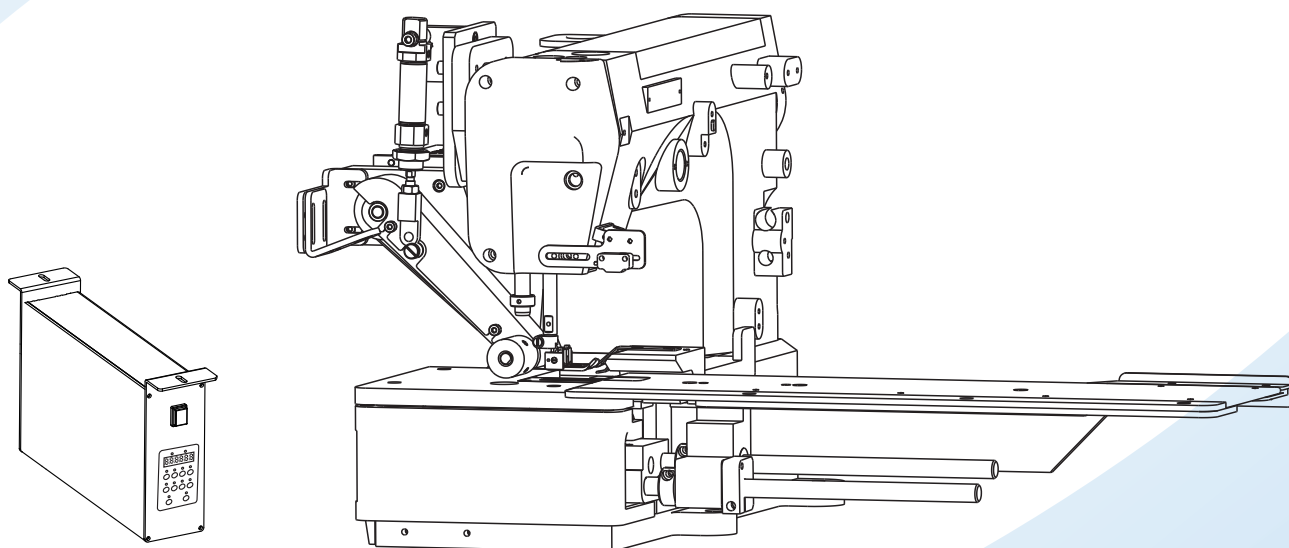


MANUAL 用户手册



MODEL & DEVICES

GMD2S+PB+EC+SAF

自动折袖口、下摆(开放式)装置

Sleeve Hem(Automatic folding cuff / hem sewing device)

GRAND AUTOMATIC SEWING PRODUCTS SERIES

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1、Product introduction

产品介绍

一、产品用途：

Product use:

适用于T恤、袖口、单片式缝布下摆边缝制。

It is suitable for sewing T-shirt, cuff and single seam sewing.

二、产品特点：

Product features:

- 1) 采用伺服电机和电眼感应控制系统，自动感应吹气辅助下摆折边，缝制及停车，自动剪线、开机保护等功能、质量稳定可靠，安装简便，节能高效，工作效率倍增。

Using the servo motor and the electric eye induction control system, automatic induction blowing auxiliary hem, sewing and parking, automatic cutting, open protection and other functions, stable and reliable quality, easy installation, energy saving and high efficiency, working efficiency multiplied.

- 2) 适用于各厂家绷缝机配套使用。

Can be applied to any kind of Zig-zag stitch machine, flat lock machine and over lock machine etc.

- 3) 主要部件 Main components:

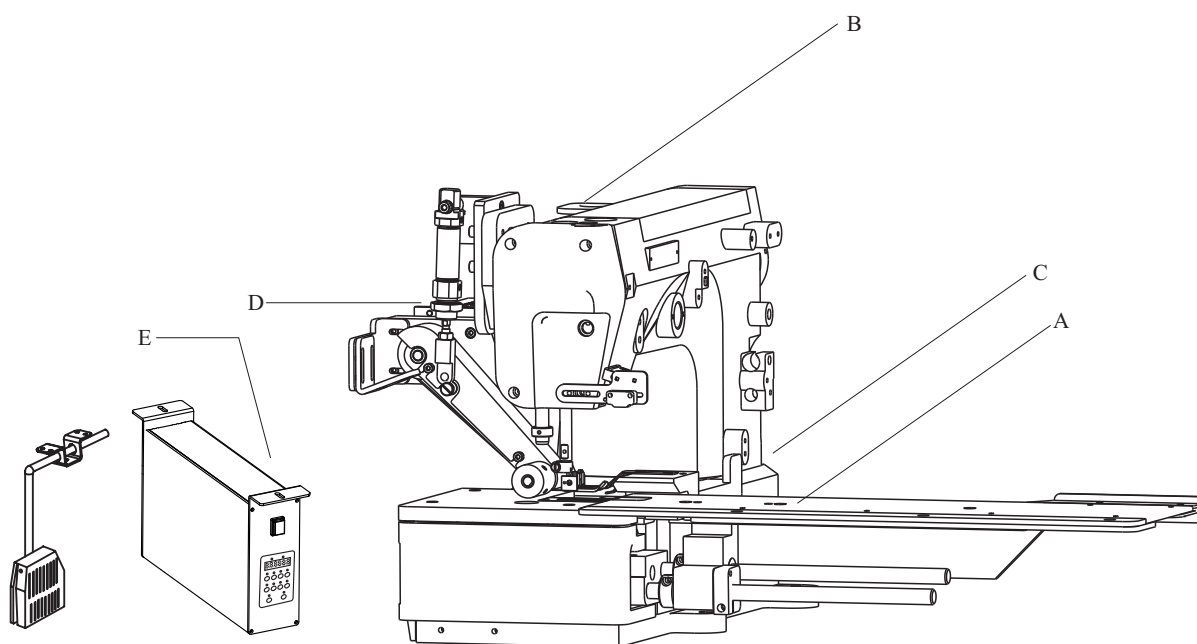
A.折边送料装置 Flanged feeding device

B.自动剪线装置(附抬压脚) Automatic wire cutting device (pressure foot)

C.伺服直驱马达 Servo direct drive motor

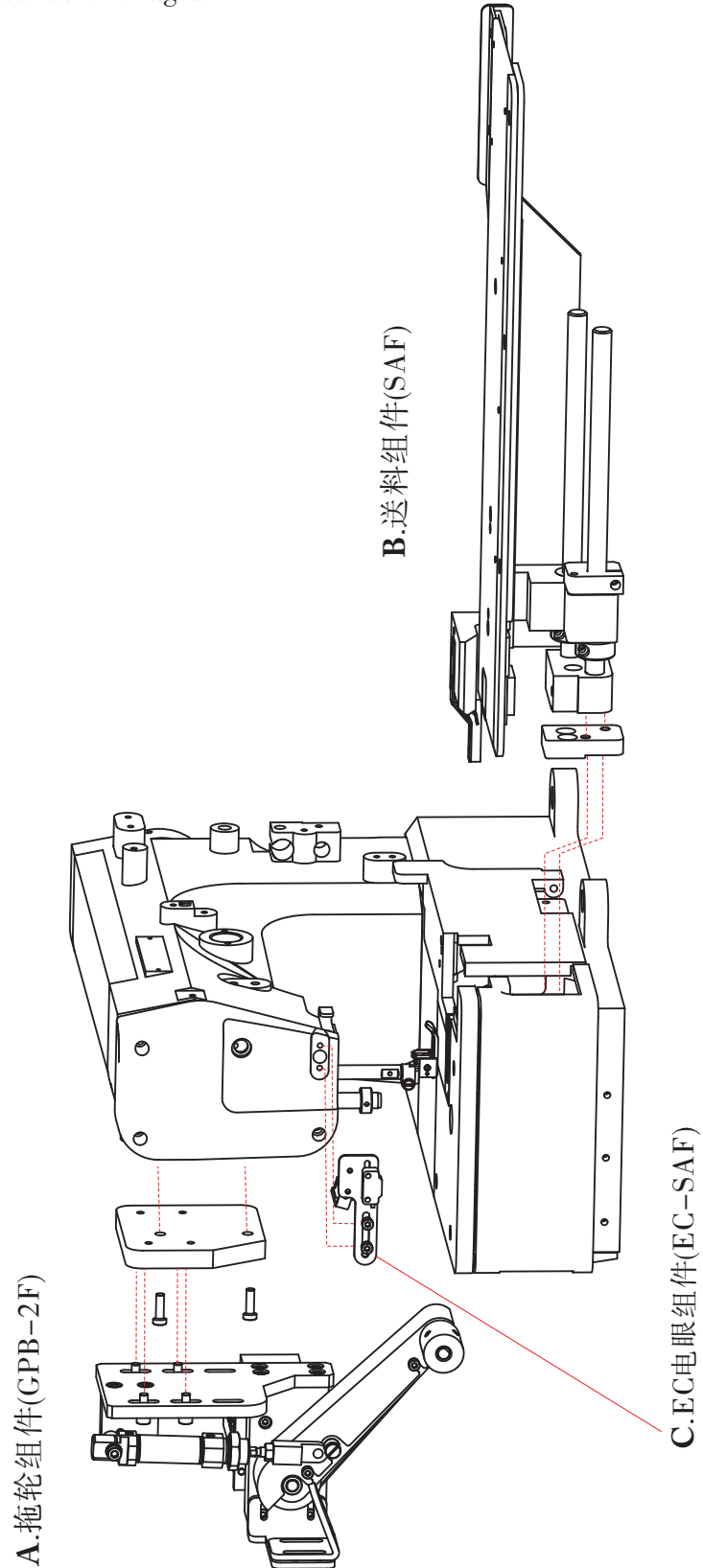
D.拖轮装置 Puller attachment

E.控制盒及脚踏开关 Control box and Electric knee switch



2、Components and installation instructions 组件及安装说明

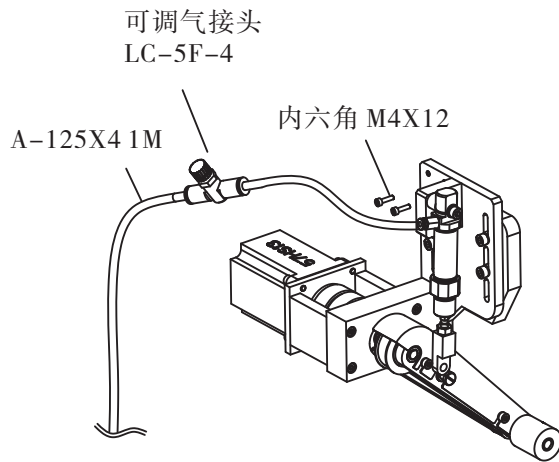
快速安装图 Fast installation diagram



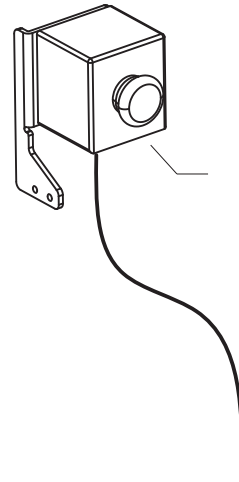
2、Components and installation instructions

组件及安装说明

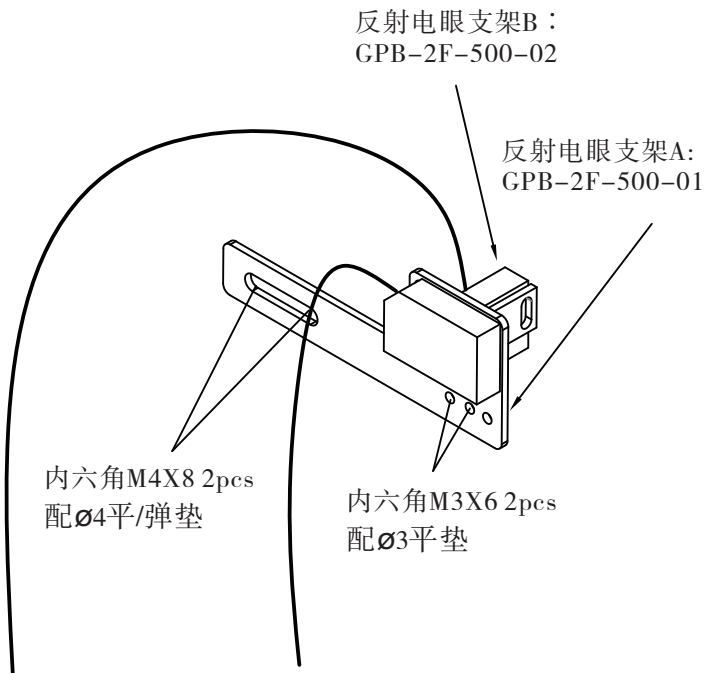
1.拖轮组件 Puller Assembly (GPB-2F-W500)



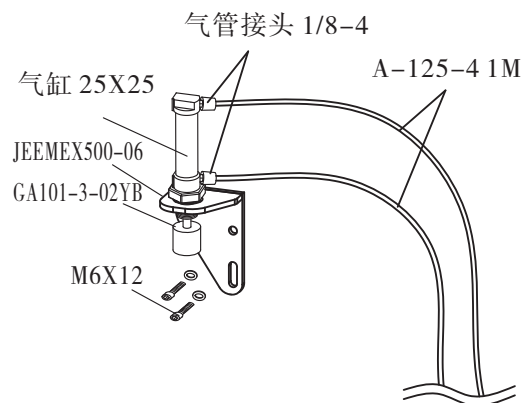
2.急停开关组件 TB38-11ZS Quick stop switch Assembly



3.EC电眼组件 Electric eye Assembly (EC-SAF-W500)



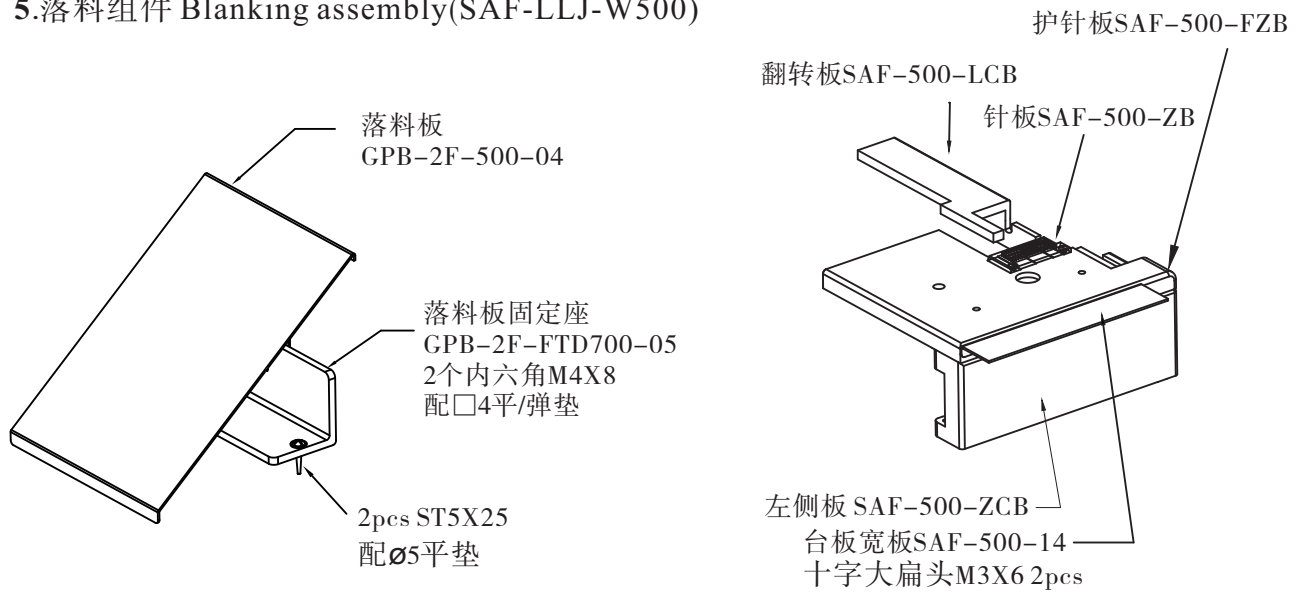
4.起压脚组件 Presser foot assembly (AP-25-25-W500)



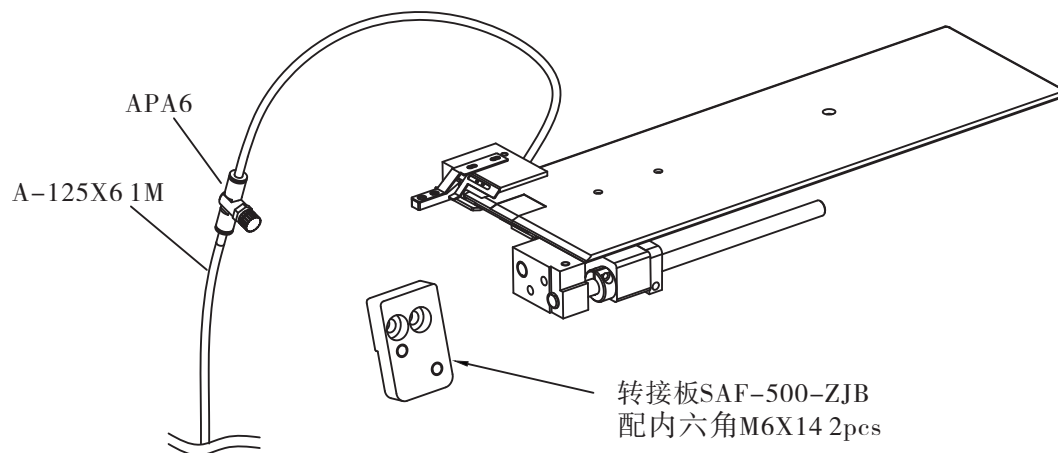
2、Components and installation instructions

组件及安装说明

5.落料组件 Blanking assembly(SAF-LLJ-W500)



6.送料组件 Feed assembly(SAF-W500)

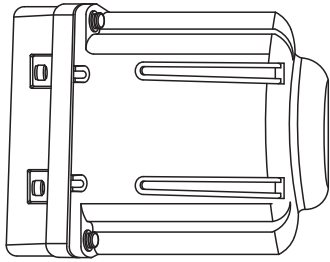


2、Components and installation instructions

组件及安装说明

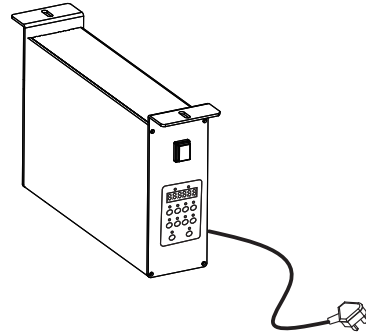
7. 伺服电机 (GMD2S-W500)

Servo motor



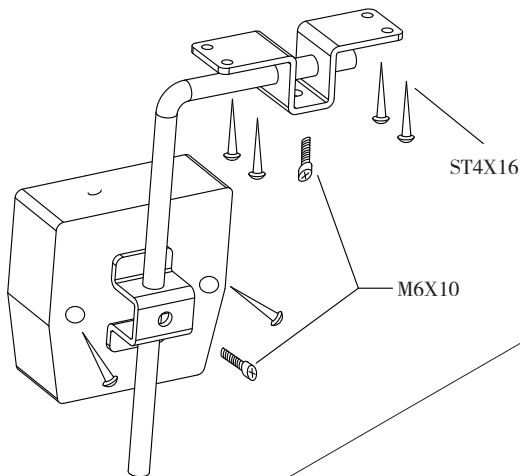
8. 电控组件 (GMD2S-PB-SAF)

Electronic control Blanking assembly



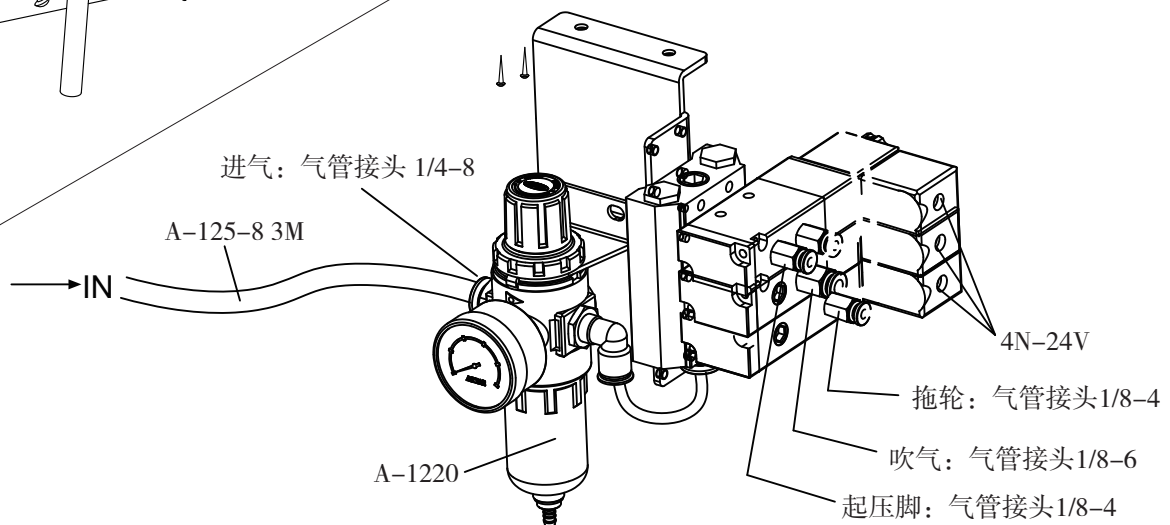
9. 脚靠开关(KS-01)

Electric knee switch



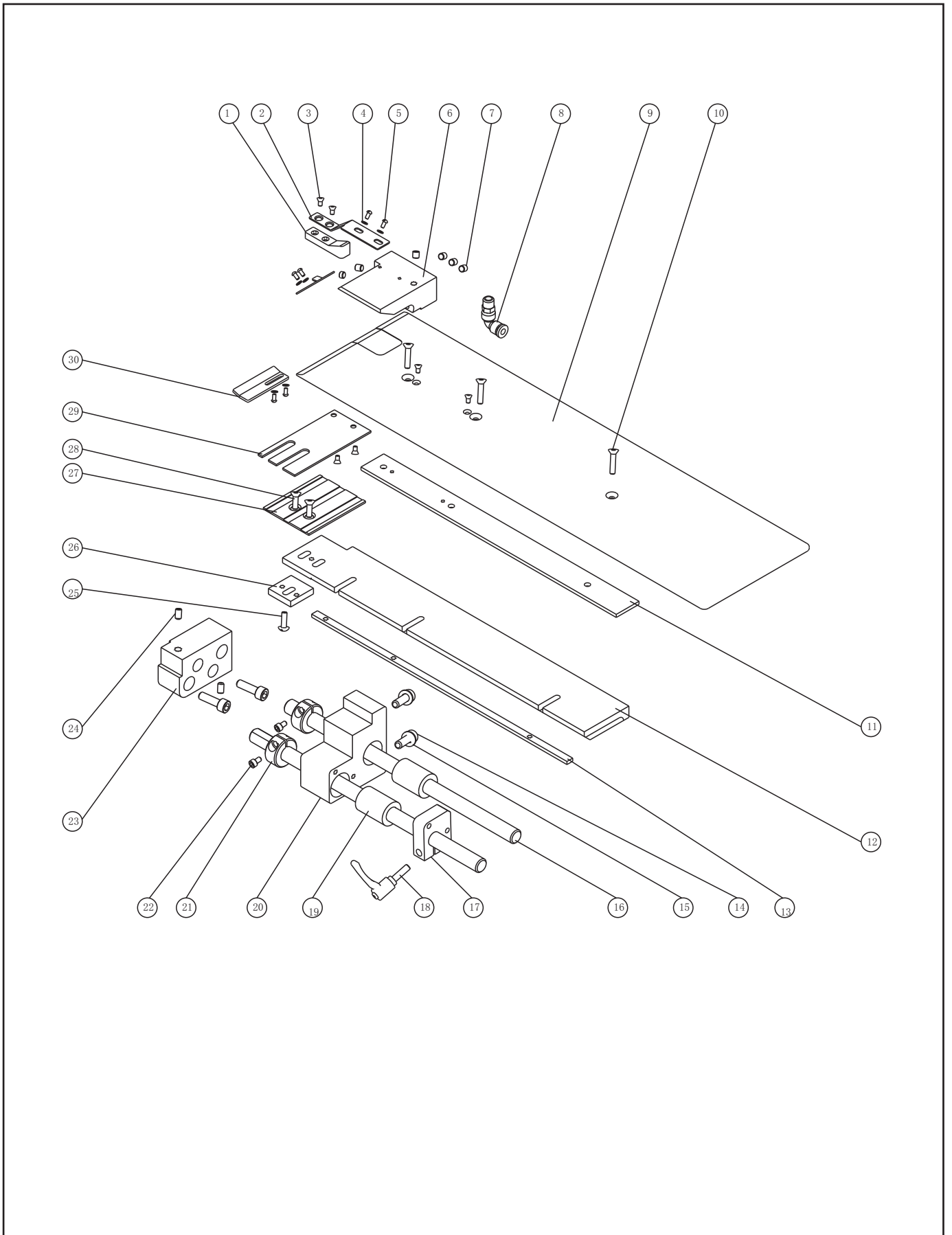
10. 电磁阀\调压阀组件(A-1220-S3)

Solenoid valve\Pressure regulating valve assembly



3、SAF Automatic cuff device assembly diagram And list (SAF-00-V1)

SAF袖口自动装置组装图及清单



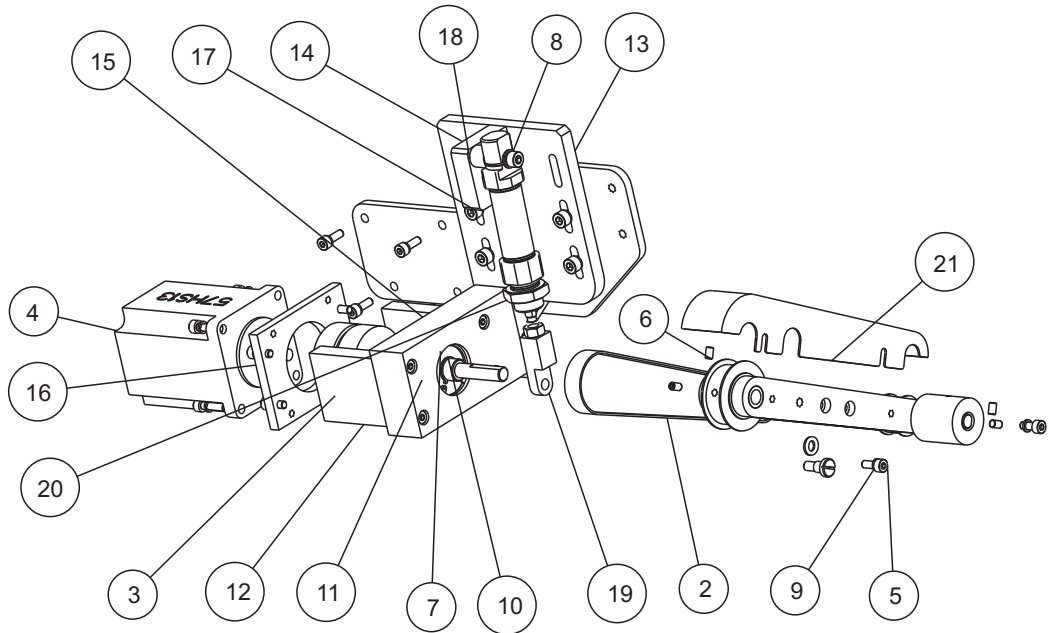
3、SAF Automatic cuff device assembly diagram And list (SAF-00-V1)

SAF袖口自动装置组装图及清单

序号	型 号	名 称		数量	备 注
Ref.No	Part No	Description		Qty	RemarkS
1	XK-11	限位块	Limit block	1	
2	XK-14	限位弹片	Limit shrapnel	1	
3	M3X6	内六角沉头螺钉	Screw	6	
4	Φ6XΦ2.5X0.5	平垫	Flat cushion	6	
5	M2.5X5	十字槽盘头螺钉	Screw	6	
6	XK-05-V1	气流导向件	Airflow guide	1	
7	M5X5	内六角平端紧定螺钉	Screw	5	
8	1/8	直角气管接头	trachea joint	1	
9	XK-04	工作平板	Work plate	1	
10	M4X20	内六角圆柱头螺钉	Screw	3	
11	XK-01	下垫板	Lower cushion plate	1	
12	XK-16	角铝滑架	aluminum sliding frame	1	
13	XK-13	底扣板	Bottom buckle	1	
14	M6X20	内六角圆柱头螺钉	Screw	4	
15	Φ12XΦ0.6X1.2	平垫	Flat cushion	2	
16	XK-06-V1	滑轨A	Slideway A	2	
17	XK-15-02-V1	夹紧块	Clamping block	1	
18	M6X20	固定把手	Fixed handle	1	
19	Φ21xΦ12x30	直线轴承	Linear bearing	2	
20	XK-15-01	滑块	slider	1	
21	XK-17	限位柱	Limit column	2	
22	M4X6	内六角圆柱头螺钉	Screw	2	
23	XK-12	安装块	Installation block	1	
24	M6X10	内六角平端紧定螺钉	Screw	2	
25	M4X12	内六角沉头螺钉	Screw	1	
26	XK-10	下紧块	Lower tight block	1	
27	XK-03-V1	小滑板	Small skateboard	1	
28	M4X14	内六角沉头螺钉	Screw	2	
29	XK-02	活动插板	Movable intercalation plate	1	
30	XK-07	反光导料板	Reflective guide plate	1	

4、Puller Assembly drawings And list(GPB-2F)

拖轮组件组件图及清单



序号	型号	名称		数量	备注
Ref.No	Part No	Description		Qty	RemarkS
1					
2	138XL	同步带	Synchro belt	1	
3	LK5-C35-6.35*10	联轴器	coupling	1	
4	M4X10	内六角圆柱头螺钉	Screw	1	
5	M4X12	内六角圆柱头螺钉	Screw	31	
6	M4X8	内六角平端紧定螺钉	Screw	4	
7	Φ28	孔用卡簧	Hole spring	1	
8	Φ5	平垫圈	Flat washer	1	
9	Φ4	弹簧垫圈	Spring washer	15	
10	Φ12	轴用卡簧	Axle spring	1	
11	YMT-CC2700-04	中心轴	Center axis	1	
12	YMT-CC2700-02	安装侧板	side guards	2	
13	GPB-2F-07V1	安装板	Mounting plate	1	
14	YMT-CC2700-09	气缸安装板	Cylinder mounting plate	1	
15	YMT-CC2700-03	法兰座	Flange seat	1	
16	YMT-CC2700-01	电机安装板	Motor mounting plate	1	
17	GPB-2F-03-V1	VF2500-156M安装底座	Mounting base	1	
18	GPB-2F-08	气缸垫套	Cylinder liner	1	
19	YMT-CC2700-10	气缸接头	Cylinder connector	1	
20	MA	16X10-S	16X10-S	1	
21	GPB-2F-10	同步带防护罩	Synchro belt shield	1	

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

自动折开放式袖口标记（数码管显示Cd000）

- 1、后电眼和脚踏开关可分别控制电机起动，停机（延迟时间可设，参数参考：F0165）
- 2、前电眼控制吹风（长吸）
- 3、安全开关按下时，等同有故障发生，拖轮抬起，参数参考：F0312/F0313/F0314
- 4、拉轮控制有效，可以自动控制拉轮压线还是压布（针数延迟）
- 5、上电时，后电眼没有接或者损坏或者有东西挡住时，报E_15故障。

(1) 参数表进入步骤

- 1)按一下"P"
- 2)移位 ⊗
- 3)++ ⊕ ⊖
- 4)按一下"OK"
- 5)移位 ⊗
- 6)++ ⊕ ⊖
- 7)按一下"OK"
- 8)按两下"P"退出（即完成）

(2) 指示灯说明

开机正常以下指示灯亮

剪线

用户参数设定键

(3) 功能灯说明

手动按下指示灯亮

起压脚 ⊕

慢起动 ⊕

停针位 ⊕

说明：

一：驱动器型号为SH-20403，

(1) 分频设为2分频（即SW1为ON,SW2为OFF,SW3为OFF）

(2) 脉冲设为单脉冲（即SW4为OFF）

(3) 电流设为2.7A（即SW5为OFF,SW6为OFF,SW7为ON）

二：步进电机型号为57HS13"

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

Automatic folding cuff mark (digital tube display c d000)

- 1、 back sensor and electric knee switch can control the start or stop of motor
- 2、 front sensor control the air jet
- 3、 protect switch working=some faulty situation come, puller lift, parameter:F0312/F0313/F0314
- 4、 puller action controls
- 5、 E_15 comes when back sensor was covered or broken

(1) Parameter table entry step

- 1)press "P"
- 2)adjust ⊗
- 3)+ - ⤴ ⤵
- 4)press "OK"
- 5)adjust ⊗
- 6)+ - ⤴ ⤵
- 7)press "OK"
- 8)click twice P to quit (which means finish)

(2) Indicator light

- 1)cut
- 2)parameter setting
- 3)User parameter setting key

(3) Functional light description

press button and light on

- 1)foot lifter ⤵
- 2)slow start ⤴
- 3)Stop needle position ⤵

Description:

1: the driver type is SH-20403,

(1) the frequency divider is set to 2 frequency division
(i.e. SW1 is ON, SW2 is OFF, SW3 is OFF).

(2) the pulse is set to a single pulse (that is, SW4 is OFF)

(3) the current is set to 2.7A (i.e. SW5 is OFF, SW6 is OFF, SW7 is ON).

2: the stepper motor model is 57HS13

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

序号	功能参数	默认值	设定范围	单位	参数说明	备注
CF00.17	慢启动针数(全有效)	3	0-1000	0-1000	以慢启动速度缝纫的针数	
CF00.18	慢启动速度(全有效)	500	200-4000	RPM	慢启动缝纫时的速度	
CF00.25	启动找上针位	0			1:有效 0:无效	
CF00.40	自动剪刀工作时间	100	10-500	ms	机器自动剪线的工作时间	
CF01.00	控制模式	2	0-2		0:手动(电眼关闭) 1:半自动 2:全自动	
CF01.10	慢启动开关	0	0-1		0:慢启动无效 1:慢启动有效	
CF01.16	拉轮模式	1	0-2		0:拉轮无动作 1:半轮模式 2:正常工作模式	
CF01.18	最高转速	4000	1000-7000			
CF01.29	电机停机延时	10	1-5000		电眼无效后, 延长多长时间电机停止运行	
CF01.39	拾压脚延迟启动时间	10	1-2000		有布挡住的时候, 多长时间拾压脚才动作	
CF01.40	拾压脚抬起保留时间	200	10-2000		拾压脚抬起时的工作时间	
CF01.43	拾压脚与电机 保护时间	20	1-800		拾压脚放下后, 多长时间电机才可以允许运行	
CF01.46	安全开关选择 (全有效)	1	0-2		0:关闭安全开关 1:低电平有效 2:高电平有效	
CF01.48	剪线电眼灵敏度	20	10-250		根据实际机械按装要求设置该参数, 如果设置不合理会导致误动作, 强度可以通过D0.10查看	无此配置,无效
CF01.58	拉轮动作角度	0	0-2045		半轮模式时有效	(1)当AF01.58=0, AF01.59=0时 或当AF01.58=2045, AF01.59=0时 或当AF01.58=2045, AF01.59=2045时, 拖轮0-360度都工作 (2)当AF01.58=600, AF01.59=1800时 拖轮上针位0-180度都 工作 (3)当AF01.58=0, AF01.59=2045时 拖轮只有在最上针位 工作1度左右
CF01.59	拉轮终止角度	0	0-2045		半轮模式时有效	
CF01.60	拉轮速度比例	195	10-1000		10快 1000慢	
CF01.61	拉轮方向	1	0-1		0:电机逆时针 1:电机顺时针	

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

Code.No	Fuction	Default	Range	Unit	Description	Remark
CF00.17	stitches of slow start	3	0-1000	0-1000	the stitches of how long slow start keep	
CF00.18	speed of slow start	500	200-4000	RPM	the speed of slow start	
CF00.25	needle up position	0			1:positive 0 : negative	
CF00.40	time of auto-cut working	100	10-500	ms	Automatic cutting time of machine	
CF01.00	mode	2	0-2		0 : manual (sensor off) 1 : semi-auto 2 : auto	
CF01.10	switch of slow start	0	0-1		0:negative 1:positive	
CF01.16	mode of puller	1	0-2		0: none 1 : half roll mode 2 : normal mode	
CF01.18	max speed	4000	1000-7000			
CF01.29	time of motor stop delay	10	1-5000		the time after sensor uncover how long the motor stop	
CF01.39	presser foot up delay	10	1-2000		the time cover the sensor what time the preser foot will react	
CF01.40	time of presser foot keep	200	10-2000		the time presser foot to up	
CF01.43	presser foot up and motor protection time	20	1-800		After lifting the foot,How long can the motor be allowed to run	
CF01.46	safe switch	1	0-2		0 : off 1 : low power on 2 : high power on"	
CF01.48	sensetive of cutter sensor	20	10-250		set parameter by actual installment. If the parameter is not suitable, wrong action will appear.that can be seen by D0.10	Without this configuration, it is invalid
CF01.58	angle of puller action	0	0-2045		angle of puller action	(1)when AF01.58=0,AF01.59=0 or when AF01.58=2045, AF01.59=0 or when AF01.58=2045, AF01.59=2045, puller work in the angle of 0-360 (2) when AF01.58=600, AF01.59=1800puller working in needle position angle0-180 (3) when AF01.58=0, AF01.59=2045puller work angle 1 since neelde position is in the top
CF01.59	ending angle of puller	0	0-2045		positive in half roll mode	
CF01.60	proportion of puller speed	195	10-1000		10 fast 1000 slow	
CF01.61	puller direction	1	0-1		0:counterclockwise 1 : clockwise	

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

序号	功能参数	默认值	设定范围	单位	参数说明	备注
CF01.63	拉轮前延时抬起针数	0	0-500		1:开机就拉紧,电磁阀没电,拉轮压紧 2:布遮住后电眼时,运行多少针后拉轮抬起,电磁阀有电 3:布遮住后电眼,电机一直工作时拉轮抬起,电磁阀有电 4:布离开后电眼时,拉轮开始压紧,电磁阀没电,但电机有延时功能可设	
CF01.64	间隔剪线延迟针数	128	0-500		经过电眼后再延迟多少针数剪线	
CF01.65	电机启动控制模式	0	0-1		0.脚踏开关控制启动 1.后电眼控制启动	按下面板M键会在两种模式下切换,此参数断电不保存,只给工程人员调试机器使用,注意运转安全
CF01.75	显示运行速度	0	0-1		0不显示, 1显示	
CF03.12	故障重新启动次数	180			0-65535	
CF03.13	故障自动复位	1	0-1		0无操作, 1自动复位	
CF03.13	故障自动复位	1	0-1		0无操作, 1自动复位	
CF03.14	故障重新启动时间	2.0	1-6000		1.0-6553.5S	
CF03.15	参数初始化	0	0-2		0无操作, 1恢复出厂设定, 2清除故障记录	
CF04.00	缝纫机控制类型	1	0-1		0包缝机, 1绷缝机	

5、SAF parameter table(GMD2S+PB+EC+SAF)

SAF参数表(GMD2S+PB+EC+SAF)

Code.No	Fuction	Default	Range	Unit	Description	Remark
CF01.63	stitches of at first puller up	0	0-500		1 : solenoid valve off,the puller press tight, the fabric was pulled after power on. 2 : the fabric cover the sensor,how many stitches go then the puller get up,the solenoid on.3 : the fabric cover the sensor, the motor work since the puller up,the solenoid valve on.4 : fabric uncover the sensor,puller press tight,the solenoid valve off,but it can be set in motor stop delay mode	
CF01.64	interval cutting delay stitches	128	0-500		the amount of stitches after uncover the sensor will cut	
CF01.65	Motor starting control mode	0	0-1		0. control start by knee switch 1. back-eye control start	Press the panel M key in two modes Switch, this parameter is not saved, Only for the engineer to debug the machine, Pay attention to operation safety
CF01.75	show speed	0	0-1		0 no, 1 yes	
CF03.12	restart times in faulty situation	180			0-65535	
CF03.13	auto reset after fault	1	0-1		0 no , 1 auto reset	
CF03.14	restart time in faulty situation	2.0	1-6000		1.0-6553.5S	
CF03.15	reset parameter	0	0-2		0 no, 1 reset, 2 clear the fault record	
CF04.00	machine type	1	0-1		0 overlocl, 1 flatlock	

6、SAF Fault parameter table(GMD2S+PB+EC+SAF)

SAF故障参数表(GMD2S+PB+EC+SAF)

故障显示代码	故障原因	故障排除方法
ERROR 01	系统故障1	上电电流检测错误, 控制板或者电流检测IC有故障
ERROR 02	母线过压2	请检查电源电压是否正常? 如果电源电压高于265V,关机,请等电源电压恢复正常再开机
ERROR 03	母线欠压3	请检查电源电压是否正常? 如果电源电压低于160V,关机,请等电源电压恢复正常再开机
ERROR 04	霍尔故障4	检查霍尔编码器
ERROR 05	运行过流5	检查电机或者功率板
ERROR 06	模块过流6	模块过流
ERROR 07	电机堵转7	检查负载
ERROR 08	输出缺相8	请检查电机电源线是否脱落或松动
ERROR 09	模块过热9	散热器过热
ERROR 10	安全开关10	安全开关打开, 检测安全开关是否启用或者处于有效状态
ERROR 11	电机过载11	负载过重
ERROR 12	保存错误12	保存错误12
ERROR 13	通信错误13	请检查控制面板与驱动器的连线是否正常
ERROR 14	定位失败14	电机可继续运转, 但无针数计数、针位定位及剪线/扫线及倒缝功能请检查磁钢是否正常。 请检查机头是否被卡住
ERROR 15	上电有布15	1.将布拿开机器再重新来一次即可 2.布边传感器设定错误, 重新设定布边传感器类型 3.布边传感器损坏
ERROR 16	时间到达	联系厂家

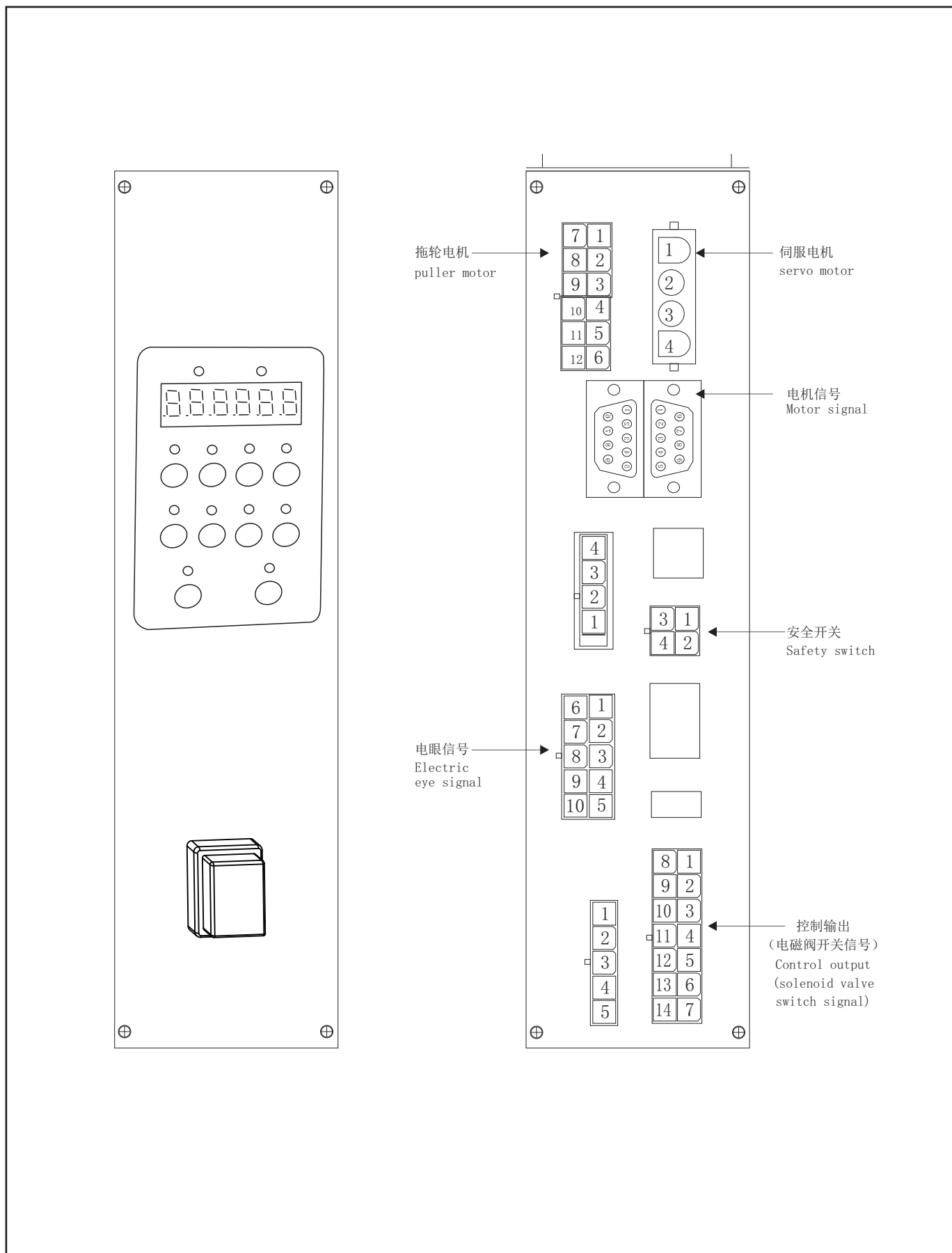
6、SAF Fault parameter table(GMD2S+PB+EC+SAF)

SAF 故障参数表(GMD2S+PB+EC+SAF)

error code	reason	trouble shooting
ERROR 01	faulty system	faulty electronic board or IC
ERROR 02	over power	check voltage, if over 265v,turn off, restart after voltage is proper
ERROR 03	low power	check voltage,if lower than 160v,turn off,restart after voltage is proper.
ERROR 04	faulty hall sensor	check hall sensor hardware
ERROR 05	overload	check motor or power board
ERROR 06	module overload	over electric in module
ERROR 07	motor stuck	check load
ERROR 08	fail detect output	check cable
ERROR 09	check cable	radiator too hot
ERROR 10	protect switch	protect switch on, check protect switch on or off and if it is positive
ERROR 11	motor overload	overload
ERROR 12	faulty save	EEPROM fault save
ERROR 13	wrong signal connect	check cable of panel and drive
ERROR 14	position fail	motor keep running, no stitch counting, needle position, thread cutting and backtack. check magnet and if sewing head get stuck.
ERROR 15	fabric cover sensor	1.put out the fabric retry 2.fabric sensor faulty setting 3.fabric sensor is broken
ERROR 16	time out	contact with manufacturer

7、SAF Controller face the version and controller connection instructions

SAF 控制器面版及控制器连接说明





美國百川公司

GRAND PRODUCTS(U.S.A) GROUP

FACTORY : GRAND PRECISION INDUSTRIAL LTD.

NO. 136, Qiwan Road North, East District, Zhongshan City, Guangdong Province, China

Tel: 86-760-88414888 Fax: 86-88414668

Http://www.usa-grand.com E-mail: info@usa-grand.com