

Equipment name and model: 8-meter geomembrane production line JG-TGM8000

No.	Commodity	Type	Q'ty (set)	Amount
			FOB Qingdao port of China IN USD	
1	3-Layers Plastic Geomembrane Production Line 三层塑料土工膜生产线	JG-TGM8000	1	490,000
			Total	490,000

Note: The price is valid for one month. 价格有效期一个月。

1. Delivery time 交货期:

90 working days.

90 工作日。

3. Terms of Payment 付款方式:

30% by T/T as down payment. After the examination of the goods pay 70% by T/T before picking up the goods.

30% TT 预付, 70%TT 尾款发货前付清。

4. Shipping container 海运集装箱

40HQ×10

5. Installation and commission 安装调试:

The seller will send engineers stay in 30 days for commissioning.

The relevant charges such as salary US\$100/person/day, visa and round way air-tickets will be borne by Buyer.

卖方派工程师去买方工厂调试 30 天, 买方需承担食宿、往返机票、签证及每人每天\$100 工资。

6. Guarantee 质保期:

12 month, lifelong service for customer.

12 个月质保, 终生服务。

7. Electricity unit 电器配置

Main motor

Wannan or Siemens

主电机

皖南或西门子



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Main transducer	Siemens or Danfoss Brand
主变频器	西门子或丹佛斯
Main low voltage electrical apparatus	Schneider Brand
主低压电器	施耐德品牌
Main temperature controller meter	OmRon Brand
主温控仪	欧姆龙
Voltage	380V 50HZ
电压	380V 50HZ

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2023-9-8

合同附件**Appendix**合同号 **Contract No.:**日期 **Date:**

设备名称及型号: 8米土工膜生产线 JG-TGM8000

Equipment name and model: 8-meter geomembrane production line JG-TGM8000

设备应用和特点**Equipment Applications and Features**

生产线采用 180 单螺杆挤出机双机, 配置熔体泵, 并可在线复合纺布进行流延复合, 生产土工复合膜, 用于道路建设, 土木工程等领域。

设备自动化程度高, 操作简单, 产量高。生产的产品表面光滑, 性能稳定, 内久力强。

The production line is equipped with a twin-screw extruder with 180 single-screw extruders, equipped with a melt pump, and can be compounded with an in-line composite spinning cloth to produce composite geomembranes for road construction, civil engineering and other fields.

The equipment has a high degree of automation, simple operation and high output. The product produced has a smooth surface, stable performance and strong internal strength.

主要技术参数 The main technical parameters

最大流延幅宽(mm) Maximum streaming width	8000
厚度(mm) Thickness	0.5 ~ 3
主挤出机: 螺杆直径×长径比(mm) Main extruder: screw diameter L/D	Φ180×33/1x2
挤出机挤出能力(Kg/h) Extruder extrusion capacity	1300 ~ 1800Kg/h (见配混系统)
生产线线速度 (M/min) Line speed(M/min)	约 1-3m/min
钢辊直径 Steel roller diameter	Φ800
辊长(mm) Roller length (mm)	8300
最大收卷直径(mm) Maximum winding diameter	Φ700
总功率(KW)	About 900KW

Total power (KW)	
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生产条件 Production conditions

装机区域: 长×宽×高; 25m×20m×6m

Installed area: length × width × height:25m×20m×6m

工艺流程 Process flow

准备→混料→加温挤出→三辊压延→冷却→牵引→双回程储布→牵引(计长、横切)→收卷 Preparation → mixing → extrusion by heating → three-roll rolling → cooling → hauling → double-return storage → traction (counting, cross cutting) → winding



设备清单 Equipment List

序号 No.	名称 Name	数量 Q'ty	备注 Remark
1	配混系统 Compounding system	1 Set	
2	挤出机 Φ180×33/2 Extruder Φ180×33/2	Total 2 Sets	
3	模具 Mould	1 Set	
4	液压换网系统 hydraulic screen changing system	2 Sets	
5	熔体泵 Melt pump	2sets	
6	三辊压光机 Φ800×8300mmx3 Three-rolls calendrer Φ800×8300mmx3	3 根 3pcs	减速机：国茂 辊子调心轴承品牌：国产 压光辊品牌：国产 压光辊材料：45# 压光辊硬度：HRC > 60 胶辊品：国产 胶辊材料：硅胶辊 胶辊硬度：邵氏硬度 80 过渡滚筒材料：45# 过渡辊带座轴承：开封轴承 机架钢板焊接材料：Q235 Reducer: Guomao Brand of roller self-aligning bearing: domestic Calender roll brand: domestic Calender roll material: 45# Hardness of calender roll: HRC > 60 Rubber roller brand: domestic Cots Material: Silicon cots

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			Cots hardness: Shore hardness 80 Transition drum material: 45# Transition roll belt seat bearing: unsealed bearing Frame steel plate welding material: Q235
7	在线废边切断粉碎机 Online crusher	1set	
8	第一牵引部分 First traction section	1set	
9	储布部分 Storage section	1set	
10	第二牵引部分 Second traction section	1set	
11	自动横向切断 Automatically cut device	1set	
12	收卷装置 Winder device	1set	
13	电器装置 Electric device	1set	
14	随机配件 Spare parts	1set	

主要技术参数

Main Technical Parameters:

1.配混系统配混系统 1套	
1.Compounding system 1set	
数量	1套
Quantity	1 set
原料配混组份	4组份
Raw material compounding components	4 components
配混能力	1300-1800kg/h
compounding ability	
计量精度	±0.5%

Measurement accuracy	
气动式喂料 pneumatic feeding	1 套 1set
原料状态 Raw material status	颗粒原料 Granular raw material
上料方式 Feeding method	真空加料 Vacuum feeding
混合方式 Mixed mode	双挽式混合 Double-blade mixing
混合功率 Mixing power	1.5kw
料仓材质 Silo Material	不锈钢 Stainless Steel
原料卸料方式 Raw material discharging method	气动式卸料 Pneumatic unloading
原料配比控制 Raw material ratio control	电脑控制 Computer control
	
2.挤出机 2套 2.Extruder 2sets	
料筒螺杆 Barrel screw	Φ180×33/1x2
减速器 reducer	采用体积小，承载能力大，传动平稳，噪音低，效率高的高精度硬齿面带推力座的减速器。 It adopts a high-precision hardened surface belt thruster reducer with small volume, large bearing

	capacity, smooth transmission, low noise and high efficiency.
减速箱型号 Reducer Model	品牌: 国茂 250KW 电机 Brand: Guomao 250KW motor
电机、变频器 Motor, frequency converter	西门子 Siemens
数量 Quantity	2 台 2 sets
调速方式 Speed control method	变频调速 frequency
规格 Specifications	250KW (Siemens)x2
数量 Quantity	2 台 2 sets
料杆 The material rod	采用分离型混合结构, 料筒采用八区加温、风机冷却, 确保温度精确, 便于使用回料和填充料。 adopts a separate mixed structure. The material cylinder adopts eight zones for heating and fan cooling to ensure accurate temperature and facilitate the use of recycled materials and fillers.
型号规格 Model specifications	Φ180×33/1x2
材质 Material	38CrMoAl 调质氮化处理, 氮化深度 0.5—0.7 38CrMoAl tempering and nitriding, nitriding depth 0.5-0.7
螺杆硬度 Screw hardness	HV≥740
螺筒硬度 Barrel hardness	HV≥940
产量 Output	600-800kg/hx2



3.模具 1套

3.Mould 1set

规格:	8300mm(带分配器)
Specifications:	8300mm (with dispenser)
总加热功率	约 110KW
Total heating power	about 110KW
风机冷却	铸铝加热器
Fan cooling	Cast aluminum heater
参数 Special	<p>采用衣架式型模、内加热方式，组合式模口，模腔内带阻流条结构保证膜口压力均匀从而减少产品纵向厚薄偏差，使出膜平整，调整灵活方便，具有调节幅度大，能在同一台机组上生产厚薄差别较大的产品</p> <p>材质 5CrMnMo 调质处理，内腔打磨抛光，镀硬铬研磨。</p> <p>模具加热 19 区，功率约 110KW，模具装有阻流棒和可变模唇，模具宽度 8300mm</p> <p>分配器结构 A/B/A 或者 A/B，分层比例可调节</p> <p>The hanger-type mold, internal heating method, combined die mouth, and the structure of the inside of the cavity to ensure the uniform film pressure to reduce the longitudinal thickness deviation, to make the film flat, flexible and convenient adjustment, with a large adjustment range, can Produce thicker</p>

	<p>and thinner products on the same unit</p> <p>Material 5CrMnMo quenched and tempered, internal cavity polished, hard chrome plated.</p> <p>Mold heating 19 zones, power about 1100KW, The mold is equipped with choke bars and variable die lips, and the mold width is 8300mm</p> <p>Distributor structure A/B/A or A/B with adjustable layer ratio</p>
<p>电器柜 Electrical cabinet</p>	<p>采用国内知名品牌电气元件，操作方便，质量可靠。</p> <p>The use of domestic well-known brand electrical components, easy operation, reliable quality.</p>
<p>安装方式 Installation method</p>	<p>根据生产工艺要求，各种型号的模头能适合不同角度的安装方式</p> <p>如生产土工膜，我司建议选择卧式安装方式是最稳定的。</p> <p>According to the production process requirements, various types of die can be installed at different angles.</p> <p>For the production of geomembrane, we recommend that the horizontal installation method is the most stable.</p>

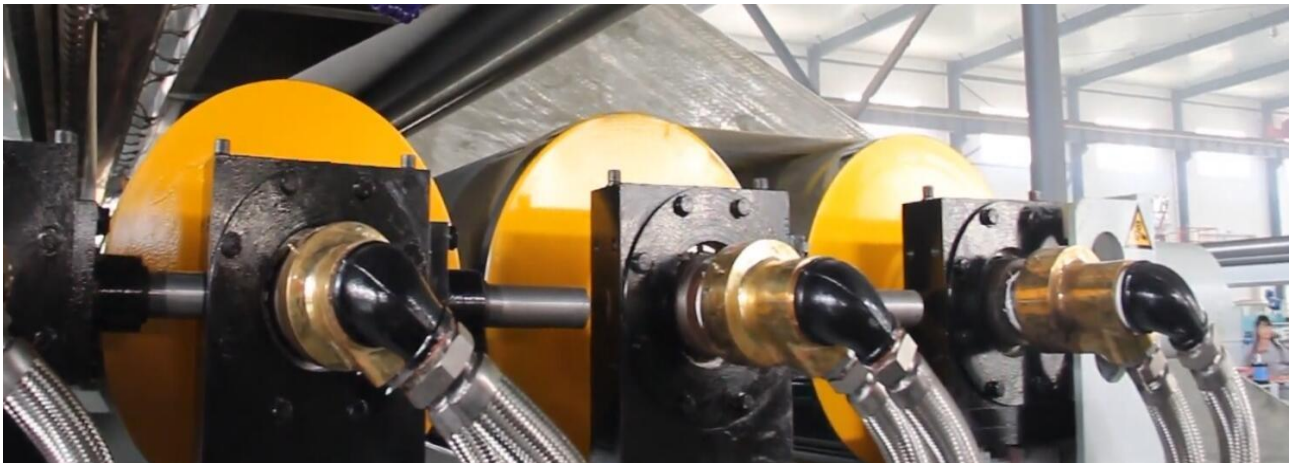
**4. 液压换网系统 2套****4. hydraulic screen changing system 2sets**

结构形式 Structural form	双板双工位换网器, 配液压站(最高压力 16MPA) Double plate double station screen changer, equipped with hydraulic station (maximum pressure 16MPA)
5. 熔体泵 2套 5. Melt pump 2sets	
计量齿轮泵 Measuring gear pump	500cc/r×2 sets
驱动功率	30KW×2

Drive power	
调速方式 Speed control method	变频调速 frequency
控制方式 Control method	自动压力控制 Automatic pressure control
压力传感器 Pressure sensor	数量 3 套 x2 测量压力 quantity 3 sets x2 to measure pressure
6. 三辊压光机 Φ800×8300mm×3 根	
6.Three-rolls calendrer Φ800×8300mm×3pcs	
参数 spec.	共 3 根辊筒，其中光辊共 3 套，分别带有独立的驱动和控制系统，能够不停机生产光面以及花面的土工膜产品 There are 3 rollers in total, including 3 sets of smooth rollers, each with independent drive and control systems, which can produce smooth and embossed geomembrane products without stopping machine.
单独冷却架 Separate cooling rack	长度 4m(根据客户要求，可加长) length 4m (according to customer requirements, can be extended)
钢棍 Steel rod	Φ100×8500x6 根 Φ100×8500x6pcs
钢棍 形式 Steel rod type	采用夹套式强制水循环冷却，表面镀硬铬，抛光处理。 Jacketed forced water circulation cooling, hard chrome plating, polished.
减速机 Reducer	品牌：国茂 Brand: Guomao
辊子调心轴承品牌 roller self-aligning bearing	品牌：国产 Brand: Domestic
压光辊 Calender roll brand	品牌：国产 Brand: Domestic
压光辊材料 Calender roll material	45#

压光辊硬度 Hardness of calender roll	HRC > 60
胶辊 Rubber roller	品牌: 国产 Brand: Domestic
胶辊材料 Cots Material	硅胶辊 Silicon cots
胶辊硬度 Cots hardness	邵氏硬度 80 Shore hardness 80
过渡滚筒材料 Transition drum material	45#
过渡辊带座轴承 Transition roll belt seat bearing	开封轴承 unsealed bearing
机架钢板焊接材料 Frame steel plate welding material	Q235
钢辊传动 Steel roller drive	采用齿轮箱三辊独立传动。 Use gear box three-roll independent transmission.
电机功率 Motor power	11KW×3 台 11KW×3sets
变频器 Inverter	11KW×3 台 11KW×43sets
压延机移动 Calendrer move	采用大减速比的蜗轮蜗杆减速器, 带制动电机控制控制, 防止在生产过程中产生移动。 A large reduction ratio worm gear reducer with brake motor control to prevent movement during production.
钢辊压紧 Steel roller compaction	采用液压压紧方式(间隙为数显) Adopt hydraulic pressing method (Gap is digital display)
规格 Specifications	T40x200(带微调)×3 只 T40x200 (with fine adjustment) ×3 only
导辊	Φ150×8400(表面镀硬铬)×3 根

Guide roller	Φ150×8400(hard chrome plated on the surface)×3
配水温机	3 台
Water temperature machine	3sets
加热功率	24KW×3
Heating power	24KW×3
电机	4KW×3
Motor	
循环水泵	不锈钢多级泵
Circulating pump	Stainless Steel Multistage Pump
机架	采用δ=50 钢板焊接×1 套
Rack	with δ = 50 steel plate welding × 1 set



7.在线废边切断粉碎机

7.Online crusher

破碎装置	1 套
Crushing device	1 set
整机功率	7.5KW
Machine power	
牵引机	1.1KW
Tractor	
在线破碎装置	4 KW
Online crusher	
高压风机	2.2KW
High pressure fan	
参数	在线废边自动回收系统, 带有噪音阻隔装置, 实

Spec.	<p>现废边在线粉碎，并自动回收到混料装置中，实现生产过程中无废料</p> <p>Online waste edge automatic recycling system, with noise blocking device, realizes online crushing of waste edge, and automatically recycles it into the mixing device to achieve no waste in the production process</p>
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8.第一牵引部分	
8.First traction section	
牵引主动辊 Traction drive roller	Φ290×8400mm×1 根
材质 Material	钢棍，表面镀铬 steel rod, Chrome plating
牵引被动辊 Traction passive roller	Φ240x8400mm(表面包胶)×1 根
材质 Material	丁晴橡胶 Nitrile rubber
硬度	75-80

Hardness	
牵引电机 Traction motor	3KW
牵引压紧 Traction pressure	气动压合×1套 pneumatic pressure × 1 sets
电器控制 Electrical control	与三辊压延同步控制×1套 with Three-rolls rolling synchronous control × 1 set
分切方式 Cutting method	刀片式 Blade type
调节方式 Adjustment method	机械式,左右可调幅宽 Mechanical type, Left and right adjustable width



9. 储布部分

9.Storage section

导布辊 Guide roller	Φ120×8400(表面镀硬铬)×7 根 Φ120×8400 (hard chrome plated on the surface)× 7 pieces
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10.第二牵引部分	
10.Second traction section	
牵引主动辊 Traction drive roller 材质 Material	Φ290x8400mm×1 根 Φ290x8400mm×1 pcs 钢棍, 表面镀铬 steel rod, Chrome plating
牵引被动辊 Traction passive roller 材质 Material	Φ240x8400mm(表面包胶)×1 根 Φ240x300mm (surface covered)×1 丁晴橡胶 Nitrile rubber
硬度 Hardness	75-80
牵引电机 Traction motor	3KW
牵引压紧 Traction pressure	气动压合×1 套 pneumatic pressure × 1 sets
机架 Rack	120×60×5 方管焊接×1 套 120×60×5 square tube welding×1 set
电机控制 Motor Control	与收卷同步控制, 变频控制 with Winding Synchronization Control, Frequency Control
静电消除器 One static eliminator	一台 one set



11.自动横向切断	
11.Automatically cut device	

切断横向移动导轨 Cut off the lateral movement guide	8800×2 根
裁断方式 Cutting method	刀片式切割裁断 Blade cutting
切断电机 Cut off the motor	BWD2-29-1.1×1 台 BWD2-29-1.1×1set
计米器 Meter counter	1 只 1 set



12.收卷装置 一套 12.Winder device One set	
收卷方式 Winding method	摩擦式收卷 Friction winding
收卷辊 Roller	Φ400x8400mm(表面镀硬铬)×2 根 Φ400x8400mm (hard chrome plated on the surface) ×2
导辊 Guide roller	Φ100x8400mm×1 根 Φ100x8400mm×1
收卷电机 Winding motor	伺服电机 BWD31-187-1.5KW (变频调速)×1 台 Servo motor BWD31-187-1.5KW (frequency control) × 1set
最大收卷直径 Maximum winding diameter	Φ700
卸卷方式	气动式卸卷

Unloading method	Pneumatic unloading
电器控制柜 Electrical Control Cabinet	收卷直联独立控制柜×1 台 winding Direct Control Cabinet × 1
静态消除器 static eliminator	一套 包含 One set include
其他: Others:	
料斗干燥机 Hopper Dryer	一套 包含 One set include
液压车 hydraulic truck	一套 包含 One set include
在线切割刀 (切割不同幅宽) Online Knife (cut different width)	4 个 4pcs
13. 电器装置 13. Electric device	
电机 Main motor	皖南或西门子 Wannan or Siemens
主变频器 Main drive	丹佛斯或霍尼韦尔 Danfoss or Honeywell
主低压电器 Main transducer	西门子或施耐德品牌 Siemens or Schneider brand
温控仪表 Main Temperature controller meter	OmRon
PLC 电脑控制 PLC computer control	西门子 Siemens
电压 Electricity voltage	380V/50HZ

15. 配件清单

15. Spare parts List

编号 No	名称 Name	尺寸(规格) Model	数量 Qua	备注 Remark
343705	金属网 Metal mesh	φ150	2	
373400	胶木把手 Bakelite handle	L=120	2	
330622	轴承 Bearing	61908-2Z	2	
353706	扩口直通管接头体 Flared straight pipe connector body	G1/2"/M18×1.5 (扩口)	2	
350903	快插接头 Quick connector	APC08-03	2	
350902	快插接头 Quick connector	APC08-02	2	
352603	消声器 muffler	BSL01	1	
350926	单向节流阀 One-way throttle valve	ASL10-04	1	
350406	手转阀 Hand operated valve	4HV430-15	1	
350908	快插接头 Quick connector	APC10-04	1	
352604	消声器 muffler	1/2"	2	
350937	Y型三通 Y-shaped tee	APY10	2	
351913	铜补芯 Copper bushing	3/4×1/2	2	
330693	轴承 Bearing	6206zz	2	
372910	双辐条手轮 Double spoke handwheel	φ160 孔φ16	1	
330339	推力球轴承 Thrust ball bearing	51104	2	
310895	外栓 External bolt	M30×60	2	
310416	弹垫 Spring washer	φ30	2	
310316	平垫 Flat pad	φ30	2	
310116	螺母 Nut	M30	2	
353773	扩口式三通管接头体 Flared tee connector body	M18×1.5	2	
330720	带座轴承 Bearing with seat	UCP209	1	
	纵切刀 Slitter	120×40×2 TJ-4.0TGM-QYFQ-21	3	

	横切刀 Cross cutter	122×60×2 TJ-6.0TGM-QYQG-42	1	
310657	内栓 Internal spigot	M30×90	2	
310658	内栓 Internal spigot	M30×80	2	
240909	数显百分表 Digital dial indicator	Φ60 表盘 (0-12.7mm)	1	
310513	内栓 Internal spigot	M6×15	2	
310237	镀锌螺母 Galvanized nut	M16	2	
351003	旋转接头 Rotary joint	HD-25 左旋	1	
351003	旋转接头 Rotary joint	HD-25 右旋	1	
310622	内栓 Internal spigot	M20×45	2	
310718	12.9 及内栓 12.9 and internal bolt	M16×60	2	
310771	12.9 及内栓 12.9 and internal bolt	M20×55	2	
350601	球阀 ball valve	4 分	1	
351505	金属软管 Metal hose	Φ10×600, C 型接头 M18×1.5	1	
351505	金属软管 Metal hose	Φ10×500, C 型接头 M18×1.5	1	
350262	节流阀 throttle valve	KC-03	2	
	橡胶垫片 Rubber gasket	DN80PN1.0MPa	2	
350603	不锈钢球阀 Stainless steel ball valve	一寸	2	
360707	活节垫 Articulated pad	2.5 寸	2	
350674	不锈钢球阀 Stainless steel ball valve	2.5 寸	1	
373435	紧定手柄 Locking handle	外丝 M8×40	2	
374033	磁珠 Magnetic beads		4	
370602	链条 chain	15.875	2 挂	
330615	轴承 Bearing	6207-2Z	2	
360517	轴卡 Shaft clamp	φ35	2	
310805	外栓 External bolt	M8×25	2	
310550	内栓 Internal spigot	M12×25	2	

310553	内栓 Internal spigot	M12×40	2	
310562	内栓 Internal spigot	M12×1202	2	
373407	五角星把手 Five pointed star handle	M6	2	
373202	合页 Hinge	50#	4	
310536	内栓 Internal spigot	M6×15	4	
310514	内栓 Internal spigot	M6×20	4	
322770	铸铝加热圈 Cast aluminum heating ring	TJ-4.0TGM-150ZJ-J-01 φ230×550	1	380V
322383	不锈钢加热棒 Stainless steel heating rod	TJ-4.0TGM-150ZJ-J-02 φ18×190	2	220V
322028	不锈钢加热圈-1 Stainless steel heating ring-1	TJ-4.0TGM-150ZJ-J-03 φ100×110	2	220V
320207	不锈钢加热圈-2 Stainless steel heating ring-2	TJ-4.0TGM-150ZJ-J-04 φ90×60	2	220V
320023	不锈钢加热圈-3 Stainless steel heating ring-3	TJ-4.0TGM-150ZJ-J-05 φ90×110	2	220V
320327	不锈钢加热圈-4 Stainless steel heating ring-4	TJ-6.0TGM-150ZJ-J-06 φ150×130	1	220V
320256	不锈钢加热圈-5 Stainless steel heating ring-5	TJ-6.0TGM-150ZJ-J-07 φ120×150	1	220V
347001	交流接触器 AC contactor	LC1D09M7C 9A	2	施耐德
347008	交流接触器 AC contactor	LC1D18M7C 18A	1	施耐德
347002	交流接触器 AC contactor	LC1D32M7C 32A	1	施耐德
347074	中间继电器头 Intermediate relay head	RXM4AB2P7 AC220V	1	施耐德
347073	中间继电器头 Intermediate relay head	RXM4AB2BD DC24V	2	施耐德
347036	中间继电器基座 Intermediate relay base	RXZE2S114M	3	施耐德
346802	开关电源 Switching Mode Power Supply	L2REM24020 4.5A	1	施耐德
342252	温控仪表 Temperature control instrument	E5EWL-R1TC	2	欧姆龙
342512	热电偶 Thermocouple	7M	2根	
344003	行程开关 Travel switch	ME(TZ)-8108	1	
344119	接近开关 Proximity switch	LJA18M-10N1	1	
343910	旋转按钮 Rotate button	LAY37	2	
260303	内六角扳手 inner hexagon spanner	3	1	

260304	内六角扳手 inner hexagon spanner	4	1	
260305	内六角扳手 inner hexagon spanner	5	1	
260306	内六角扳手 inner hexagon spanner	6	1	
260307	内六角扳手 inner hexagon spanner	8	1	
260308	内六角扳手 inner hexagon spanner	10	1	
260309	内六角扳手 inner hexagon spanner	12	1	
260310	内六角扳手 inner hexagon spanner	14	1	
260312	内六角扳手 inner hexagon spanner	17	1	
260313	内六角扳手 inner hexagon spanner	19	1	
240201	千分尺 Micrometer	0-25	1	
261414	电子秤 Electronic scale		1	
374034	生料带 PTFE TAPE		1	
240501	塞尺 Feeler gauge	100 #	1	
240607	合尺 Combined ruler	10m	1	

卖方:

The Seller:

买方:

The Buyer: