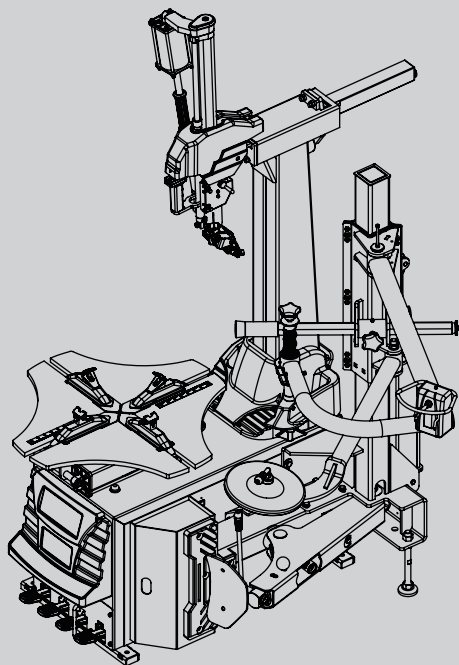




豪华免撬棍轮胎拆装机
Luxury leverless tyre changer With Helper

AE1018H/AE1018H-3



使用说明书 \ User's Manual



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第一章 介绍

1.1 介绍:

- 感谢您从自动轮胎机系列中购买本产品。产品基于最优质的原理。遵循本手册中的简单的说明可以保证正确的操作和延长机器的使用寿命。彻底阅读本说明书，并确保您理解它。

1.2 拆胎机铭牌:

- 型号和序列号的完整描述将是我们售后服务部门能够更轻松的提供服务，也便于所需的备件发运。为了您的方便，我们在以下的方框中加入拆胎机的数据。如果本手册中的数据 and 机器上附着的光盘上的数据之间存在任何的差异的话，以后者为正确的版本。

	
Model: <input type="text"/>	Serial No.: <input type="text"/>
Voltage: <input type="text"/>	Frequency: <input type="text"/>
Phase: <input type="text"/>	Output Power: <input type="text"/>
Current: <input type="text"/>	Weight: <input type="text" value="125kg"/>
Date of Manufacture: <input type="text"/>	

1.3 为了正确地使用本手册，建议如下

- 将本手册放在易于拿取的地方。
- 将本手册放在防潮的地方。
- 适当的使用本手册，不要损坏。
- 机器的操作者必须熟悉本手册的说明和程序。

本手册是产品的一部分。在机器被再卖的时候，要向新的主人提供本手册



图片上的部件和元件可能会与实际的部件和元件有所区别

1.4 一般的安全措施:



拆胎机只能由经过特殊授权的专业人士进行操作

第二章 一般信息

2.1 用途:

- 本自动拆胎机的设计和制造专用于拆装轮胎
- 特此说明, 对于非本手册规定的目的, 不适当的、不正确的、不合理的使用造成的损坏, 制造厂家将不负任何地责任

2.2 说明:

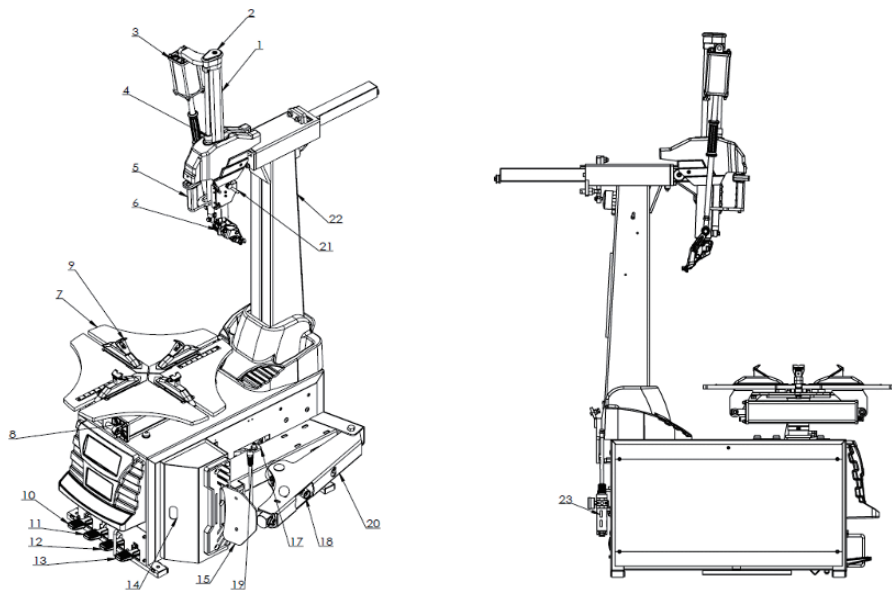


图 2-1

序号	品名	序号	品名	序号	品名	序号	品名
1	六方轴	7	转盘	13	转盘转向踏脚	19	靠胎铲手柄
2	立轴帽	8	撑夹气缸	14	撬棍	20	靠臂
3	拆胎钩升降缸	9	卡爪	15	靠胎铲	21	拆胎钩控制阀
4	六方轴升降缸	10	立柱后仰踏脚	16	换位销轴	22	立柱
5	手控阀	11	撑夹踏脚	17	靠胎气缸	23	气源三联件
6	拆装头	12	压胎踏脚	18	调整套		

2.3 危险警示标贴:


操作工程中手要远离轮胎

使用轮胎拆装机前

操作时要佩戴好保护用品

请仔细阅读《使用说明书》



小心触电！



切勿将身体任何部分探入拆装头下方。



靠胎时，靠胎铲刀会迅速而有力地向左移动，操作者切勿站在铲刀与轮胎中间。



注意，在压胎时若夹紧气缸是开的，会刮伤操作者的手，切记在压胎时不要用手接触轮胎侧壁。



夹紧轮辋时，请注意手和其它部位勿进入卡爪与轮辋之间。



不要站在立柱后面，以免立柱摆动时伤人。



佩戴手套



阅读使用说明书



佩戴防护眼镜



佩戴手套，在维修期间，切断电源，保证机器隔离

安全标识位置示意图：

- 注意保持安全标识的完整，模糊或丢失时，应立即更换新标识。
- 应使操作者清楚地看见安全标识并须明确标识的含意。

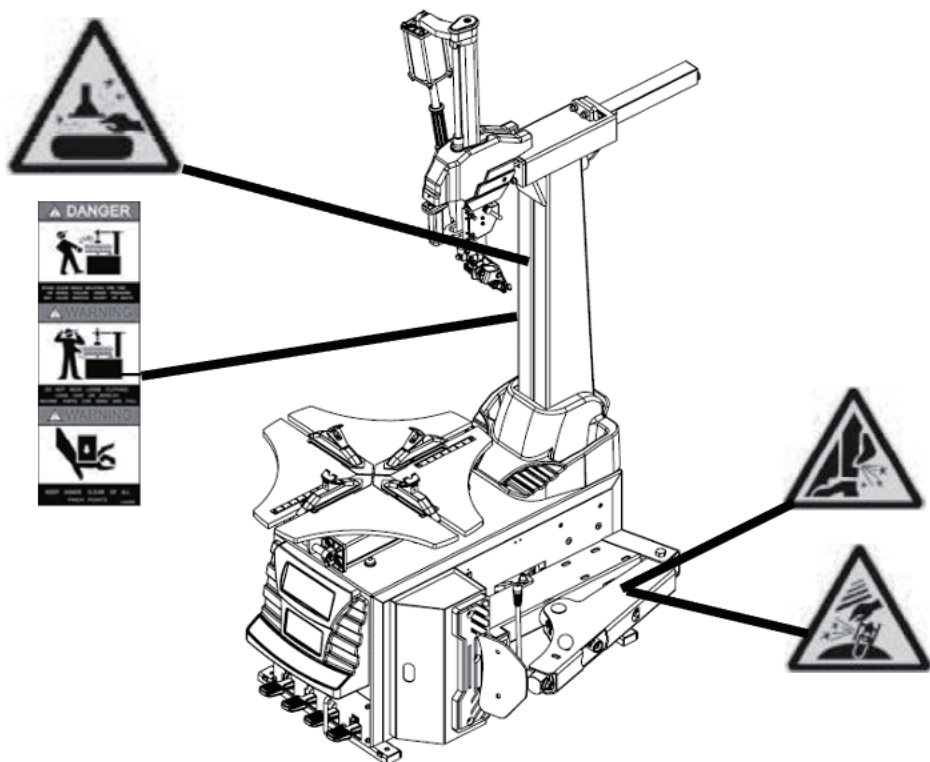
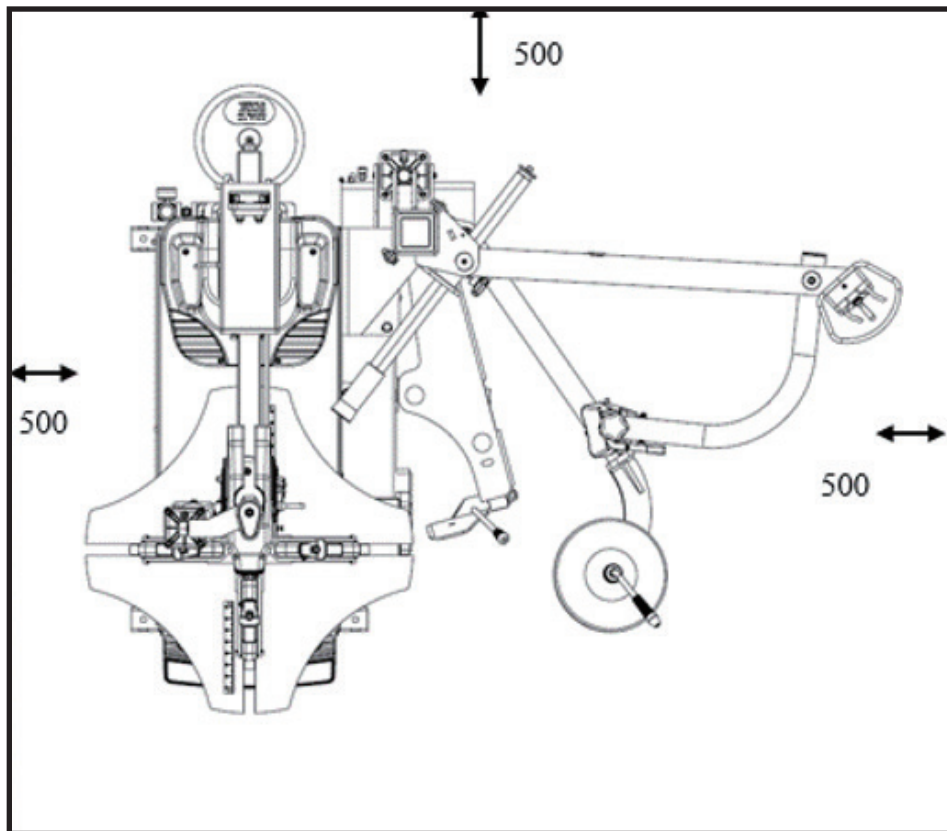


图 2-2

2.4 技术规格（标准配置）：

工作压力	8-10 bar (145 psi)
最大充气压力	3.5 bar (50 psi)
电源电压	220V/ 380V230V/ 400V3PH
	110V220V230V1PH
电机功率	0.75kw (3 相单速)
	0.85/1.1 kw (3 相双速)
	1.1 kw (单相)
旋转速度	6.5-13 rpm
最大心轴扭矩	1200 Nm
包装尺寸	1280X1020X2000 mm
净重	357.5 kg ± 3kg
工作状态下的噪音	<70dB (A)
环境温度	5°C ~ 45°C
空气相对湿度	30%-95%
海拔高度	最大 1000M
技术规格（标准配置）	根据配置大盘不同就不同
外部夹撑轮辋的尺寸（寸）	12" - 24"
内部夹撑轮辋的尺寸（寸）	13" - 26"
最大轮胎尺寸（寸）	43" (1100 mm)
最大轮胎宽度（寸）	14" (305 mm)
靠胎力（10 巴）	2800 kg
工作压力	8-10 bar (145 psi)
最大充气压力	3.5 bar (50 psi)
电源电压	220V/380V230V/400V3PH
	110V220V230V1PH
电机功率	0.75 kw (3 相单速)
	0.85/1.1 kw (3 相双速)
旋转速度	6.5-13 rpm
最大心轴扭矩	1200 NM
包装尺寸	1280X1020X2000 mm
净重	357.5 kg ± 3kg
工作状态下的噪音	<70 dB(A)
环境温度	-5°C ~ 45°C
空气相对湿度	30% ~ 95%
海拔高度	最大 1000M



第三章 运输、拆包和存储

3.1 运输:

- 拆胎机的运输要使用原包装。
- 包装的拆胎机由负荷适宜的叉车进行搬运，按（参考第三章 / 图 3-1）所示的位置插入叉。

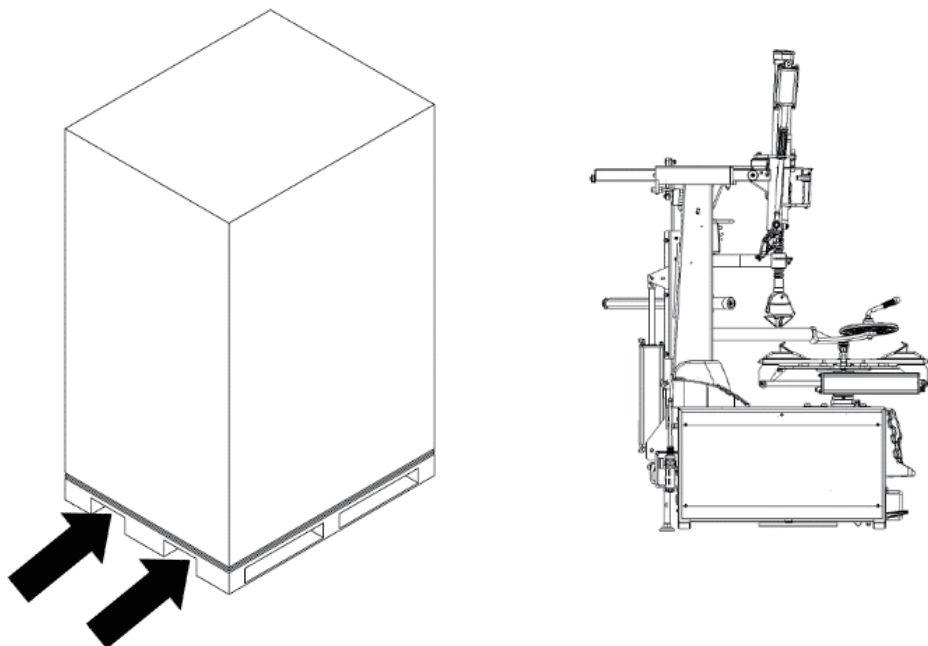


图 3-1

3.2 拆包:

- 除去保护用的硬纸板和尼龙袋。
- 检查设备是否状态良好，确保部件没有缺失或损坏。



如有疑问，不要使用机器，同零售商进行联系

3.3 存储:

- 如果需要长期存储设备的话，确保电源的断开，并对大盘上的夹爪导轨进行润滑，防止氧化。

第四章 安装

4.1 通气试验:

- 将气源三联体 (参考第二章 / 图 2-1/ 序号 23 气源三联体) 的进气端与总气源压缩空气系统进行连接, 当接通气源后, 按下 (参考第四章 / 图 4-1/ 序号 Y) 锁紧气阀按钮将推拉臂锁紧, 踏立柱倾斜踏板 (参考第四章 / 图 4-2/ 序号 10) 立柱即向后倾斜约 $25^{\circ} \pm 2^{\circ}$ 立柱运动速度出厂前已调为单向运动时间约为 2 秒, 使用日久后如速度过快或过慢, 可用立柱倾斜踏板 (参考第四章 / 图 4-2/ 序号 10) 控制的气阀调整, 气阀上的铜制消音节流阀放松, 顺时针拧, 节流阀速度减慢, 逆时针拧则加快。

4.2 调试:



所有的电气工作必须由专业的人员进行, 确保电源是正确的。确保相位的连接是正确的。不恰当的电气连接会损坏电机, 不受保修。

- 检查是否您系统的特性符合机器的要求。如果您不得不改变机器的操作电压, 参照第十章的电气图进行必要的接线



将机器同电气系统相连接, 该电气系统要配有线路保险, 良好的接地要符合当地国家标准, 必要时给设备配备漏电保护装置, 以确保设备的安全运行。如果拆胎机没有安装电源插头, 用户有必要安装一个, 该电源插头的电流最小为 16A, 并符合机器的电压和相关规定。

4.3 操作测试:

- 踩下踏脚 (参考第四章 / 图 4-2/ 序号 13) 至中间位置时, 大盘按顺时针方向慢速转动, 再次向下踩时, 大盘按顺时针方向快速转动。松开踏脚, 大盘停止转动。当踏脚被拉起的时候, 大盘按逆时针方向转动。



如果大盘的转动方向同上述的方向不同的话, 则调换 3 相接线柱上的两根线。

- 踩下踏脚 (参考第四章 / 图 4-2/ 序号 12), 靠胎铲进入工作状态, 松开踏脚, 靠胎铲返回原始位置
- 当手控阀固定按钮 Z 的位置时候, 四方轴松开, 六方轴向上, X 位置四方轴松开, 六方轴向下, Y 位置四方轴与六方轴同时锁紧 (参考第四章 / 图 4-1)。

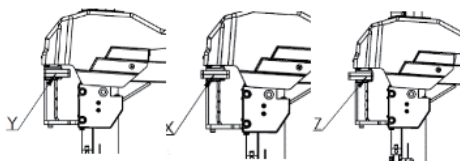


图 4-1

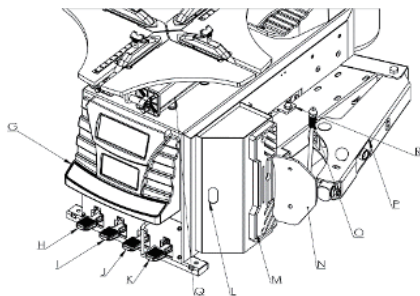








图 4-2

第五章 操作

	为避免损坏内胎，需使阀门位于拆胎头右侧，距离为 10cm。
	靠胎时如果夹爪位于开放的位置，那对操作者的手将会是极其危险的。靠胎过程中千万不要使您的手同胎壁相接触。
	建议拆胎机配压力调节装置。
	将提供的润滑脂（或类似的润滑脂）涂抹在胎口上，所使用的润滑脂必须是无毒无害不易燃的。不适用润滑脂将会导致对胎口的严重损坏。
	在您阅读和理解整个手册和所提供的警告之后才能使用机器。在进行操作之前，放掉胎中的空气，并除去轮上的所有的铅块。

轮胎拆装机的操作包括以下部分：a) 靠胎 b) 拆胎 c) 装胎

5.1 靠胎：

	在靠胎操作时要极度的小心。当靠胎脚踏驱动靠胎臂快速而有力的移动的时候，靠胎臂会对其移动的区域内的所有事物造成危险和压碎。
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检查轮胎是否放气，如果没有的话排空胎内空气。彻底合上大盘夹爪。

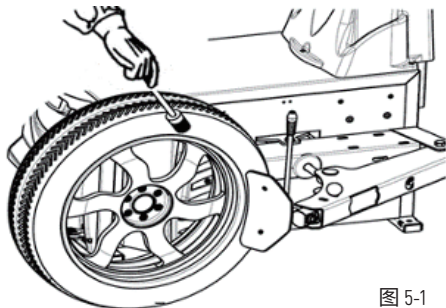


图 5-1

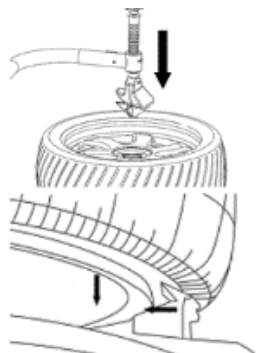


图 5-2

- 将轮胎置于“压胎铲”和“压胎胶垫”之间，把“压胎铲”置于轮胎侧面（参考第五章 / 图 5-1）。然后踩“压胎脚踏（参考第四章 / 图 4-2/ 序号 12）”使轮缘与胎分离。在轮胎其它部位重复以上操作，使两侧轮胎与轮辋彻底脱离。为使“胎唇”顺利剥离，可使用毛刷在胎唇与轮辋间涂润滑剂。
- 靠胎过程中，可以根据轮胎宽度的不同，调节靠胎气缸活塞杆端部的两档调整套（参考第四章 / 图 4-2/ 序号 18），调整大铲靠胎的深度，避免大铲靠入过深，伤害轮胎或者轮辋。
- 靠胎完成后，踩踏转盘的撑夹脚踏（参考第四章 / 图 4-2/ 序号 11），将转盘卡爪的张开距离调至比钢圈的外沿直径大 3cm-5cm 左右，将轮胎放置到转盘上，然后向下压住轮辋的中心，踩踏撑夹脚踏，将钢圈夹紧。如果操作的轮胎胎壁较硬，卡爪无法进入钢圈与轮胎的贴合处，可以使用辅助臂进行辅助操作，将压胎锥对准轮辋中心，向下压约 2cm-3cm，这样就可以顺利夹住轮辋。如（参考第五章 / 图 5-2）所示

5.2 用自动拆胎钩手进行轮胎拆装：

- 按推拉臂手控阀（参考第四章 / 图 4-1/ 序号 X）至中间位置，将拆装头落到工作位置，使拆装头靠近轮缘，将鸟头套和鸟尾垫贴在轮辋上，如果胎壁较硬，可以使用辅助臂的压胎杆将胎唇压低，如图（参考第五章 / 图 5-2-1）所示。然后按下手控阀按钮将推拉臂锁紧，这时拆装头会自动移开轮辋一定距离，使拆装头与轮辋边缘脱离，避免划伤轮辋，如图（参考第五章 / 图 5-2-2）所示。

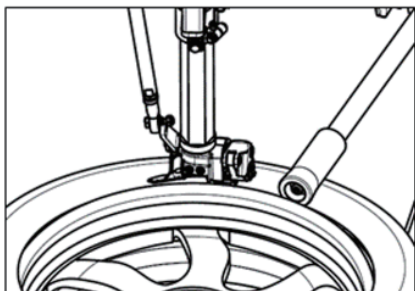


图 5-2-1

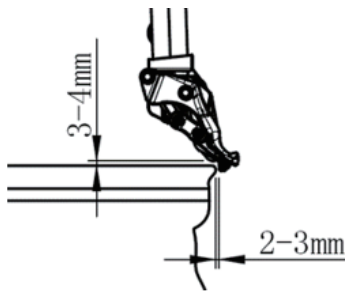


图 5-2-2

- 为了避免损坏气门嘴，拆胎钩需要在距离气门嘴左侧约10cm左右的位置进行操作（参考第五章 / 图 5-2-3）

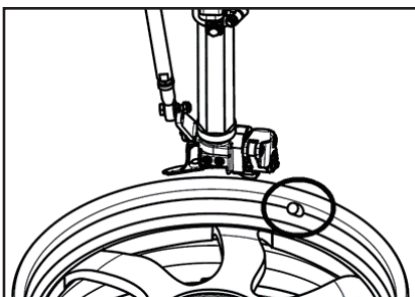


图 5-2-3

- 向下扳动拆胎钩控制阀（参考第二章 / 图 2-1/ 序号 21 拆胎钩控制阀），使拆胎钩进入胎唇内侧，如果拆胎钩运行到底部未进入胎唇内侧，可点踩转盘转向踏脚，让转盘轻微转动，使拆胎钩进入胎唇内侧，如图（参考第五章 / 图 5-2-4）所示。如果胎唇较硬，可以使用辅助臂压胎杆压低胎唇，以便拆胎钩能够顺利进入胎唇内侧。

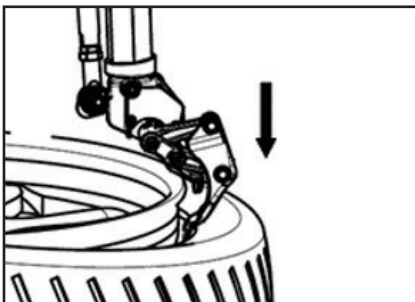


图 5-2-4

- 拆胎钩进入胎唇内侧后，向上扳动拆胎钩控制阀，将胎唇钩起至拆胎头圆形凸起部位的上方，如图（参考第五章 / 图 5-2-5）所示，此时轻轻点踩转盘转向踏脚，观察胎唇和拆胎钩，如无异常，踩下转向踏脚，转盘顺时针旋转，上层胎唇脱出。

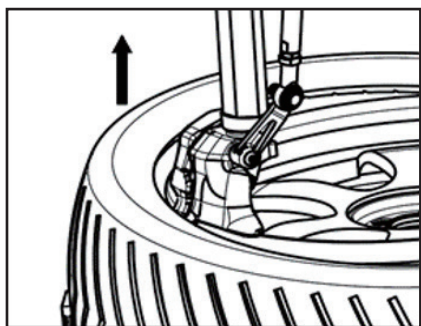


图 5-2-5

- 用辅助臂上的托托盘将下胎唇抬起至轮辋的上边缘，如图（参考第五章 / 图 5-2-6）所示，降下拆胎钩，将下胎唇钩起，如图（参考第五章 / 图 5-2-7）所示，然后踩下转盘转向踏脚，将下胎唇脱出。

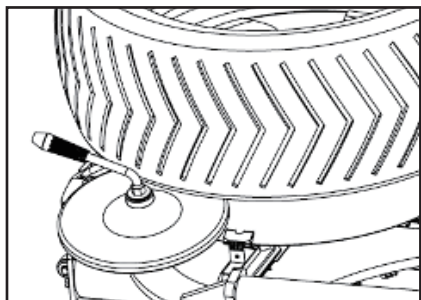


图 5-2-6

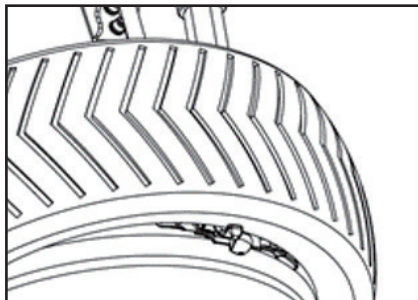


图 5-2-7

- 踩下立柱后仰踏脚（参考第四章 / 图 4-2/ 序号 10），将立柱后仰，取出已经拆下的轮胎，如图（参考第五章 / 图 5-2-8）所示，拆胎操作完毕。

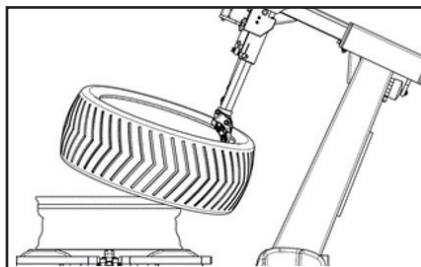
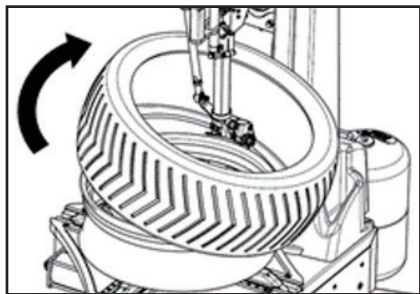


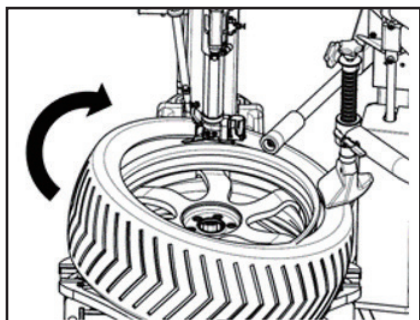
图 5-2-8

5.3 安装轮胎：

- 将修补好的轮胎或新轮胎按下图所示放置在轮辋上。顺时针旋转卡盘带动的轮辋，下面一层轮胎装入，如下图所示。



- 将压胎滚及压胎块压在轮辋边缘以下，以轮胎不拖出为准，如下图所示。



- 顺时针旋转卡盘带动的轮辋，上层轮胎装入。



最重要的是检查轮胎和轮辋，防止再充气过程中的爆炸。在开始安装操作之前要确保：轮胎和胎纹纤维没有受到损坏，如发现，不要安装轮胎；轮辋没有凹痕和翘曲肉眼观察，注意铝合金轮辋的内侧没有微小的划痕，这些是危险的，尤其是在充气的时候。



在轮辋锁定的时候，不要将手放在轮胎的下面。正确的操作是使轮胎位于大盘的中央。



立柱倾斜的过程中要确保没有人站在立柱的后面。



如果所拆装的轮辋的尺寸相同的话，就没有必要经常地锁紧拆胎臂或解除拆胎臂的锁紧，您所需要做的仅仅是将立柱后仰或恢复到工作的位置，拆胎臂保持在工作的位置。



千万不要将您的手放在车轮的上面。立柱回位到工作位置会对操作者的手造成挤伤，使其夹在轮胎和轮辋之间。



为防止工业事故，在大盘转动的时候使手和身体的其他的部分尽可能的远离拆胎臂。



拆装轮胎的时候，大盘要按照顺时针的方向转动。逆时针的转动仅在机器熄火导致操作者发生错误的时候为了纠错而使用。

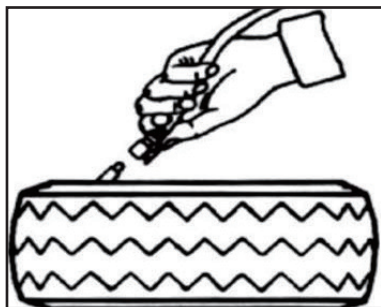
第六章 充气



在轮胎充气的时候要极度的小心，严格的按照下面的说明执行，因为拆胎机的设计的制造对于突然的爆胎不予以周围的人保护。

爆胎会导致操作者的严重的伤害或甚至导致死亡。仔细检查轮辋和轮胎的尺寸要相同。在充气之前要检查轮胎没有毛病或磨损。每次喷气之后都要检查压力。我们所有的拆胎机均限定最大的充气压力（3.5bar=51psi），无论如何不要超出制造厂家建议的压力值使您的身体和手尽可能远离轮胎。

6.1 使用充气表进行轮胎的充气在标准的版本下，我们的拆胎机配有充气表。充气程序如下：



- ①将充气表和轮胎气阀相连接。
- ②最后检查一下轮胎和轮辋的尺寸的配合。
- ③检查胎口是否被充分润滑，如果有必要的话，进行更深一步的润滑。
- ④充气，检查充气表的气压。
- ⑤继续充气，边充气边检查气压。



爆炸的危险！

轮胎充气的时候不要超过 3.5bar (51psi)：如果需要较高的气压的话，将轮胎从大盘上卸下，置于专用的保护笼中进行充气。千万不要超过制造厂家建议的充气压力，手和身体位于正在充气的轮胎的后侧；仅由受过专门训练的授权的人员进行充气的操作，其他的人不得操作或呆在拆胎机的附近。

6.2 使用选配的 IT 系统进行轮胎的充气：

在真空胎充气的时候，如果使用选配的（IT 系统）进行充气的话，是便利的。



在此过程中，噪音能达到 85 分贝。建议使用噪音保护。

- ①将车轮固定在大盘上，将充气头同轮胎气阀相连接。
- ②最后检查一下轮胎和轮辋的尺寸的配合。
- ③检查胎口是否被充分润滑，如果有必要的话，进行更深一步的润滑。
- ④向下按脚踏至中间位置。
- ⑤充气，检查充气表的气压，继续充气，边充气边检查气压。直至气压达到所要求的压力值。



爆炸的危险！

轮胎充气的时候不要超过 3.5bar (51psi)；如果需要较高的气压的话，将轮胎从大盘上卸下，置于专用的保护笼中进行充气。千万不要超过制造厂家建议的充气压力，手和身体位于正在充气的轮胎的后侧；仅由受过专门训练的授权的人员进行充气的操作，其他的人不得操作或呆在拆胎机的附近。

第七章 保养

7.1 注意事项:



禁止非授权人员执行保养。

手册中描述的日常的保养对于拆胎机的正确的操作和长寿是必要的。如果不经常进行保养的话，机器的操作和可靠性将会被危及，将会使操作者或其他的人位于危险区域的附近。



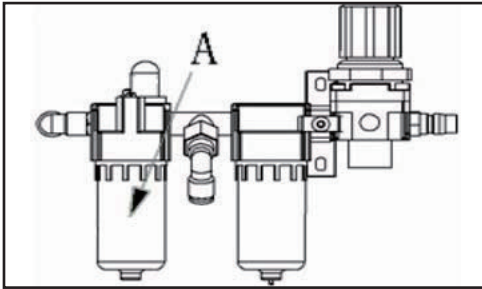
在进行任何的保养之前，断开电源和气源。

必须要由专业人员用制造厂家的部件更换故障部件严禁拆卸和改动安全装置（限压和调压阀门）。



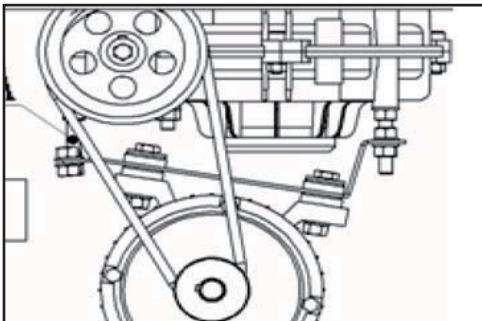
特此声明。制造厂家将不会对使用其它厂家的备件或改动或拆卸安全系统而造成的损坏负责。

7.2 保养操作:



每周用柴油清洁大盘，以防止灰尘的产生，对夹爪导轨进行润滑。至少每月保养一次，进行下列的操作：检查润滑油杯的油位。如果必要的话，松开螺丝注满储油罐（参考第七章 / 图 7-2-1），仅适用 ISO VG 粘性 ISO HG 等级的油进行压缩空气气路的润滑。

图 7-2-1



检查是否是每踩下脚踏（参考第二章 / 图 2-1/ 序号 12 压胎脚踏）3-4 次之后，油滴一滴，如果不是的话，使用顶端螺丝来进行调节（参考第七章 / 图 7-2-1）。

注：系统压力为出厂设定值，三联体压力调节阀不允许私自调节。

如果无力的话，检查传动皮带是否过松。通过专用的电机支架上的调节螺丝（参考第七章 / 图 7-2-2）来卸下传动皮带。

图 7-2-2

7.3 拆装头与轮辋的间隙调整：

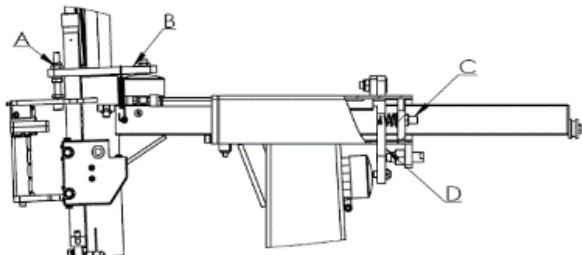


图 7-3-1

- 上下间隙，调整六方轴锁紧板；
- 关闭气源，卸下垂直六方轴的防护罩。如果间隙过大可 16# 外六角扳手向下调整六方锁紧板前端螺母（参考第七章 / 图 7-3-1/ 序号 A）；如果间隙过小可向上调。

前后间隙，调整四方锁紧板。

- 关闭气源，用 6# 内六角扳手调整立柱上座后端两个四方锁紧板顶丝（参考第七章 / 图 7-3-1/ 序号 C），如果间隙过大，将顶丝拧入，用 18# 外六角扳手锁紧顶丝螺母，如果间隙过小，则反向调整。

- 关闭电源、气源，卸掉防护盖，可将踏脚底盘全部拿出后维修电机开关。

7.4 脚踏开关维修：

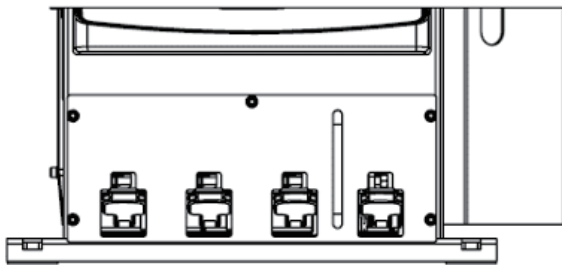


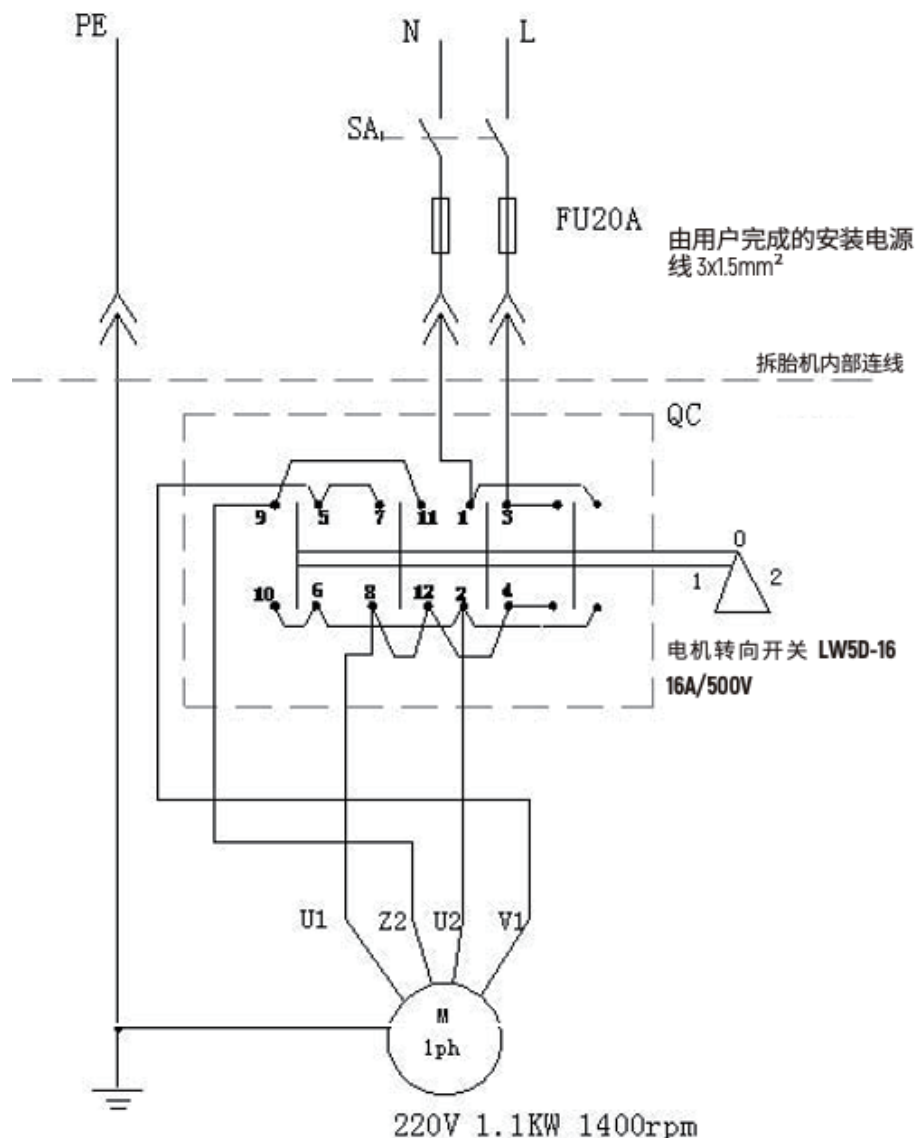
图 7-4-1

第八章 故障

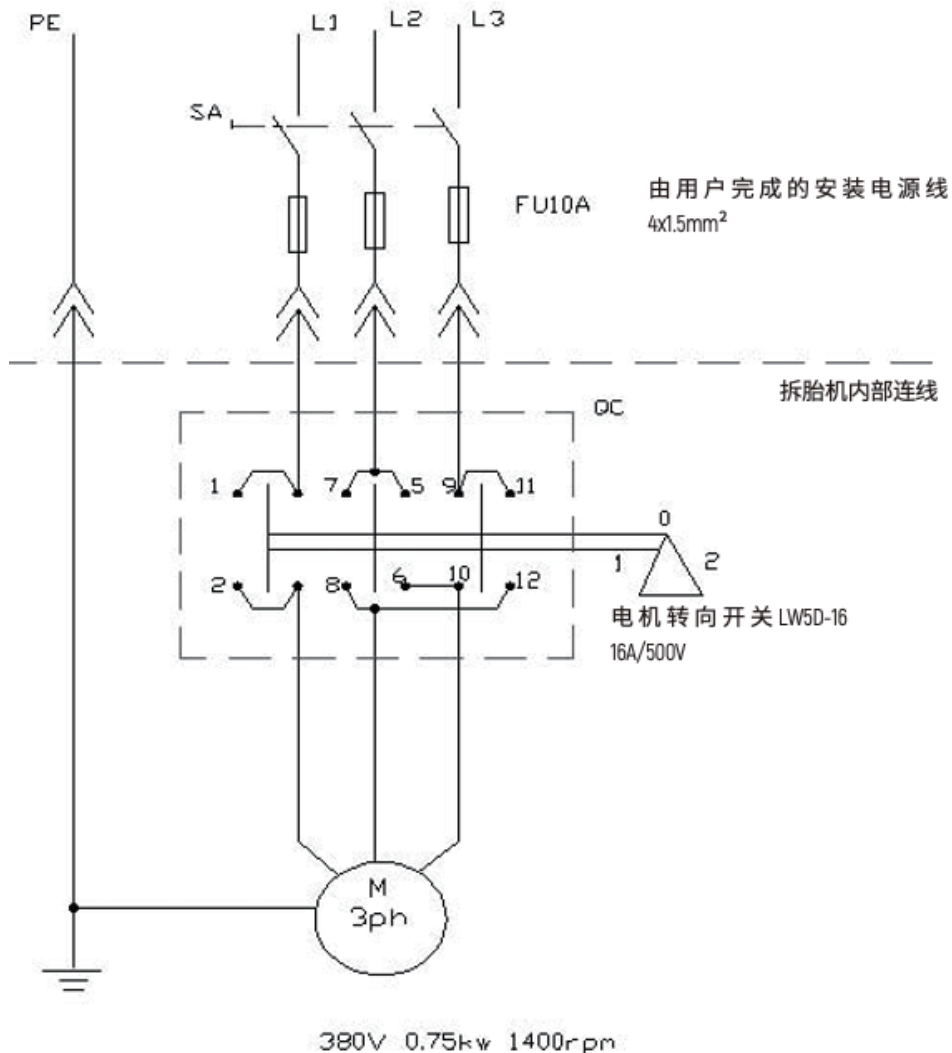
故障	可能的原因	排除方法
转盘只单向转动	万能转换开关触点烧坏	更换万能转换开关
转盘不转	皮带损坏	更换皮带
	皮带太松	调整皮带松紧度
	电机或电源有问题 图 8-3A	检查电机、电源、接线盒电源接线
	万能转换开关损坏	电机烧坏、更换电机 更换万能转换开关
转盘不能正常夹紧轮辋	卡爪磨损	更换卡爪
	撑夹气缸漏气	更换漏气的密封件
四方轴、六方轴锁不住	锁紧板不到位	调节锁紧板调节螺钉
	锁紧气缸漏气	更换气缸密封圈
推拉臂推拉不灵	四方锁紧板位置不对	见第五章维修保养
六方轴上下活动阻滞	六方锁紧板位置不对	四方、六方锁紧板的调整
立柱后仰或回位速度过快或过慢	立柱气缸排气速度过快或过慢；进气源压力过低	打开侧面板，调节流阀见(3.2.1) 通气试验
底盘踏脚不回位	踏脚回位钮簧损坏	更换钮簧
电机不转或输出力矩不够	传动部位卡阻	排除卡点
	电容击穿	更换电容
	电压不足	等待恢复电压
	短路	排除
气缸输出力不足	漏气	更换密封件
	机械障碍	排除障碍
	气压不足	调解气压达到机器要求

第九章 电气与气路图

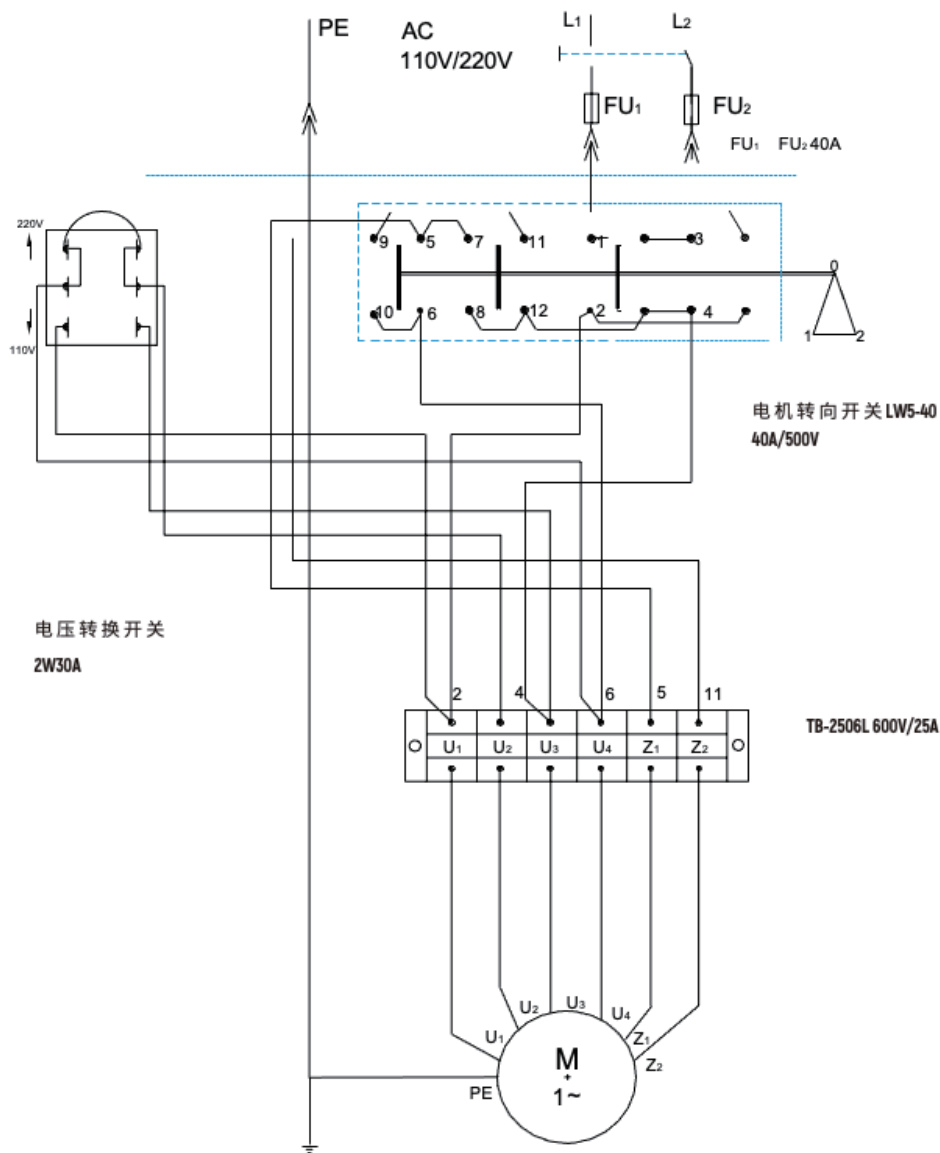
380V 电气原理图:



拆胎机单相电机 220V 接线原理图 (通用)

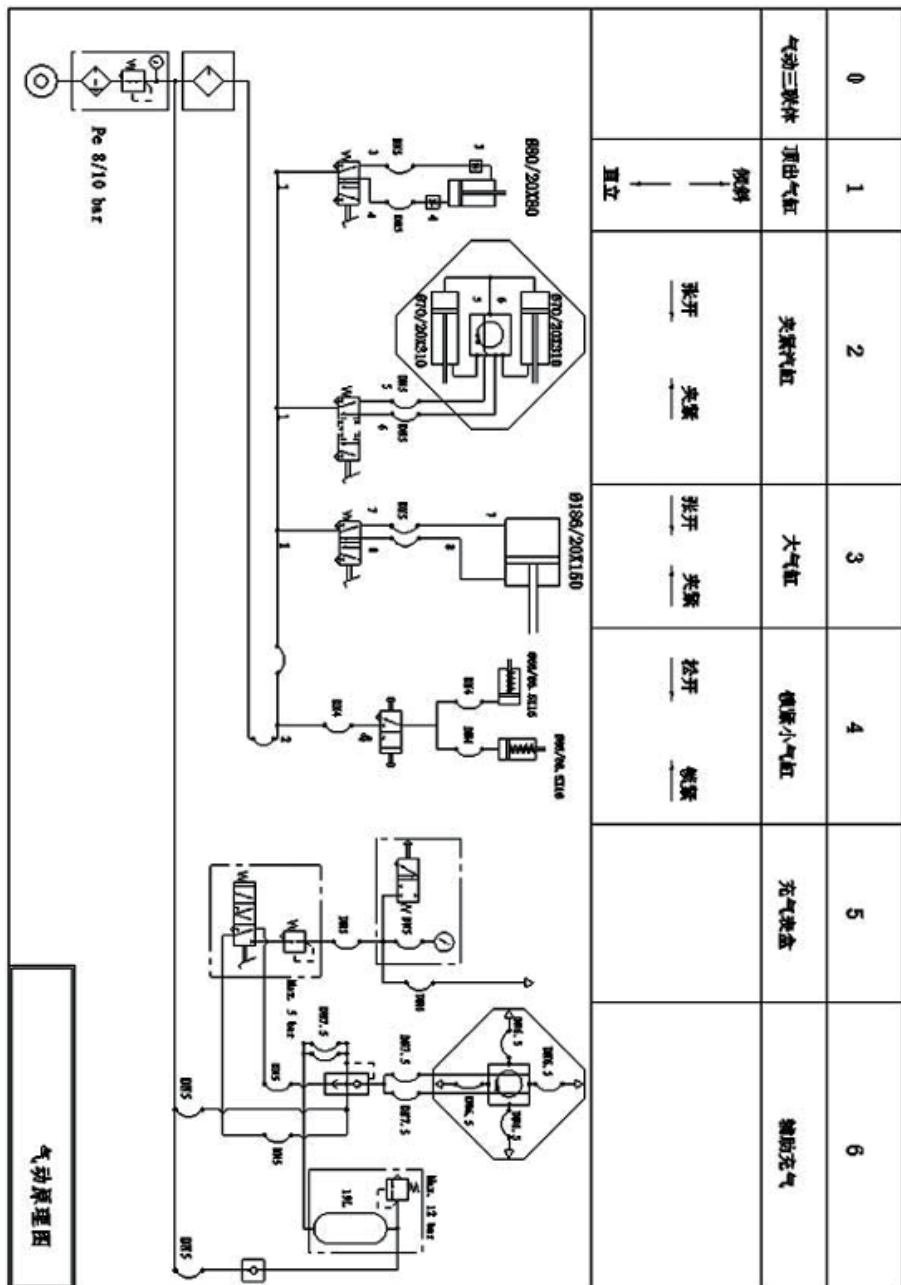
110/220V 电气原理图:

拆胎机三相电机 380V 接线原理图 (通用)

110/220V 电气原理图:



扒胎机双压电机连线图之二

气动原理图:




Chapter I Introduction

Product introduction:

- Thank you for purchasing this automatic tire machine product. It is based on the highest quality principles. Following the simple instructions in this manual can ensure proper operation and extend the life of the machine. Read these instructions thoroughly and make sure you fully understand them.

Nameplates of tire changer:

- A complete description of the model and serial number will make it easier for our after-sales department to provide services and deliver spare parts. For your convenience, we have included the data of the tire changer in the box below. In case of any inconsistencies between the data in this manual and that on the disc attached to the machine, the latter shall prevail.

	
Model: <input type="text"/>	Serial No.: <input type="text"/>
Voltage: <input type="text"/>	Frequency: <input type="text"/>
Phase: <input type="text"/>	Output Power: <input type="text"/>
Current: <input type="text"/>	Weight: <input type="text" value="125kg"/>
Date of Manufacture: <input type="text"/>	

Manual storage:

The following recommendations shall be followed to use this manual correctly

- Place this manual in an easily accessible location.
 - Place this manual in a location which is protected from moisture.
 - Use this manual properly and do not damage it.
 - Machine's operator must be familiar with instruction and procedure of this user's manual.
- This manual is a part of the product.

When the machine is resold, deliver this manual to the new owner.



Parts and elements in the images may differ from the actual ones.

General safety measures :



This tire changer may only be operated by specially authorized professionals.

Chapter II General Information

Intended purposes:

This automatic tire changer is designed and manufactured specially for the assembly/disassembly of rims. It is hereby declared that the manufacturer assumes no liability for any damage caused by the improper, incorrect or unreasonable use of this product, or for purposes not specified in this manual.

Instructions:

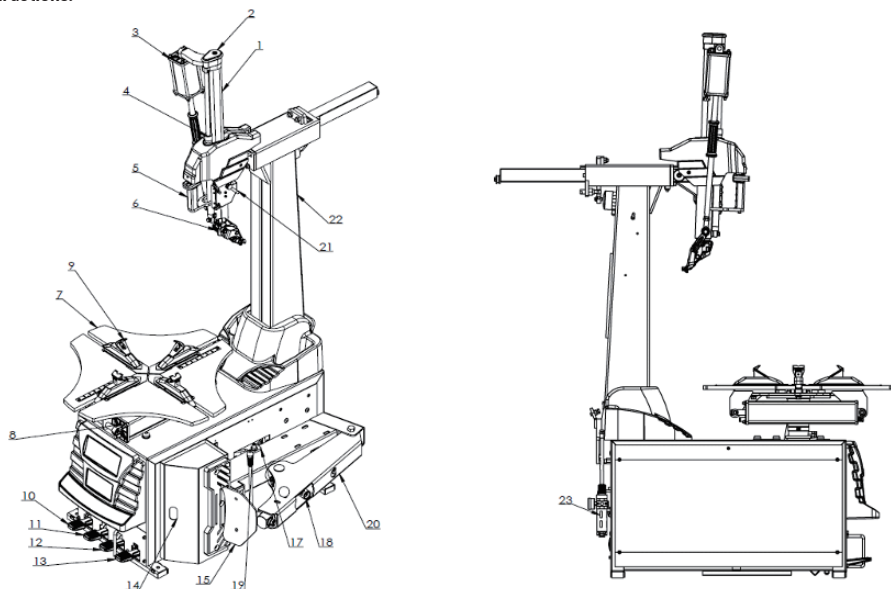


图 2-1

No.	Product	No.	Product
1	Hexagonal shaft	13	Turntable steering pedal
2	Cap of hexagonal shaft	14	Lever
3	Lift cylinder of dismounting tire hook	15	Tire-pressing shovel handle
4	Lift cylinder of hexagonal shaft	16	Transposition pin
5	Manual controlled valve	17	Cylinder of Tire-pressing shovel handle
6	Tire-changing mount/dismount head	18	Adjustable nut
7	Turn table	19	hand lever of tire-pressing shovel handle
8	Clamping cylinder	20	Arm of shovel handle.
9	Clamping jaw	21	Control valve of dismounting tire hook
10	Turntable steering pedal	22	Column
11	Clamping jaw pedal	23	Air treatment FRL
12	Tire-pressing pedal		

Hazard warning labels:


- Keep your hands away from the tire during operation.

- Before operating the tire changer, please read the Operation Instructions in detail.

- Wear protective equipment.



Take precautions to avoid electric shock!



Do not put any part of your body under the dismantling head.



During tire pressing, the tire-pressing shovel moves to the left quickly. Therefore, the operator shall not stand between the blade and the tire.



Note: if the clamping cylinder is open during tire pressing, the operator's hand may be scratched. Therefore, do not touch the side of the tire during the tire pressing.



When clamping the rim, do not put your hand or other body parts between the clamping jaw and the rim.



Never stand behind the column so as to avoid injuries caused by the swinging column.



Wear gloves.



Read the Operation Instructions.



Wear protective glasses.



During maintenance and servicing, turn off the power and ensure that the machine is isolated.

Location diagram of safety signage:

- Ensure the integrity of safety signs and supplement new signs or replace illegible ones immediately.
- Safety signs shall be clearly seen by the operator and shall be able to clearly express their meanings.

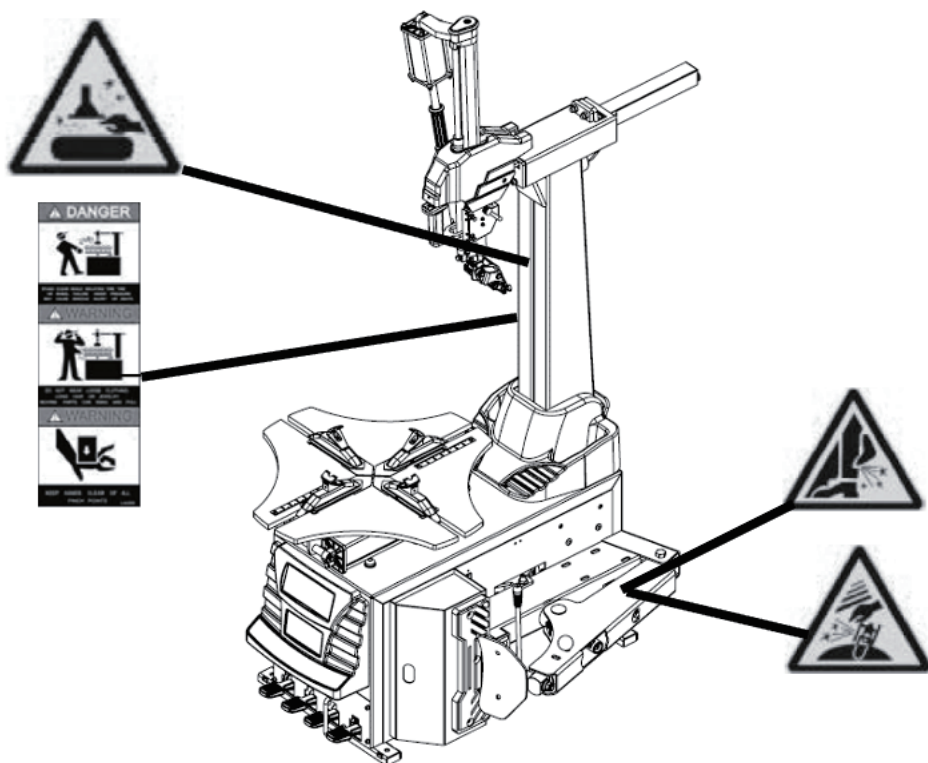


图 2-2

Technical specifications (standard configuration) :

Working pressure	8-10 bar (145 psi)
Maximum inflation pressure	3.5 bar (50 psi)
Power voltage	220V/ 380V230V/ 400V3PH
	110V220V230V1PH
Motor power	0.75 (3-phase single-speed)
	0.85/1.1 kw (3-phase double-speed)
	1.1 kw (Single phase)
Rotating speed	6.5-13 rpm
Maximum mandrel torque	1200 Nm
Package dimensions	1280X1020X2000 mm
Net weight	357.5 kg ± 3kg
Noise under working conditions	<70dB (A)
Ambient temperature	5°C ~ 45°C
Relative humidity of air	30%-95%
Altitude	Maximum 1,000 M
Technical specifications (standard configuration)	depending on the large plate
External clamping rim size (inch)	12" - 24"
Internal clamping rim size (inch)	13" - 26"
Maximum size of tire (inch)	43" (1100 mm)
Maximum width of tire (inch)	14" (305 mm)
Tire-pressing force (10 bar)	2800 kg
Working pressure	8-10 bar (145 psi)
Maximum inflation pressure	3.5 bar (50 psi)
Power voltage	220V/380V230V/400V3PH
	110V220V230V1PH
Motor power	0.75 KW (3-phase single-speed)
	0.85/1.1 kw (3-phase double-speed)
Rotating speed	6.5-13 rpm
Maximum mandrel torque	1200 NM
Package dimensions	1,280 × 1020 × 2000 mm
Net weight	357.5kg ± 3kg
Noise under working conditions	<75 dB(A)
Ambient temperature	-5°C ~ 45°C
Relative humidity of air	30% ~ 95%
Altitude	Maximum 1,000 M

Chapter III Transportation, Unpacking and Storage

Transportation:

- The tire changer shall be transported in its original package.
- The packaged tire changer shall be handled using a properly loaded forklift with the fork inserted as shown in Fig.3.1

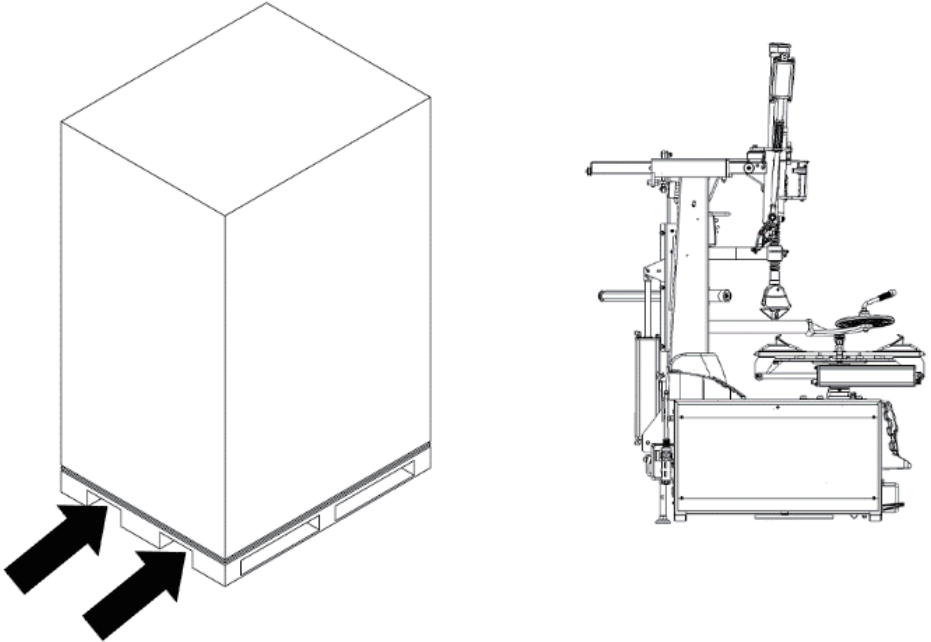


图 3-1

Unpacking:

- Remove the protective cardboard and nylon bags.
- Check if the equipment is in good condition and ensure that the parts are not missing or damaged.



In case of any doubt, do not use machine until consulting with the retailer.

Storage:

- If long-term storage is required, ensure the disconnection of power and lubricate the clamping jaw rail on the large plate to prevent oxidation.

Chapter IV Installation

Space requirements:

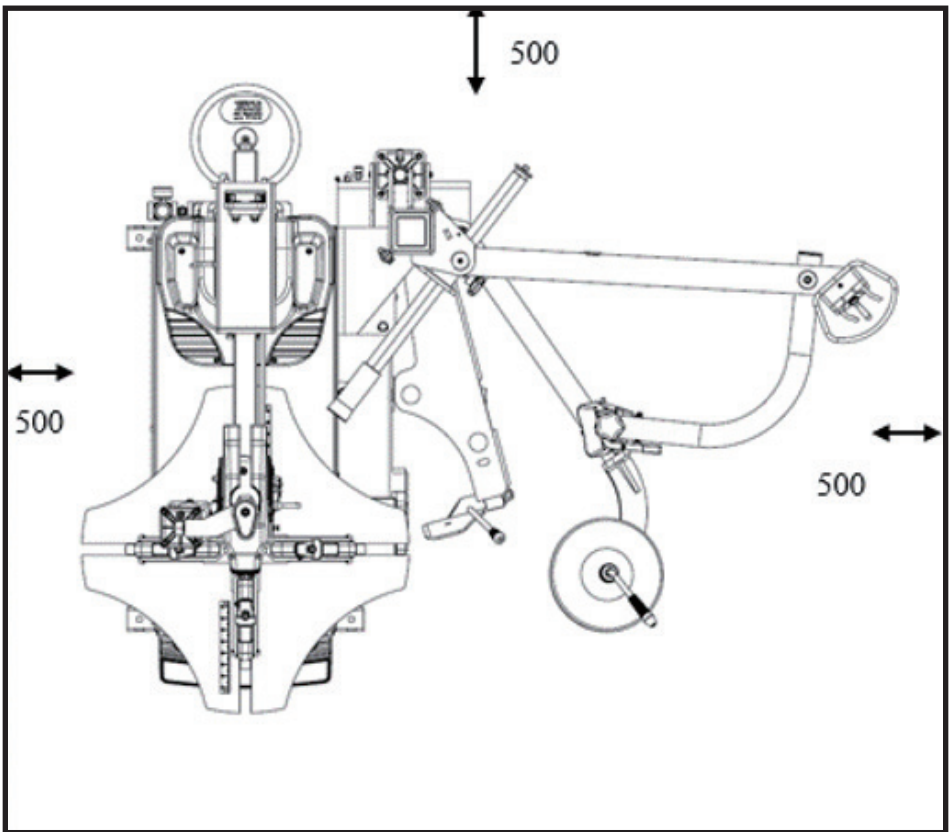


When selecting an installation site, be sure to comply with existing work safety regulations.

- As the tire changer must be connected to a power supply and air source, it is suggested that it should be installed near a power supply and air source in order to ensure the correct operation of its parts without any restrictions. If the machine is installed outdoors, it must be sheltered.



Tire changers with motors shall not be exposed to explosive risk.





Ventilation test:

- When the air source is open, press the air valve locking button (n Fig. 2-1 B) to lock the push-pull arm, and depress the column tilt pedal (l Fig. 2-1 H) release the copper silencer throttle valve on the air valve and turn the throttle valve clockwise to decrease the speed, and vice versa.

Commissioning:

	All electrical works shall be performed by qualified personnel, and the correct power supply shall be provided. Make sure that the phases are connected correctly. Improper electrical connections may damage the motor and invalidate the warranty.
--	--

- Changed, adjust the terminal block according to the electrical diagram in Chapter X. Connect the inlet of the air source triplet (Fig. 2-1 S)
- Check if the characteristics of your system meet the requirements of the machine. If the operating voltage of the machine must be with the compressed air system of the total air source.

	Connect the machine to the electrical system. The electrical system shall be equipped with a safety line and grounded according to local national standards. If necessary, the equipment shall be fitted with leakage protection devices to ensure the safe operation of the equipment. If a power plug is not installed in the tire changer, the user shall install a plug which has a minimum current of 16 A and which complies with the regulations for machine voltage.
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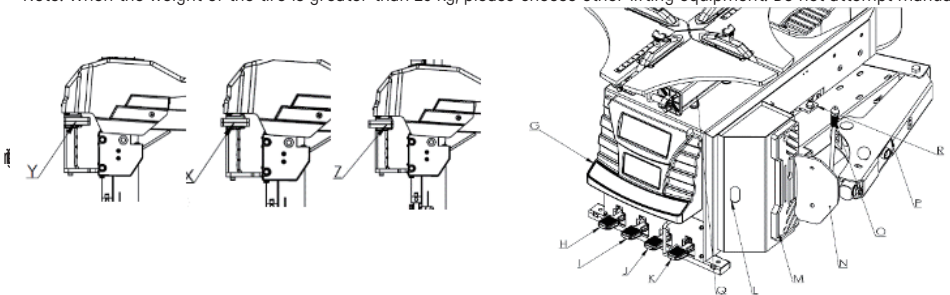
Operation test:

- With the foot pedal (Fig. 4-17 K) depressed, the large plate will rotate clockwise. With the foot pedal released, the large plate will rotate counter clockwise.






	If the large plate does not rotate in the above directions, swap the two lines on the 3-phase binding post.
--	---

- Depress foot pedal H to lean back column U; depress the foot pedal again to restore the column. Depress foot pedal I to open the four clamping jaws; depress the foot pedal again to close the clamping jaws. With foot pedal J depressed, the tire-pressing shovel enters working status; with the foot pedal released, the tire-pressing shovel returns to its original position. With button Y fixed, tire-changing arm U and push-pull arm C are locked; with button Z fixed, tire-changing arm U and push-pull arm C are unlocked.

- Note: When the weight of the tire is greater than 25 kg, please choose other lifting equipment. Do not attempt manual




Chapter V Operation

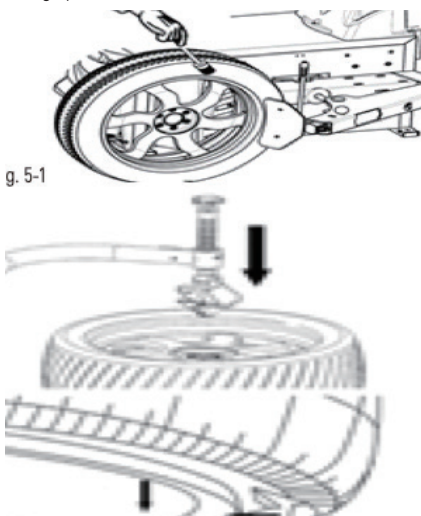
	The valve shall be placed on the right side of the tire-changing mount/dismount head with a gap of 10 cm to avoid damage to the inner tube (Fig. 5-5) .
	If the clamping jaw is in an open position when the tire is pressing, the operator's hands are exposed to high risks. Never put your hands in contact with the tire wall during the tire pressing process.
	It is advisable to use a pressure regulator for the tire changer.
	Apply the supplied lubricating grease (or similar lubricating grease) to the tire edge. Such grease shall be non- toxic, non-flammable and harmless or else the tire edge may sustain serious damage.
	Be sure to use the machine only after you have read and understood the entire manual and warnings. Before operation, deflate the tire and remove all lead weights from the wheel.

The operation of the tire changer includes: a) tire pressing; b) tire changing; and c) tire mounting.

Tire pressing:

	Be extremely careful when conducting the tire-pressing operation. When the tire-pressing foot pedal is driving the tire-pressing arm to move quickly, the arm may endanger everything in the radius of its movement.
---	--

- Check if the tire is deflated. If not, discharge the air from inside the tire. Completely close the clamping claw of the large plate.



- Place the tire between the tire press shovel and the tire press mat. Place the tire press shovel on the side of the tire (FIG. 5-1). Then step on the tire press foot (FIG. 4-2-12) to separate the rim from the tire. Repeat with the rest of the tire to completely detach both sides from the rim. To make the "tire lip" peel off smoothly, a brush can be used to lubricate the tire lip and rim. In the process of leaning on the tire, two sets of adjusting sleeves (FIG. 4-2-18) at the end of the piston rod on the tire cylinder can be adjusted according to the different width of the tire (FIG. 4-2-18). The depth of the big spade leaning on the tire can be adjusted to avoid that the big spade leaning on the tire is too deep, which will hurt the tire or the rim. After the tire is finished by the tire, step on the tread of the rotary table (FIG. 4-2-11), adjust the opening distance of the claw of the rotary table to about 3cm-5cm larger than the outer diameter of the steel ring, place the tire on the rotary table, then press down on the center of the rim, step on the tread and clamp the steel ring tightly. If the operating tire tire wall is hard and the claw cannot enter the joint between the steel ring and the tire, auxiliary arm can be used for auxiliary operation. Align the tire pressure cone to the center of the rim and press down about 2cm-3cm, so that the rim can be successfully clamped. See Figure 5-2.

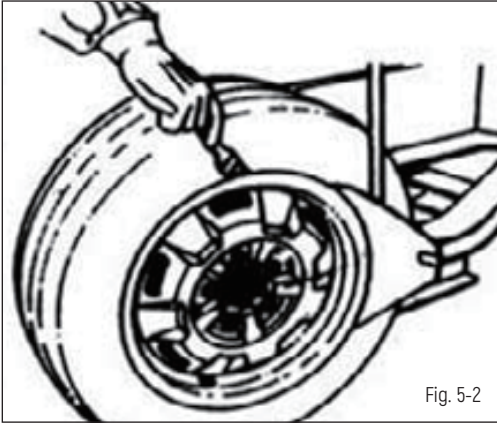
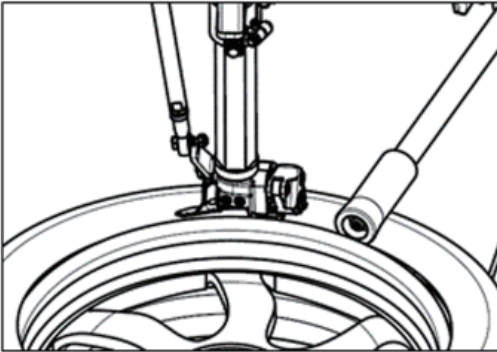


Fig. 5-2

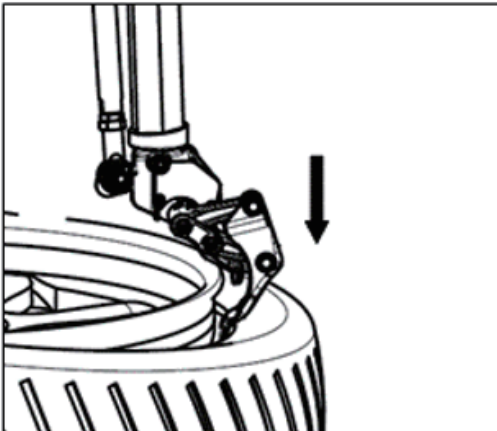
Depress the foot pedal (Fig. 5-1) and move the tire-pressing shovel. When the tire-pressing shovel reaches the end of its stroke or breaks the tire edge, release the foot pedal and gently rotate the tire until it is completely disengaged from the rim.

Remove and install the tire with the automatic tire-changing hook:

Roll the tire with the tire-pressing roller of the auxiliary arm as shown below.

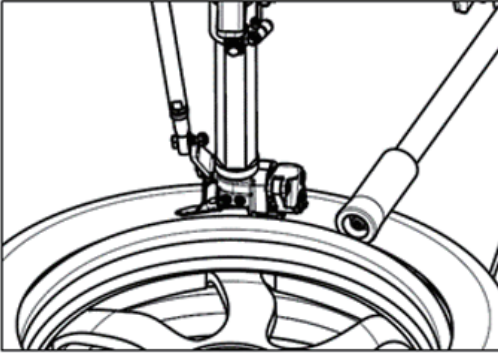


Lower the manual valve of the tire-changing mount/dismount head to extend the tire-changing hook.

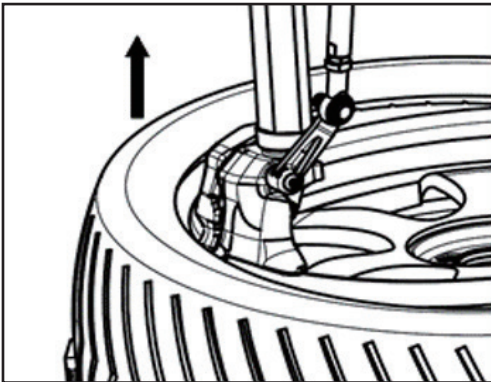




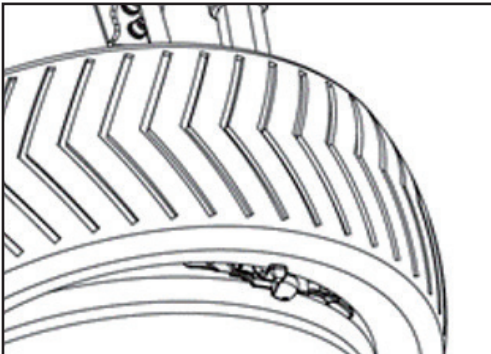
Place the tire-changing hook inside the tire.



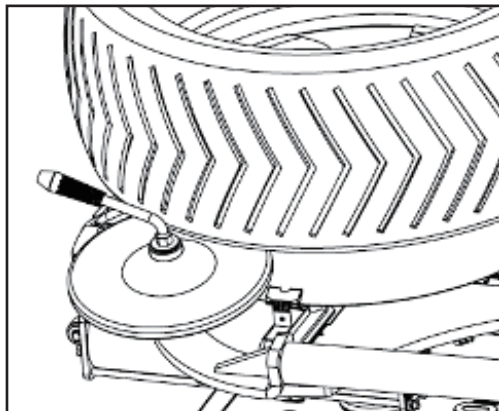
Lift the manual valve of the tire-changing mount/dismount head to retract the tire-changing hook. At this time, the tire-changing hook has lifted the tire out of the rim.



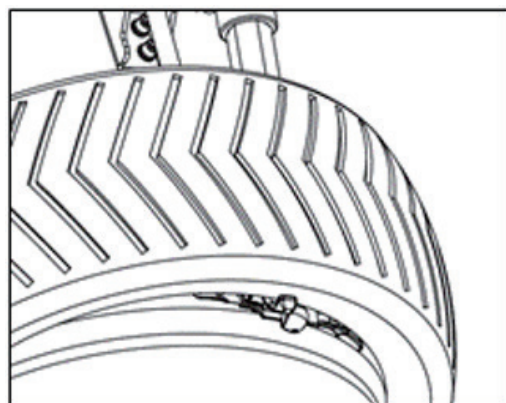
Depress the rotary switch of the spindle so that the chuck drives the tire to rotate clockwise. At this point, the single-sided tire edge is disengaged.



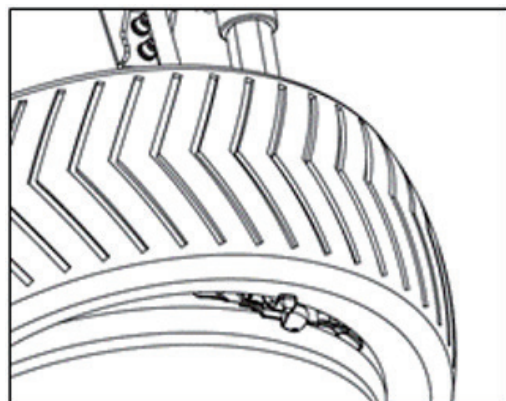
Use the tire-holding plate on the auxiliary arm.



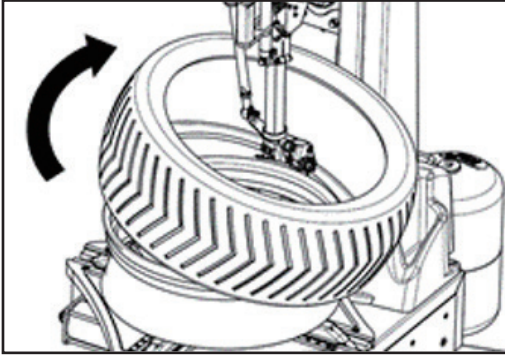
Lower the control handle of the tire-changing hook to extend it.



Hold the outside of the tire with your right hand and lift the control handle of the tire-changing hook to raise the tire.

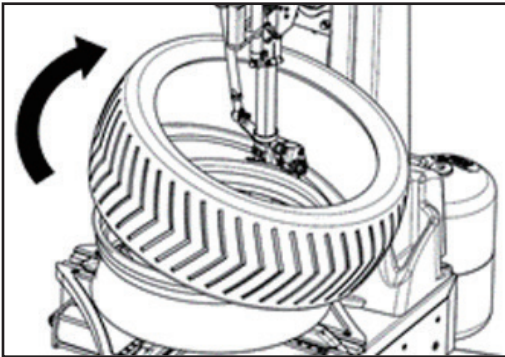


Depress the rotary switch of the spindle so that the chuck drives the tire to rotate clockwise. At this point, the lower tire edge is disengaged.

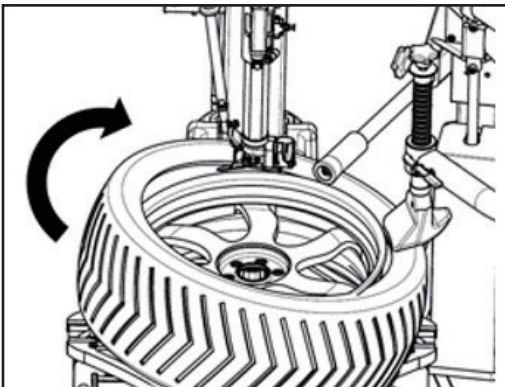


Installation of tire mounting:

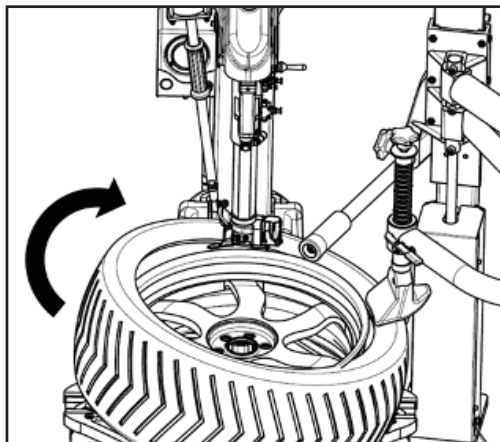
Place the patched tire or new tire on the rim as shown below.



Rotate the rim driven clockwise by the chuck to load the lower layer of the tire.



Press the tire-pressing roller and block below the edge of the rim as shown below to the extent that the tire is not dragged out.



Rotate the rim driven clockwise by the chuck to load the upper layer of the tire.



Most importantly, check the tire and rim to prevent explosion during the inflation process. Before installation, make sure that the tire and tread are not damaged. If they are, do not mount the tire. The rim shall be free of dents and warping. Make sure that there are no tiny cracks inside the aluminum alloy rim or else it may result in risks, especially during inflation.

Lubricate the tire edge with the special lubricating grease to avoid the damage to the edge and facilitate the operation.



Do not put your hands under the tire while locking the rim. The correct operation may position the tire in the exact center of the large plate.



Make sure that no one is standing behind the column during the tilting process.



If the sizes of the rims to be removed are the same, it is not necessary to tighten the tire-changing arm or unlock it frequently. All you need to do is to tilt the column or return it to the working position. The tire-changing arm remains in the working position.



Do not put your hands on the wheel. As the column returns to its working position, it can crush the hand of the operator between the tire and the rim.



Keep hands and other body parts as far away from the tire-changing arm as possible while the large plate is turning so as to prevent industrial accidents.



During the mounting and removal of the tire, the large plate shall rotate clockwise. Counterclockwise rotation is only permissible for error correction when the operating failure is caused by the shutdown of the machine.

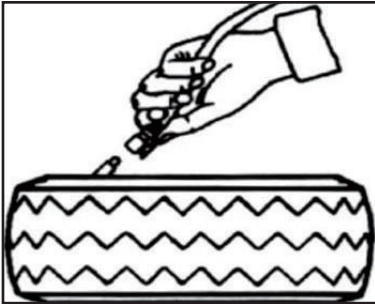
Chapter VI Inflation



As the tire changer is not specially designed and manufactured to protect the people around in case of sudden explosions, extreme care shall be taken when the tire is inflated, and the instructions below shall be strictly followed.

A sudden explosion may cause the operator serious injury or even death. Carefully check and make sure that rim and the tire are the same size. Confirm that the tire is free of defects or wear before inflation. Check the pressure after each jet of air. The maximum inflation pressure applies to all of our tire changers (3.5 bar = 51 psi) . The pressure values recommended by the manufacturer shall not be exceeded. Keep your body and hands as far away from the tire as possible.

Inflate the tire while checking the inflation indicator:



- ① Connect the inflation indicator to the tire valve.
- ② Check the dimensional fit between the tire and the rim.
- ③ Check if the tire edge is fully lubricated and perform further lubrication if necessary.
- ④ Inflate the tire and check the readings of the inflation indicator.
- ⑤ Check the air pressure while inflating the tire.



Warning: There is a risk of explosion.

The tire inflating pressure shall not be more than 3.5 bar (51 psi) . If higher pressure is required, remove the tire from the large plate and inflate it in the special protective cage. Do not exceed the inflating pressure recommended by the manufacturer, and keep your hands and other body parts behind the tire during inflation. The inflation procedure shall only be conducted by specially trained and authorized personnel. Other personnel shall not work or stand near the tire changer.

Inflate the tire with the optional IT system:

The optional system (IT system) is suitable for the inflation of vacuum tires.



During this process, the noise may reach 85 dB. It is recommended to wear noise protection gear.

- ① Fix the wheel on the large plate and connect the inflation head to the air valve.
- ② Check the dimensional fit between the tire and the rim.
- ③ Check if the tire edge is fully lubricated and perform further lubrication if necessary.
- ④ Depress the foot pedal to the middle position.
- ⑤ Check the air pressure while inflating the tire until the pressure reaches the required value.



Warning: There is a risk of explosion.

The tire inflating pressure shall not be more than 3.5 bar (51 psi) . If higher pressure is required, remove the tire from the large plate and inflate it in the special protective cage. Do not exceed the inflating pressure recommended by the manufacturer, and keep your hands and other body parts behind the tire during inflation. The inflation procedure shall only be conducted by specially trained and authorized personnel. Other personnel shall not work or stand near the tire changer.

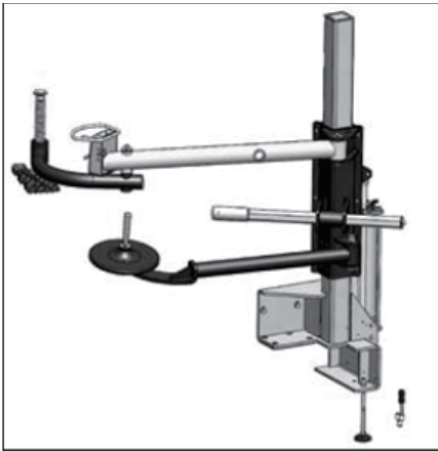
Chapter VII Installation and Operation of Auxiliary Arm

As one of the most important auxiliary devices, the auxiliary arm can be attached to our 20" or above tire-changing machines separately or in pairs to help separate hard rims and flat tires, as this task is very difficult or even impossible to complete manually, as shown in Fig. 7-1.

Installation of left auxiliary arm (type II) :

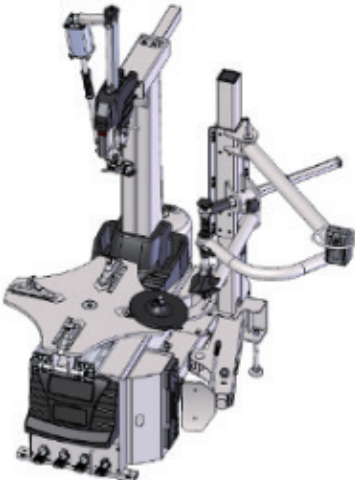


Power and air sources must be completely cut off before installation.



Take the auxiliary arm out of the packaging box and install the corresponding parts according to the drawings.

Handle the machine as shown below.



Fix the auxiliary arm to the left side of the machine with a wrench and tighten the corresponding screws and nuts.

Chapter VIII Maintenance

Precautions:



Maintenance shall only be performed by authorized personnel.

The daily maintenance described in the manual is necessary for the correct operation and long service life of the tire changer. Infrequent maintenance may harm the operation and reliability of machine, and expose the operator or others to danger.



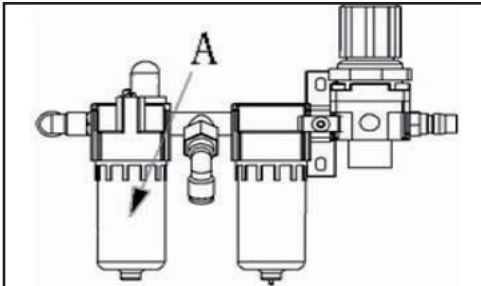
Disconnect the power and air sources before conducting any maintenance.

Faulty parts shall be replaced with the same original parts by a professional. It is strictly forbidden to remove or modify the safety systems (pressure limiting valve and pressure regulating valve) .



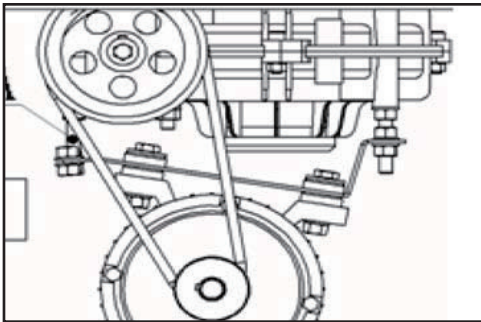
Disclaimer: The manufacturer assumes no liability for damage caused by the use of spare parts from other manufacturers or the modification or removal of safety systems.

Maintenance:



Clean the large plate with diesel and lubricate the clamping jaw rail weekly to prevent dust accumulation. Perform the following operations at least once per month

Fig. 8-1



Check the oil level in the lubricating oil cup. If necessary,loosen the screw to fill the reservoir (r Fig. 8-1) and only lubricate the compressed air circuit with ISO VG viscous lubricating oil (ISO HG) .

Fig. 8-2

Adjustment of gap between tire-changing head and rim:

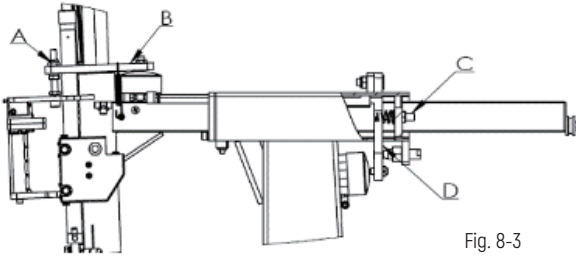


Fig. 8-3

- Adjust the locking plate of the hexagonal shaft for the upper and lower gaps; close the air source and remove the protective cover of the vertical hexagonal shaft. If the gap is too large, adjust the front nut of the locking plate of the shaft downwards with a #16 exterior hexagonal wrench (Fig. 8-3A) ; if the clearance is too small, adjust it upwards.

- Adjustment of square locking plate for front and rear gaps.

- Close the air source and adjust the two square locking plate jackscrews at the rear of the upper seat of column with a #6 internal hexagonal wrench (Fig. 8-3B) . If the gap is too large, fit the jackscrew and lock it with a #18 external hexagonal wrench; if the gap is too small, adjust it in the opposite direction.

Foot pedal switch repair:

- Turn off the power supply and air source, and remove the protective cover. Take out the foot pedal chassis before repairing the switch.

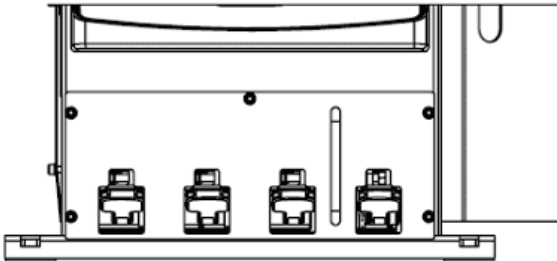


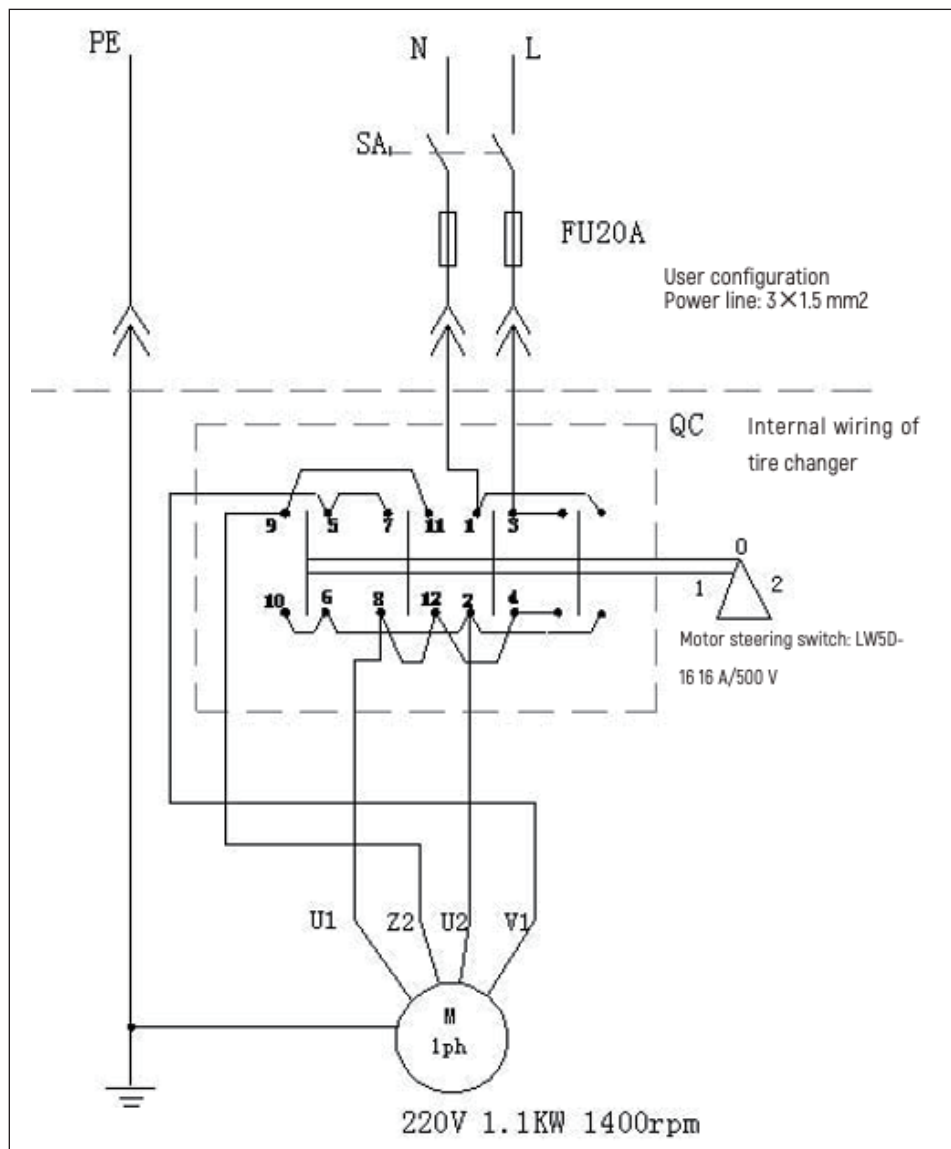
Fig. 8-4

Chapter IX Faults

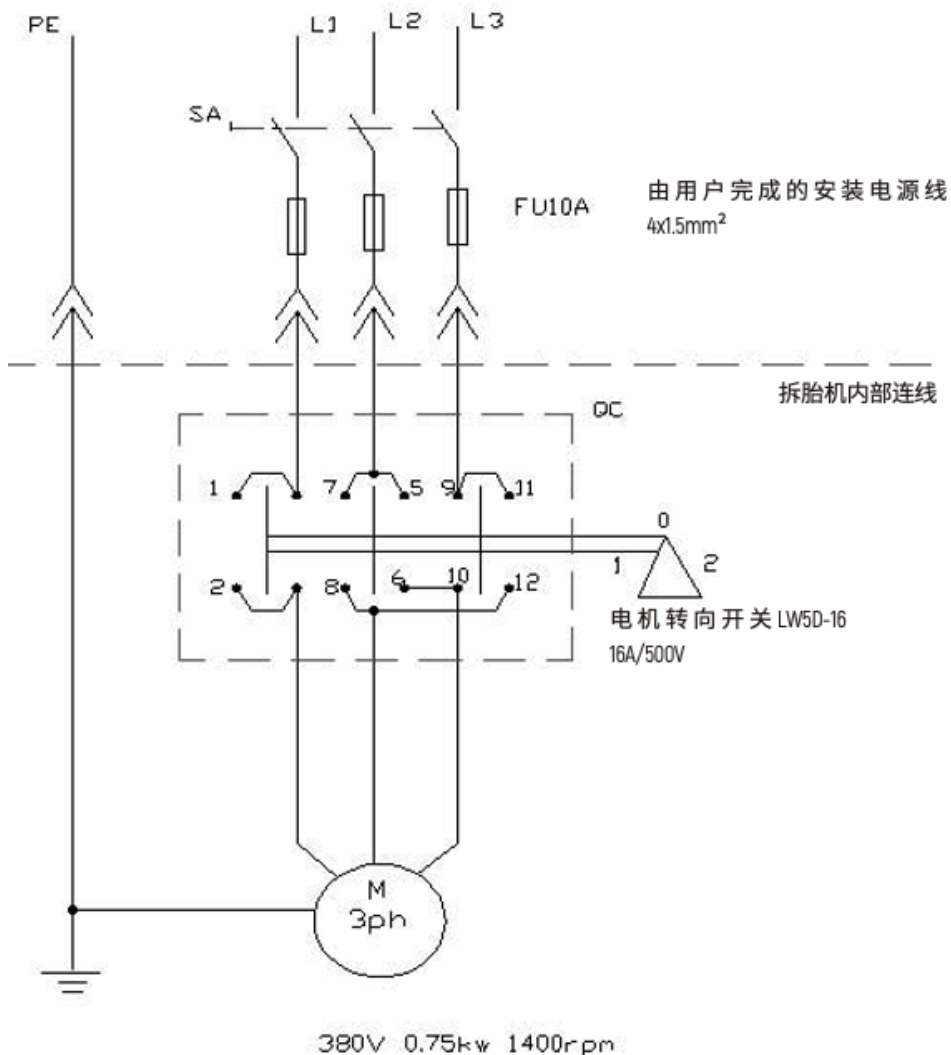
Troubleshooting	Possible causes	Troubleshooting
Turntable only rotates one way	Burnout of universal change-over switch contact	Replace universal change-over switch
Turntable failure	Belt damage	Replace belt
	Belt too loose	Adjust belt tightness
	Fault of motor or power supply	Check power wiring of motor, power supply and junction box
	Damage of universal change-over switch	Motor is burned out; replace motor
Replace universal change-over switch		
Failure of turntable to clamp rim properly	Tear of clamping jaw	Replace clamping jaw
	Leakage of clamping cylinder	Replace leaking seals
Locking failure of square shaft and hexagonal shaft	Locking plate not in place	Regulate adjustment screw of locking plate
	Leakage of locking cylinder	Replace sealing ring of cylinder
Failure of push-pull arm	Square locking plate not in correct position	See Chapter V Maintenance
Sticking of hexagonal shaft	Hexagonal locking plate not in correct position	Adjust square and hexagonal locking plates
Too fast or slow tilt or return of column	Too fast or slow exhaust of column cylinder; too low air source pressure	Open side panel and adjust flow valve according to (3.2.1)
Return failure of chassis foot pedal	Damage of foot pedal return torque spring	Replace torque spring
Motor failure or insufficient output torque	Jam of drive part	Rectify jamming point
	Capacitor breakdown	Replace capacitor
	Insufficient voltage	Wait for voltage recovery
	Short circuit	Rectify
Insufficient output of cylinder	Air leakage	Replace seals
	Mechanical barrier	Rectify barrier
	Insufficient pressure	Adjust pressure as required

Chapter X Electrical and Gas Circuit Diagrams

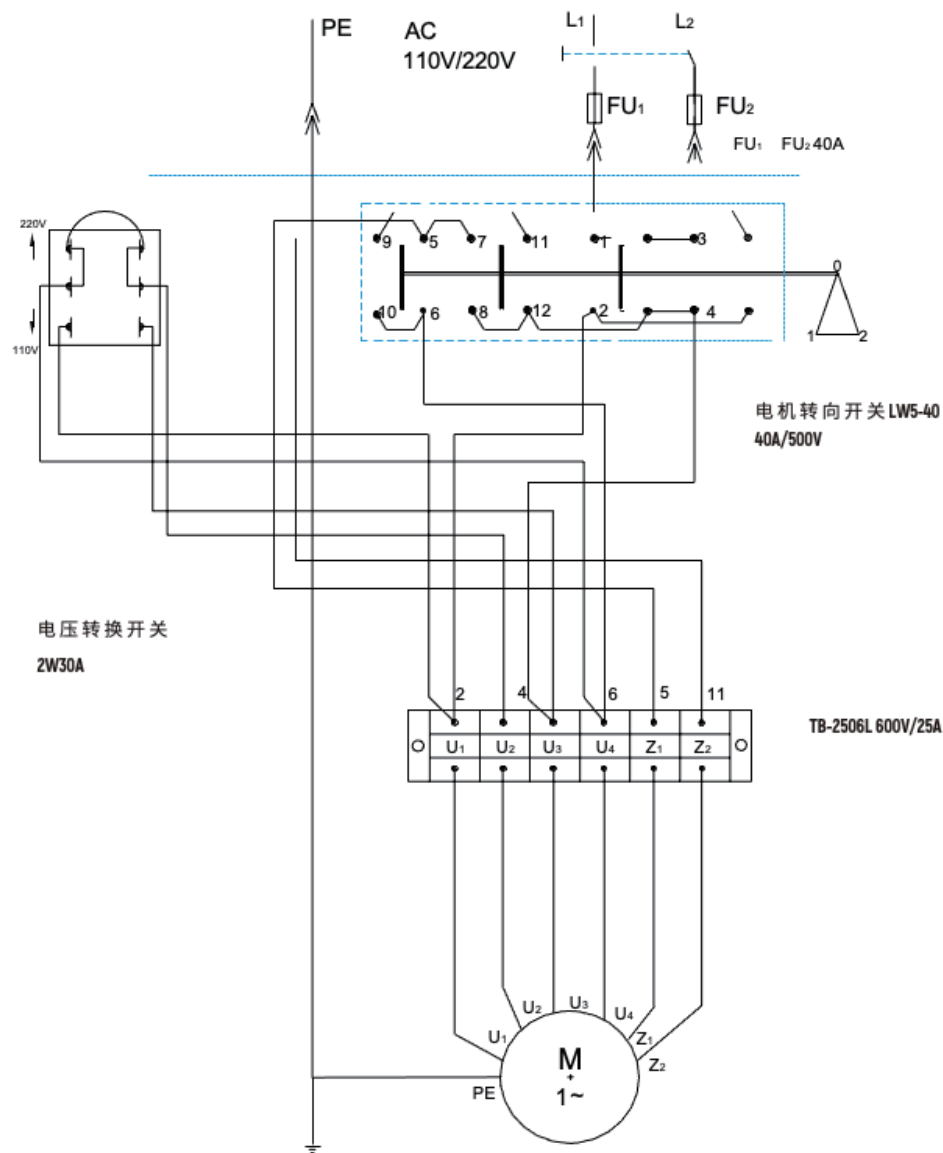
220 V Electrical Schematic Diagram:



220 V Wiring Schematic Diagram of Tire-Changer Single-Phase Motor (General)

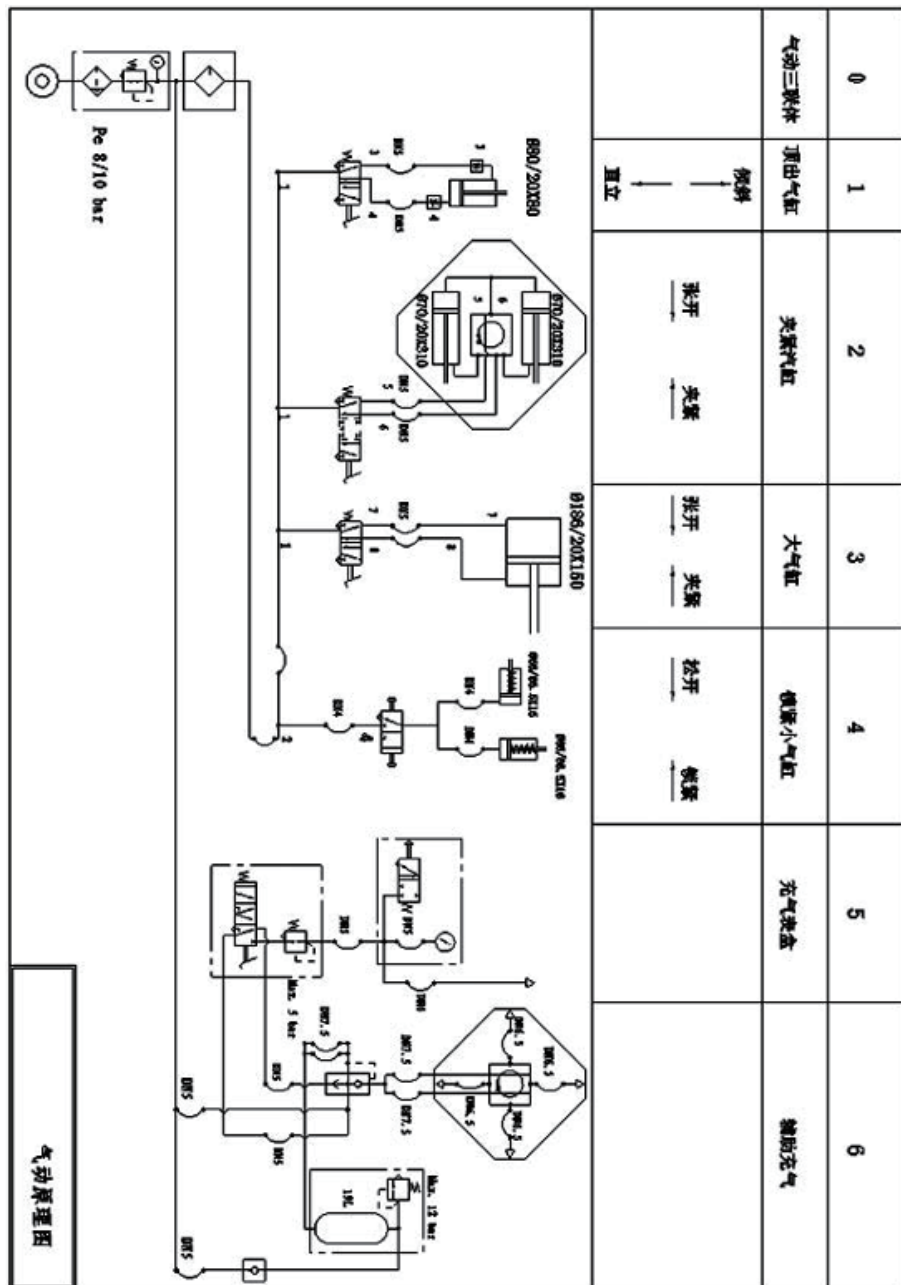
110V /220V Electrical Schematic Diagram:

380 V Wiring Schematic Diagram of Tire Changer Three-Phase Motor (General)

110/220 V Electrical Schematic Diagram:



Wiring Diagram II of Tire Changer Double-Voltage Motor

Pneumatic Schematic Diagram:



适用型号 / Model

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版本号 / Version No

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