts, the fan will automatically start, and when the machine stops, the fan will stop too.





15. Motor button: when the frequency changer is not powered on, press button , and the button will display  when the frequency changer is powered on; when the frequency changer is powered on, it will display . Long press  for 2 seconds when the frequency changer is powered on, and the frequency changer will be powered off.

16. Cleaning button: press the button , and the button will show that  cleaning function is on.



17. Force button: long press the button  for 2 seconds, and the button will display




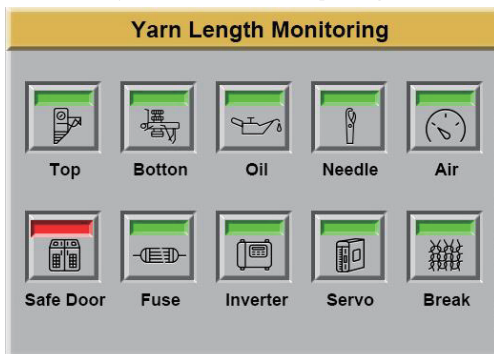
, the system force function is turned on. (After the force is turned on, in case of faults like yarn breakage in the upper or lower part, probe detection, cloth detection or out of oil, you may operate in low mode; when the whole machine is trouble-free, you may operate in high mode.)


18. Capacity zeroing button: the capacity zeroing button  needs to be used in conjunction with the cleaning button . When the cleaning function is turned on and in yellow , press the capacity zeroing button , and the system will zero the number of finished bolts.

19. Setting button: press button  to enter the system parameter menu.

20. Machine speed setting: the machine speed includes high mode, and the frequency required by corresponding functions can be set according to the up  and down  arrow buttons of the high mode. The frequency will be increased or decreased by 0.5HZ by each inching, and the maximum frequency can be set according to the system.

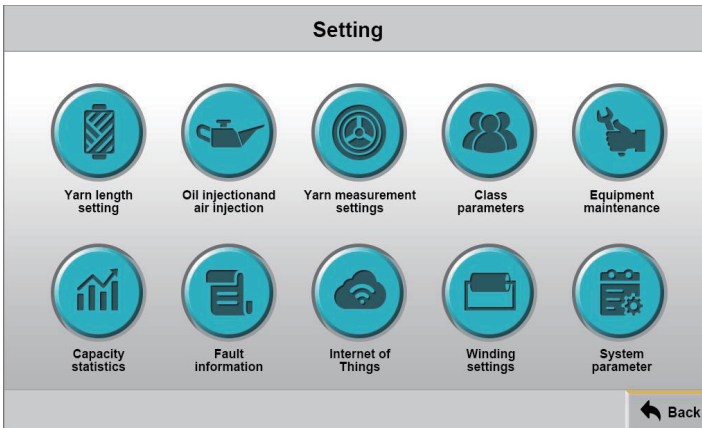
21. State indication button: press this button  to pop up the main input state window, click any position outside the window to exit the window. This window pops up automatically when the following fault occurs. This window displays the corresponding fault information. The green indicator indicates normal functioning, and the red indicator indicates faulty. Please check the corresponding fault.



22. Yarn length monitoring button: press this button  to pop up the yarn length monitoring window, click any position outside the window to exit the window. When the text stitching 1-5 is in black, it means that the corresponding stitching shaft is in a prohibited running state; when it is in blue, it means that the stitching function is turned on. The middle column is the yarn length value in mm, the set yarn value is displayed when the system stops. When the machine is running, actual monitored yarn length value is displayed. The right column is composition proportion in %. Click on each display frame to view the composition proportion details of each axis separately.

Status Indication		
	mm	%
L1	0.0	0.00
L2	0.0	0.00
L3	0.0	0.00
L4	0.0	0.00
L5	0.0	0.00

(II) Setting menu



1. Yarn length setting: press the yarn length setting button to enter the yarn length setting menu. (permission administrator, password 8888)
2. Oil injection and air injection: press the oil injection and air injection button to enter the oil injection and air injection setting menu.
3. Yarn measurement setting: press the yarn measurement setting button to enter the yarn measurement setting menu (permission administrator, password 8888)
4. Shift parameter: press the shift parameter button to enter the shift setting menu
5. Equipment maintenance: Press the equipment maintenance button to enter the maintenance menu. (Permission administrator, password 8888)
6. Capacity statistics: press the capacity statistics button to enter the statistical monitoring menu
7. Fault information: press the fault information button to enter the fault information viewing menu

8. Internet of Things: press the Internet of Things button to enter the monitoring settings menu. (permission administrator, password 8888)

9. Winding setting: press the winding setting button to enter the winding setting menu. (Permission administrator, password 8888)

10. System parameters: press the system parameters button to enter the system parameters setting menu. (Permission background, password VISOME)

Remarks: zeroing button (authority administrator) in the shift parameter menu, password 8888

(III) Yarn length setting menu

Fabric		Yarn Length Setting				Process	
Yarn Length Setting		Yarn Length Correction		Yarn Length Equivalent		Motor Setting	
Yarn 1	0.0 0.0G	0.0 mm	0	Stop			
Yarn 2	0.0 0.0G	0.0 mm	0	Stop			
Yarn 3	0.0 0.0G	0.0 mm	0	Stop			
Yarn 4	0.0 0.0G	0.0 mm	0	Stop			
Yarn 5	0.0 0.0G	0.0 mm	0	Stop			
Total Stitches 0.0 Stitches		Total Routes 0.0 Routes					
				Back			

1. Yarn length setting: set the yarn length value of the corresponding stitching shaft according to the actual yarn length required, and the yarn length is in MM (100 stitches). If it needs to be modified, you may contact the manufacturer for modification.

2. Yarn length correction: fine tune and correct the yarn length according to the actual measured yarn length. If the actual value is too long, change it to a negative number; if the actual value is too short, change it to a positive number. The change of value should depends on the actual condition. If the value is zero, this function cannot be used.

3. Yarn length equivalent: each yarn length corresponds to a yarn length equivalent. After you change the yarn length, you can wait for a few seconds to see if the yarn length equivalent has changed. If it changes with the yarn length, then the change of yarn length is effective.

4. Motor setting: press the corresponding button to select whether to operate the corresponding stitching shaft. When the corresponding stitching shaft is set to stop by the motor, the current stitching shaft will not run, but when it is displayed as green, it indicates that the current stitching shaft is running.

5. Total stitches: set the total stitches of the machine.

6. Total number of feeder: set the total number of feeder of the machine, used with composition proportion.

7. Composition proportion: press **Fabric** to display the fabric parameters setting menu. Each shaft supports 4 yarns of different materials. Click A, B, C and D to select and turn on. Each kind of yarn is divided into 5 kinds of materials, and select one material according to actual situation. Fill in the material specification, unit and number of feeder used, the system will automatically calculate the proportion of the material. If this function is not turned on, turn off A, B, C and D options of related shafts.

Fabric Parameters

ComponentFabric TypeSpecificationRoutesRadio

Yarn 1

A

Cotton

Polyester

T/C

Viscose

VCotton

40.00

S

D

90.0

0.00%

Yarn 2

B

Cotton

Polyester

T/C

Viscose

VCotton

0.00

S

D

0.0

0.00%

Yarn 3

C

Cotton

Polyester

T/C

Viscose

VCotton

0.00

S

D

0.0

0.00%

Yarn 4

D

Cotton

Polyester

T/C

Viscose

VCotton

0.00

S

D

0.0

0.00%

Yarn 5

Back

8. Process management button: press **Process** to display the process management menu. This menu can record, manage and publish relevant cloth production information. Add cloth by “add” button, and delete cloth by “delete” button. After the above two operations, click "Save" to save the change information. Write in the cloth and yarn length by directly selecting or searching cloth name and clicking “distribute”. You don’ t need to change it in the yarn length setting menu.

Process Management

0

Search

序号	配方名称	纱长1	纱长2	纱长3	纱长4	纱长5
0		0.0	0.0	0.0	0.0	0.0

Delete

Add


Save

Publish

Back

(IV) Oil injection and air injection setting

Oil Injection and Air Injection Setting			
	Number of Starting Turns	Number of Running Turns	Number of Stop Turns
Oil	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
Air 1	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
Air 2	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
Air 3	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R
Air 4	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="0"/> R

 Back

1	2	3	
Starting	Running	Stop	Remarks
A=0	B=0	C=0	Fuel injection or air injection does not work
	B>0		When the equipment is running, the fuel injection or jet start-up always works
	B=0	C>0	Fuel injection or air injection does not work
	B>0		When the equipment is running, fuel injection or air injection starts to start. After B circle, stop C circle and then start again
A>0	B=0	C=0	No fuel injection or jet operation
	B>0		After the equipment runs for a circle, the fuel injection or jet start-up always works
	B=0	C>0	Fuel injection or air injection does not work
	B>0		After the equipment runs for a circle, the fuel injection or air injection starts to start. After B circle, stop C circle and then start again

(V) Setting of measuring wheel



Measuring Wheel Setting					
	Measuring Wheel Diameter	Monitored Yarn Length Correction	Yarn Length Error Setting	Yarn Length Monitoring Setting	Alarm
Yarn 1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input checked="" type="checkbox"/> On
Yarn 4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="checkbox"/> Off
Yarn 5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/> mm	± <input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="checkbox"/> Off

[← Back](#)

1. measuring wheel diameter: set the measuring wheel diameter of each stitching shaft, in mm. Note: This parameter shall not be modified without authorization, and must be modified by dedicated professionals.

2. Monitor the yarn length correction: fine tune and correct the yarn length according to the actual monitored yarn length. If the actual value is too long, change it to a negative number; if the actual value is too short, change it to a positive number. The change of value should depends on the actual condition. If the value is zero, this function cannot be used.

3. Yarn length monitoring setting: set the monitoring yarn length unit of each stitching shaft, in stitches. For example, 100 stitches means the monitoring yarn length is in 100 stitches. Note: This parameter shall not be modified without authorization, and must be modified by dedicated professionals.

4. Alarm setting: set whether to alarm and shut down when the monitored yarn length of each stitching is greater than the Set Tolerance Value of the set yarn length error when compared with the set yarn length. When  is displayed, no alarm is triggered, and when  is displayed, the alarm shutdown function is started

(VI) Shift parameter menu:

Yarn Length Setting			
Class Selection	Capacity	Employee Number	Capacity Zeroing
A	0	a1	Class A Zeroing
B	0	0	Class B Zeroing
C	0	0	Class C Zeroing
D	0	0	Class D Zeroing

Zero All Capacities
 Back

1. Shift selection: to monitor a group of parameters on the main screen, select the shift button. After selection, the shift button will be green.
2. Capacity: displays the total capacity of each shift
3. Employee number: set the employee number of each shift
4. Capacity zeroing: press the capacity zeroing button of the corresponding shift, and then the menu of permission login (administrator) will pop up. After the permission log-in, the zeroing menu will be displayed. Press the zeroing button to zero the capacity of the corresponding shift. As shown in the figure below

Yarn Length Setting			
Class Selection	Capacity	Employee Number	Capacity Zeroing
A	<div>Are Class A data cleared?</div> <div> </div>		Class A Zeroing
B			Class B Zeroing
C			Class C Zeroing
D			Class D Zeroing


Zero All Capacities
 Back

5. All-capacity-zeroing button: refer to the description of capacity zeroing.

The Internet of Things function can only be used after an Internet of Things module is added. The Internet of Things can monitor the production state and capacity of equipment in real time, and can remotely set the yarn length and set the working mode of the stitching shaft.

(X) System parameters

System Parameter			
Feeding Wheel Diameter	Number of Feeding Wheel Teeth	Number of Servo Teeth	
Yarn 1	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
Yarn 2	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
Yarn 3	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
Yarn 4	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
Yarn 5	<input type="text" value="0.0"/> mm	<input type="text" value="0.0"/>	<input type="text" value="0.0"/>
Transmission Ratio	<input type="text" value="0.0"/> i	Maximum Frequency of Frequency Converter	<input type="text" value="0.0"/> HZ
Low Mode Frequency	<input type="text" value="0.0"/> HZ	Machine Number	<input type="text" value="11"/>

 Back

1. Stitching wheel diameter: set the diameter of stitching wheel of corresponding shaft. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
2. Number of stitching teeth: set the number of pulley teeth of the corresponding shaft storage device. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
3. Number of servo teeth: set the number of teeth of the corresponding shaft servo synchronous wheel. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
4. Transmission ratio: set the system stitching transmission ratio. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
5. Low mode frequency: set the low mode frequency of the system
6. Maximum frequency of frequency changer: set the maximum frequency of system frequency changer. Note: This parameter shall not be modified without authorization, and must be set by professionals of the manufacturer.
7. Enter machine serial number: change the machine number serial number of this equipment.

(XI) Winding setting menu

pressure roller
Winding Settings
PID

Current Tension kg

Set Tension - + kg

Traction Speed - + mm/r

Guiding Speed - + mm/r

Traction Off

Guide Off

Winding Off

Back

1. Current tension: displays the current tension in kg.
2. Set tension: set the tension required by the process in kg. If the gray cloth is wound too tight, decrease the value; if the gray cloth is wound too loose, increase the value.
3. Traction speed: set the traction speed of the upper part. The greater the value, the tighter the pull.
4. Cloth guide speed: set the cloth guide speed of the middle part, which is the percentage of the traction speed. If the traction speed is 50 and the cloth guide speed is 0.8, the cloth guide speed of the middle part is $50 * 0.8 = 40$.
5. Traction, cloth guide and winding button: On indicates turn on the motor, Off indicates turn off the motor. Select turn on or turn off according to actual needs.
6. Winding press roll: it can set the moving speed of winding press roll and other parameters, as well as manual operation.

Winding pressure roller

Automatic speed

mm/s

Forward jog

Manual speed

mm/s

Reverse jog

Return speed

mm/s

Return original

Lead screw

mm

Back

(XII) Maintenance menu

Maintain

Winding 10

<input type="checkbox"/> yarn 1 (D48)	<input type="checkbox"/> servo 3 (D57)	<input type="button" value="off"/>	<input type="checkbox"/> fan (D2)	<input type="button" value="off"/>	<input type="checkbox"/> botton (D43)
<input type="checkbox"/> yarn 2 (D35)	<input type="checkbox"/> servo 4 (D59)	<input type="button" value="off"/>	<input type="checkbox"/> up lamp (D6)	<input type="button" value="off"/>	<input type="checkbox"/> red (D56)
<input type="checkbox"/> yarn 3 (D39)	<input type="checkbox"/> servo 5 (D63)	<input type="button" value="off"/>	<input type="checkbox"/> down lamp (D9)	<input type="button" value="off"/>	<input type="checkbox"/> yellow (D58)
<input type="checkbox"/> yarn 4 (D44)	<input type="checkbox"/> save (D16)	<input type="button" value="off"/>	<input type="checkbox"/> oil (D10)	<input type="button" value="off"/>	<input type="checkbox"/> green (D60)
<input type="checkbox"/> yarn 5 (D36)	<input type="checkbox"/> fuse (D30)	<input type="button" value="off"/>	<input type="checkbox"/> cut (D11)	<input type="button" value="off"/>	<input type="checkbox"/> door air (D62)
<input type="checkbox"/> count (D19)	<input type="checkbox"/> needle (D51)	<input type="button" value="off"/>	<input type="checkbox"/> inverter (D12)	<input type="button" value="off"/>	<input type="checkbox"/> center air (D64)
<input type="checkbox"/> safe door (D21)	<input type="checkbox"/> break (D52)	<input type="button" value="off"/>	<input type="checkbox"/> middle air (D13)	<input type="button" value="off"/>	<input type="checkbox"/> run (D32)
<input type="checkbox"/> start (D15)	<input type="checkbox"/> oil (D53)	<input type="button" value="off"/>	<input type="checkbox"/> oil air (D14)	<input type="button" value="off"/>	<input type="checkbox"/> spare air (D33)
<input type="checkbox"/> stop (D17)	<input type="checkbox"/> top (D45)	<input type="button" value="off"/>	<input type="checkbox"/> top (D40)	<input type="button" value="off"/>	<input type="checkbox"/> spare (D34)
<input type="checkbox"/> jog (D23)	<input type="checkbox"/> needle_L (D47)	<input type="button" value="off"/>	<input type="checkbox"/> needle_L (41)	<input type="button" value="off"/>	<input type="checkbox"/> spare
<input type="checkbox"/> inverter (D31)	<input type="checkbox"/> botton (D49)	<input type="button" value="off"/>			
<input type="checkbox"/> servo 1 (D61)	<input type="checkbox"/> air (D54)	<input type="button" value="off"/>			
<input type="checkbox"/> servo 2 (D55)	<input type="checkbox"/> spare	<input type="button" value="off"/>			

PIC ver: 0 0 0

Bottom ver: 0 0 0

HMI ver: 0 0 0

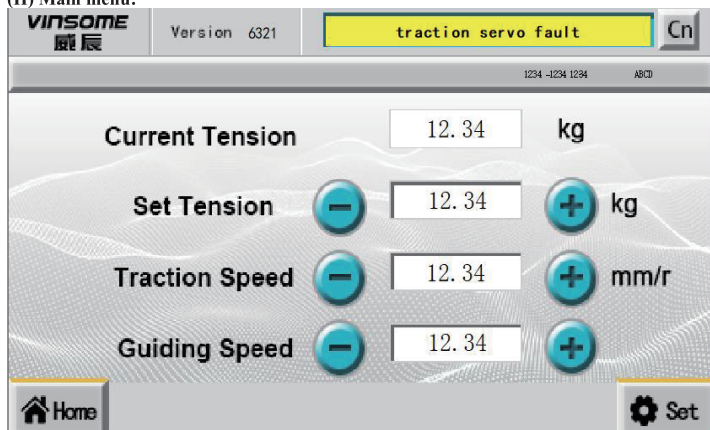
Entering this menu will automatically shut down. This menu contains all input and output status monitoring, and all output inching test operations. You can also view the version number of the device through this menu.

Part Three: Instructions on VAWS servo automatic winding system

(I) Background description of servo automatic winding system:

Traditional winding uses a gearbox to adjust the transmission ratio, which is tedious and depends on experience. The effect on ordinary cloth with low requirements is acceptable, but when winding high-end cloth, there are a series of drawbacks such as water ripple and large gram weight. Aiming at the above industry pain points, our company launched the electronic automatic winding system. Compared with the traditional mechanical cloth rack, the electronic cloth rack has several advantages. This system uses visual digital adjustment which customers can adjust winding parameters according to the actual condition of the cloth surface. The adjustment is convenient and fast, and the system responds quickly and stably, which can improve the water ripple and different gram weights.

(II) Main menu:



1. Current tension: displays the current tension in kg.
2. Set tension: set the tension required by the process in kg. If the gray cloth is wound too tight, decrease the value; if the gray cloth is wound too loose, increase the value.
3. Traction speed: set the traction speed of the upper part. The greater the value, the tighter the pull.
4. Cloth guide proportion: set the cloth guide speed of the middle part, which is the percentage of the traction speed. If the traction speed is 50 and the cloth guide speed is 0.8, the cloth guide speed of the middle part is $50 * 0.8 = 40$.
5. Fault prompt box: when the machine fails, a prompt box will automatically pop up. The prompt box includes the following fault information (upper section of cloth rack) traction servo fault, (middle section of cloth rack) cloth guide servo fault, (lower section of cloth rack) winding servo fault, winding cloth rack emergency stop is pressed, the gray cloth is wound too tight, the gray cloth is wound too loose, left limit of the winding press roll, the right limit

of the winding press roll, cutting cloth fails, the left bolt is not plugged tightly, and the right bolt is not plugged tightly.

(Upper section of cloth rack) traction servo fault: the upper section traction motor fails, it requires troubleshooting and resetting before starting.

(Middle section of cloth rack) cloth guide servo fault: the middle section cloth guide motor fails, it requires troubleshooting and resetting before starting.

(Lower section of cloth rack) winding servo fault: the lower section winding motor fails, it requires troubleshooting and reset before starting.

Winding cloth rack emergency stop is pressed: when the emergency stop button of the winding machine is pressed, it is required to reset the emergency stop before starting.

The gray cloth is wound too tight: when the upper tension limit is turned on, if the current tension is greater than the upper tension limit, this fault will occur. You need to check the mechanical structure or reset the appropriate upper limit before starting.

The gray cloth is wound too loose: when the lower tension limit is turned on, if the current tension is less than the lower tension limit, this fault will occur. You need to check the mechanical structure or reset the appropriate lower limit before starting.

Left limit of winding press roll: when the winding press roll reaches the left limit, check whether the limit switch is normal, and manually move the winding press roll to a suitable position before starting.

Right limit of winding press roll: when the winding press roll reaches the right limit, check whether the limit switch is normal, and manually move the winding press roll to a suitable position before starting.

Cutting cloth fails: if the cloth-cutting knife fails to cut cloth, this fault will occur. You should check and adjust the position of the cloth-cutting knife, and troubleshoot before starting.

The left bolt is not plugged: if the bolt on the left side of the winding axis is not plugged tightly or is not plugged, this fault will be reported. A reset is completed when the electric eye lights up after the bolt is plugged tight.

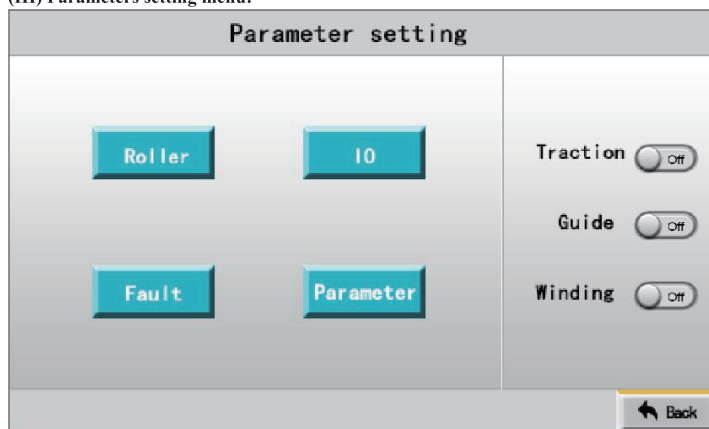
The right bolt is not plugged: if the bolt on the left side of the winding axis is not plugged tightly or is not plugged, this fault will be reported. A reset is completed when the electric eye lights up after the bolt is plugged tight.




6. Home page: click this button to return to the home page menu where you can switch between Chinese and English.

7. Setting: click this button to open the setting menu. You need administrator authority to enter this menu, and the password is 8888.

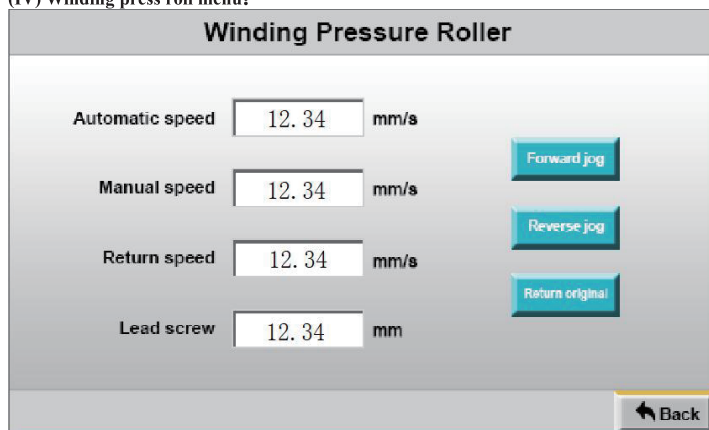
8. Bottom monitoring menu: click the upper right corner's hidden menu, and enter the administrator authority, password 8888, to enter the bottom monitoring menu. This menu can view the communication state and servo motor running state, and long press the "Factory Reset" button for 2S to restore the factory value. If the tension or the speed of the principal axis fluctuates greatly, you can adjust the fluctuation allowance of the tension and principal axis speed, and a default value is set generally.

(III) Parameters setting menu:



1. Winding press roll: open the winding press roll setting menu.
2. Fault information menu: open the fault information menu.
3. IO monitoring: open the IO monitoring menu.
4. Cloth rack parameters: open the cloth rack parameters setting menu. (Permission background, password VISOME)
5. Turn on and turn off the motor:  indicates to turn off the motor,  indicates to turn on the motor, under normal circumstances, a default  indicates turning on.

(IV) Winding press roll menu:



1. The automatic running speed setting of the winding press roll, in mm/s.
2. The manual running speed setting of the winding press roll, in mm/s.
3. The return to the original running speed setting of the winding press roll, in mm/s.

4. Lead setting of the lead screw. Set according to the actual lead, in mm.
5. Positive inching: the winding press roll is inching in the positive direction.
6. Reverse inching: the winding press roll is inching in the reverse direction.
7. Return to the origin: The winding press roll returns to its original position. If the rolling diameter of the winding exceeds the origin, the winding press roll will stop within the range of electric eye induction. When the left and right bolts are pulled out and plugged in again, the winding press roll will automatically return to the origin one time.

(V) Fault information menu:

Alarm Information		
Date	Time	Description
		<div>Page Up</div> <div>Refresh</div> <div>Page Down</div> <div>Back</div>

1. Fault information menu: display the fault information records
2. Previous page button: look through the fault information record on the previous page
3. Refresh button: refresh the fault information
4. Next page button: look through the fault information record on the next page

(VI) IO monitoring menu:

Winding IO monitoring		
<input type="checkbox"/> Emergency	<input type="checkbox"/> Pressure roller origin	<input type="checkbox"/> Traction run
<input type="checkbox"/> Forward jog	<input type="checkbox"/> Pressure roller left	<input type="checkbox"/> Guide run
<input type="checkbox"/> Reverse jog	<input type="checkbox"/> Pressure roller right	<input type="checkbox"/> Winding reverse
<input type="checkbox"/> Traction alarm	<input type="checkbox"/> Layout failure	<input type="checkbox"/> Press roller
<input type="checkbox"/> Guide alarm	<input type="checkbox"/> Left tip in place	<input type="checkbox"/> Press roller reverse
<input type="checkbox"/> Winding alarm	<input type="checkbox"/> Right tip in place	<input type="checkbox"/> Slitting knife
<input type="checkbox"/> Traction jog	<input type="checkbox"/> Press roller in place	<input type="checkbox"/> Operation permission
		Back

This menu contains all input and output status monitoring. When maintaining the equipment, you can open this menu to see if all input and output are normal.

(VII) Cloth rack parameters menu:

PID Parameters			
Encoder Resolution	<input type="text" value="12"/>	Sampling Time	<input type="text" value="12"/> ms
Encoder Ratio	<input type="text" value="12.34"/>	Current Tension	<input type="text" value="12.34"/> kg
Traction Ratio	<input type="text" value="12.34"/>	Proportion	<input type="text" value="12"/> %
Guide Ratio	<input type="text" value="12.34"/>	Integration	<input type="text" value="12"/> 100ms
Traction Diameter	<input type="text" value="12.34"/> mm	Differential	<input type="text" value="12"/> 10ms
Guide Diameter	<input type="text" value="12.34"/>	Operation Range	<input type="text" value="12"/>
		Tension Range	<input type="text" value="12.34"/> kg
		Tension max	<input type="text" value="12.34"/> kg
			<input type="button" value="Off"/>
		Tension min	<input type="text" value="12.34"/> kg
			<input type="button" value="Off"/>
			<input type="button" value="Back"/>

1. Encoder resolution: enter the corresponding resolution according to the encoder nameplate.
2. Encoder reduction ratio: the reduction ratio of the encoder to the great circle.
3. Traction motor reduction ratio: the reduction ratio of the upper section of the motor connected to the reducer
4. Cloth guide motor reduction ratio: the reduction ratio of the middle section of the motor connected to the reducer
5. Traction roll diameter: the rubber roll diameter connected to the upper section motor output axis.
6. Cloth guide roll diameter: the rubber roll diameter connected to the middle section motor output axis.
7. System gain adjustment parameters: including the sampling time, proportional gain, integral time, derivative time, operation range, and control dead-time. If it needs to be modified, you may contact the technical personnel of the manufacturer for modification.
8. The current state of the winding press roll displays: including the current tension, winding speed, and load rate, etc. do not require setting.
9. Tension range: set according to the range of the external tension sensor.
10. Upper tension limit: set the maximum tension value, when the actual tension is greater than the set value for some time, the alarm will sound and the machine stops. indicates that this function is turned off, while indicates that this function is turned on.
11. Lower tension limit: set the minimum tension value, when the actual tension is lower than the set value for some time, the alarm will sound and the machine stops. Indicates that this function is turned off, while indicates that this function is turned on.

Control circuit diagram:

