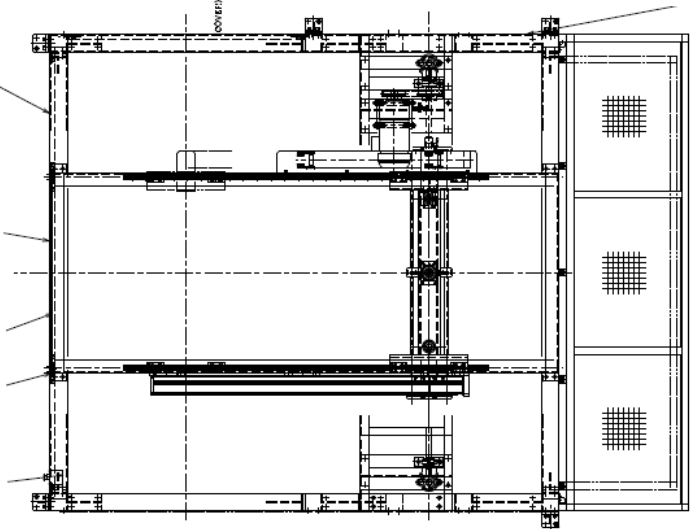



## Line D Guelph

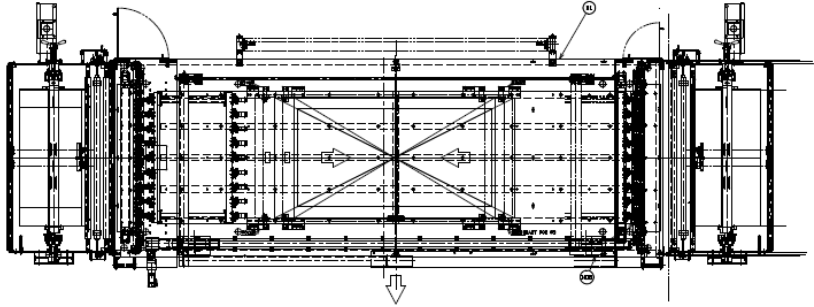

Front of the line

1

Equipment name	Glass Feeder Conveyor Line
Qty	1
Make/Model number	NPC/NCV-100x200-1
Specification/current configuration	Power: 200VAC 3PH 50/60Hz 17KVA Glass size (mm): 1948x976x3.2, 1632x976x3.2, 1948x976x4, 1632x976x4
Equipment Layout	
Photos	
Notes	

2

Equipment name	EVA
Qty	1
Make/Model number	NPC/NSF-100x200-1
Specification/current configuration	Power: 200VAC 3PH 50/60 Hz 10KVA Roll width (mm): 980

Equipment Layout	
Photos	
Notes	

2.1

Equipment name	Template loader
Qty	1
Make/Model number	Festo/3371404-1
Specification/current configuration	Power: 208VAC 1PH 60Hz
Equipment Layout	

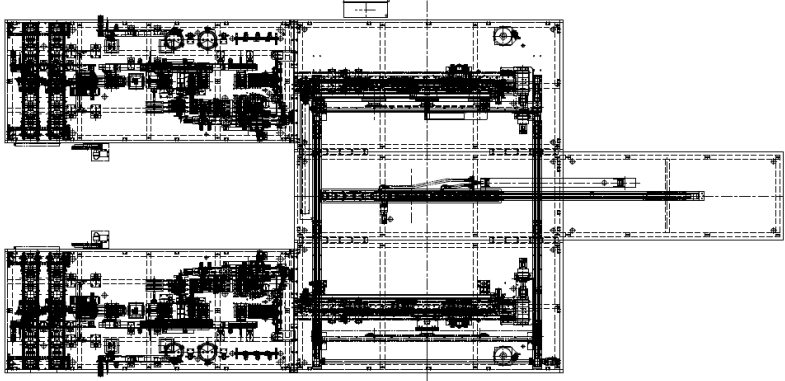

Photos



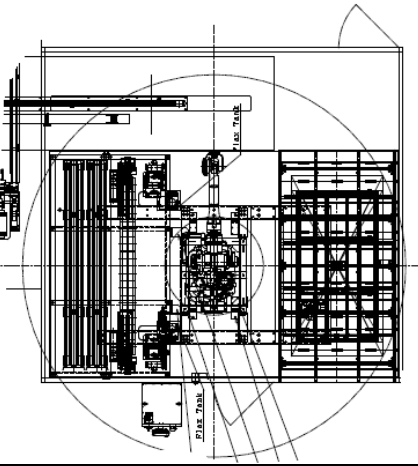
Notes

3

Equipment name	Tabbing & Stringing Machine
Qty	10 (Line D), 4 (Line A), 2 (Line B), 4 (Packaged)
Make/Model number	NPC/NTS-150-S-H-3K
Specification/current configuration	Power: 200VAC 3PH 50/60Hz 25KVA Solar cell dimensions (mm): 156x156 180-200µm thickness Cell type: multicrystalline, monocrystalline & quasi-monocrystalline; all grades Solar cells per string: 10, 12 Solder ribbon (mm): 1.2/1.5 x 0.2 Interconnect ribbon: 3 ribbon

	Placements/hr: 1200
Equipment Layout	
Photos	
Notes	

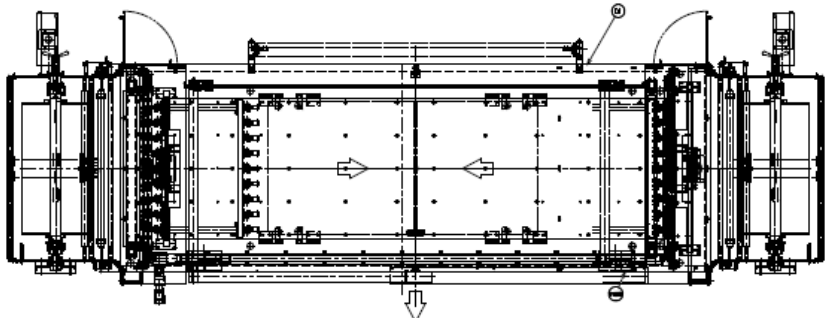

4

Equipment name	Layup 1
Qty	5 (Line D), 2 (Line A), 1 (Line B), 2 (Packaged)
Make/Model number	NPC/NLU-S-100X200-R-2
Specification/current configuration	Power: 200VAC 3PH 60Hz 7KVA Placements: 6 strings/glass Automatic ribbon trimming
Equipment Layout	
Photos	

Notes	
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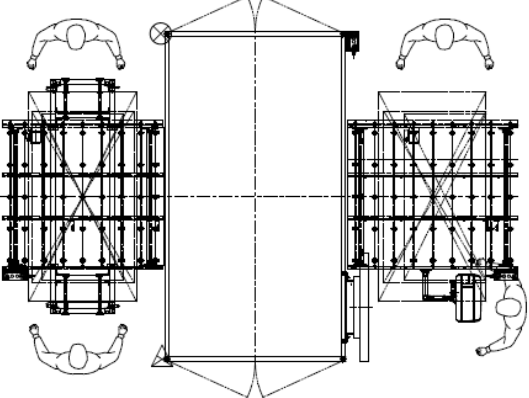

5 Bussing tables

6

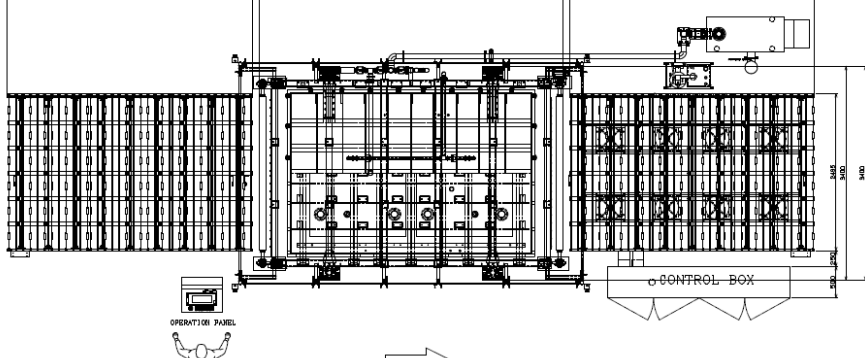
Equipment name	EVA/Back sheet feeder
Qty	1
Make/Model number	NPC/NSF-100x200-3
Specification/current configuration	Power: 200VAC 3PH 60Hz 17KVA Back sheet width (mm): 985 - 990
Equipment Layout	
Photos	
Notes	EVA feeder and Back sheet feeder overhead placing gantry are coupled together.


7

Equipment name	EL Inspection
Qty	1
Make/Model number	NPC/NEL-100X200-C
Specification/current configuration	Power: 200VAC 3Ph 60Hz 10KVA Inspection part size: 1948x976, 1632x976

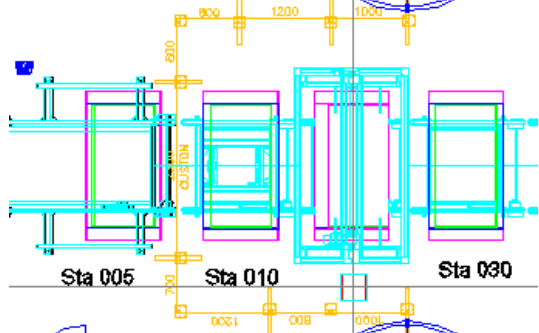
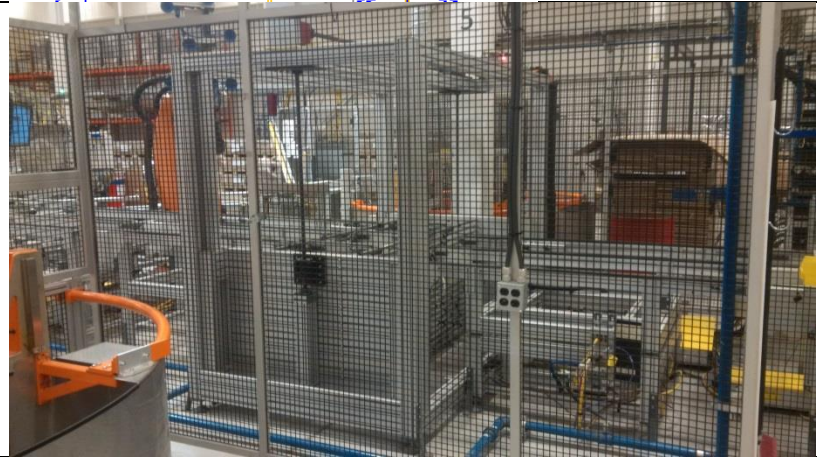
Equipment Layout	
Photos	
Notes	

8

Equipment name	Module Laminator
Qty	7
Make/Model number	NPC/NLM-230x360
Specification/current configuration	<p>Power: 200VAC 3PH 60Hz 170KVA          Temperature zones: 4 (front, center left, center right, rear)          Temperature setting (°C): 152 all zones          Upper vacuum pressure (KPa): 30          Lower vacuum pressure (KPa): 30</p>
Equipment Layout	

Photos	
Notes	

Back of the line  
A - STN 005 - 030

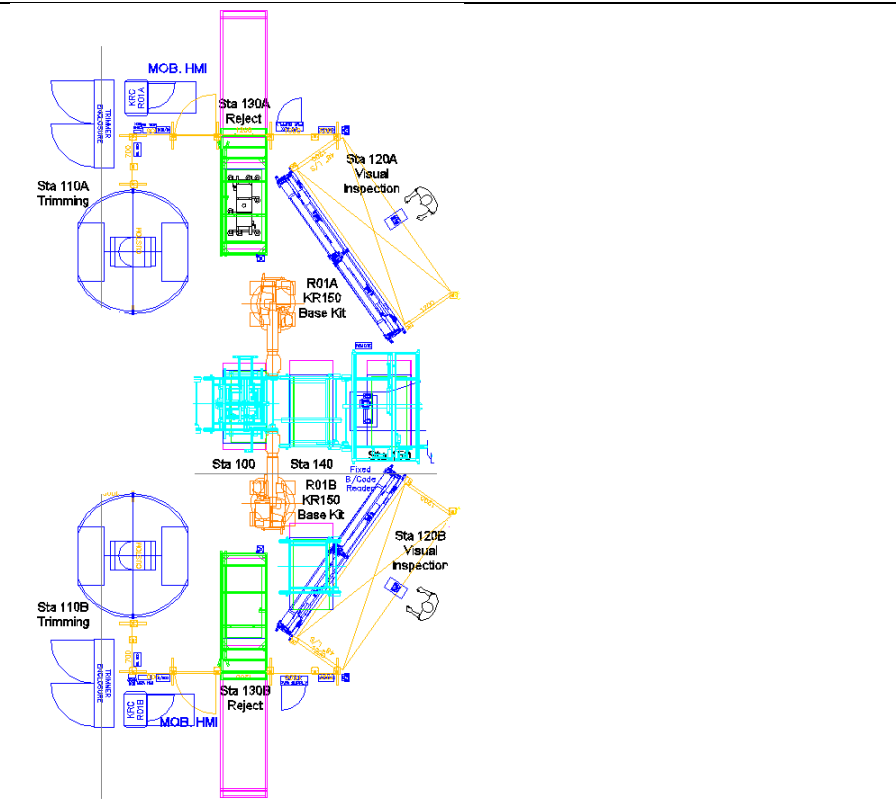
Equipment name	Buffer station
Description of operation	Parts enter into buffer and are accumulated until the line needs them.
Make/Model number	KUKA
Specification/current configuration	20 part accumulator
Equipment Layout	
Photos	
Notes	

B - STN 100 - 150

Equipment name	Trimming/inspection stations
Make/Model number	KUKA/Robot Model KR 150-2 2000 (2 robots)
Specification/current	Power: 480VAC 3Ph

configuration

Equipment Layout



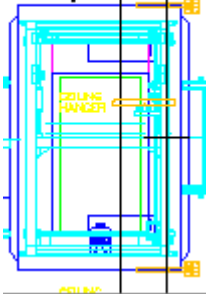

Photos



Notes

C - STN 160	
Equipment name	Kuka EL inspection
Description of operations	
Make/Model number	Vitronic/104873
Specification/current configuration	Power: 120VAC, 20 Amps

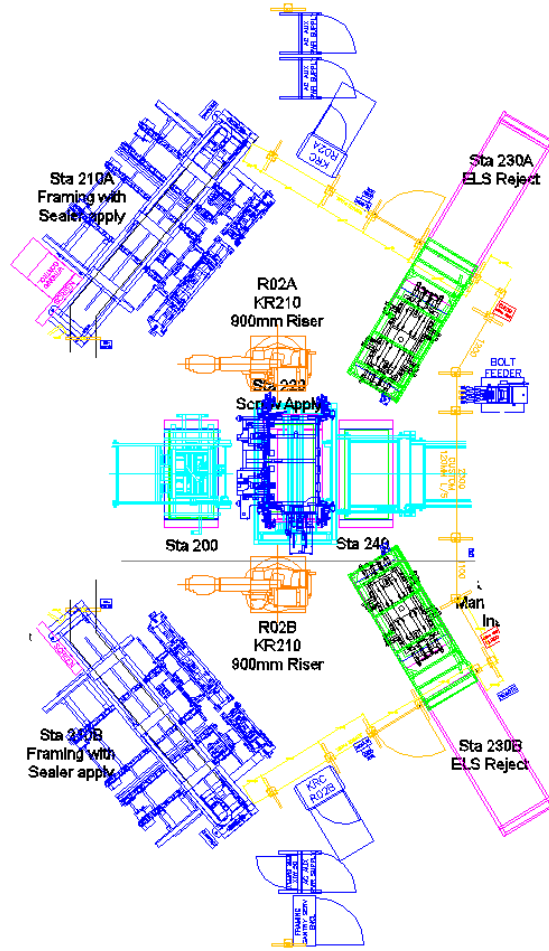


Equipment Layout	<p><b>Sta 160 ELS Inspection</b></p> 
Photos	
Notes	

D - STN 200 - 240

Equipment name	Framing and screw driving stations
Make/Model number	KUKA/Robot Model KR 210-2 2000 (qty 2) Graco/HFR metering system (qty 2) Cleco electric screw drivers/ mPro400 (1 master, 3 slave)
Specification/current configuration	Power: 480VAC 3Ph

Equipment Layout



Photos



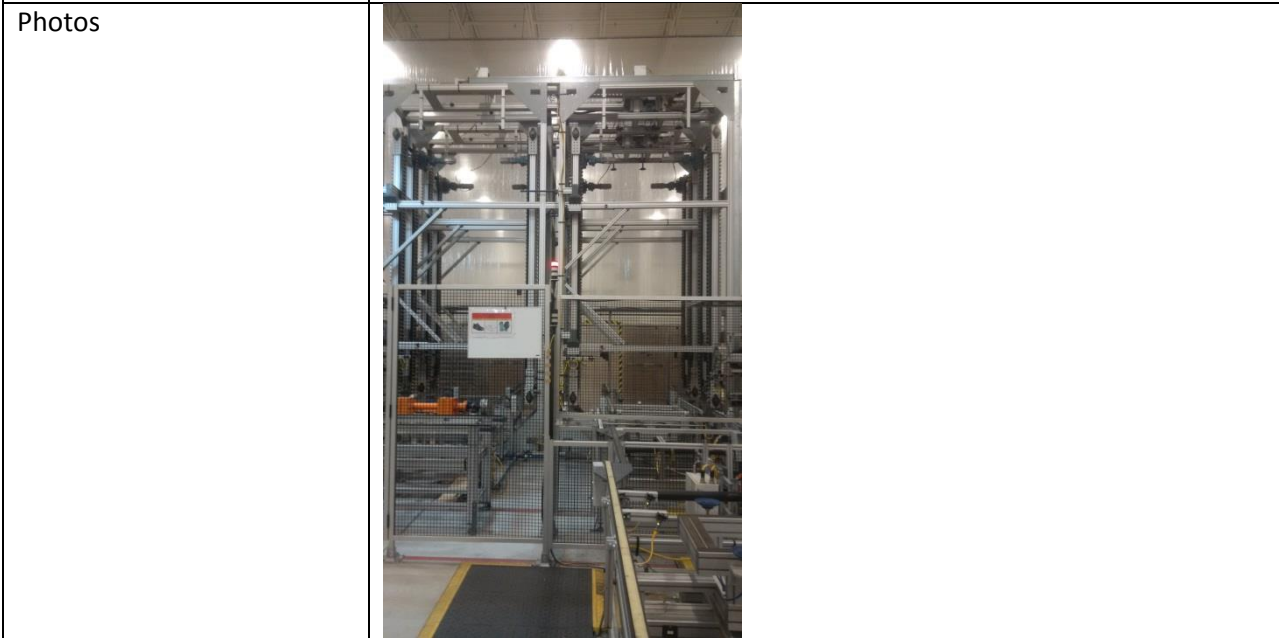
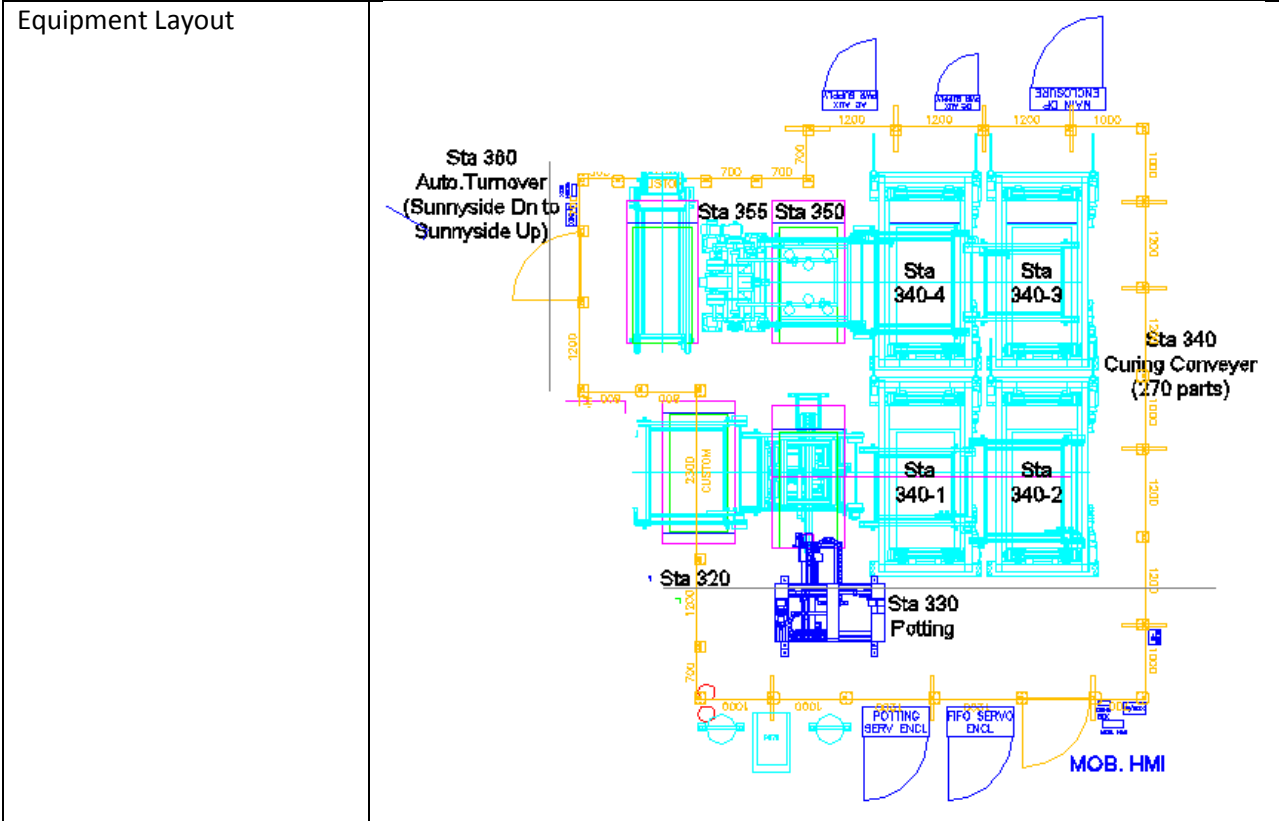
Notes

E - STN 320 - 360

Equipment name Potting/curing and flip station

Qty

Make/Model number



Notes

F - STN 370 - 380

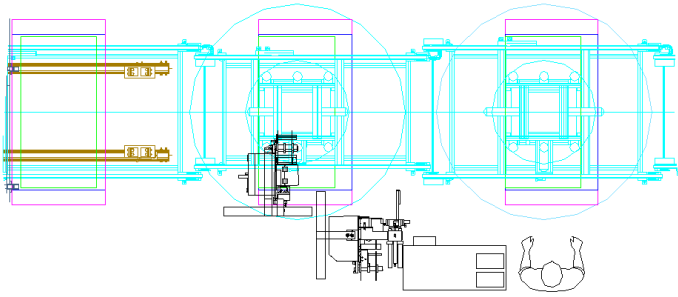
Equipment name	Visual inspection and flip station
Make/Model number	
Equipment Layout	<p>Sta 370 Manual Cleaning Front Side (Auto Transfer)</p> <p>Sta 380 Automated Rollover (Sunnyside Up to Sunnyside Dn)</p> <p>MOB. HMI</p> <p>MAIN IP</p> <p>1000</p> <p>1000</p> <p>120MM L/S</p> <p>120MM L/S</p>
Photos	
Notes	

G - STN 390 - 500

Equipment name	HI-POT test/flash test station
Make/Model number	Kuka/model: KR-210-2 2000
Specification/current configuration	
Equipment Layout	<p>MOB. HMI</p> <p>KRC R03</p> <p>Sta 500</p> <p>Sta 430</p> <p>Sta 420 Reject</p> <p>Sta 410 Flash Test (Enclosure by KUKA, test equipment by Canadian Solar)</p> <p>Sta 400 Hi Pot Test</p> <p>PASAN CONTROL TABLE</p> <p>PASAN CONTROL</p> <p>Reference Module</p> <p>R03 KR240 Base KR</p> <p>1200</p> <p>800</p> <p>500</p> <p>700</p> <p>1000</p> <p>1200</p> <p>1300</p> <p>1400</p> <p>1500</p> <p>1600</p> <p>1700</p> <p>1800</p> <p>1900</p> <p>2000</p> <p>2100</p> <p>2200</p> <p>2300</p> <p>2400</p> <p>2500</p> <p>2600</p> <p>2700</p> <p>2800</p> <p>2900</p> <p>3000</p> <p>3100</p> <p>3200</p> <p>3300</p> <p>3400</p> <p>3500</p> <p>3600</p> <p>3700</p> <p>3800</p> <p>3900</p> <p>4000</p> <p>4100</p> <p>4200</p> <p>4300</p> <p>4400</p> <p>4500</p> <p>4600</p> <p>4700</p> <p>4800</p> <p>4900</p> <p>5000</p>

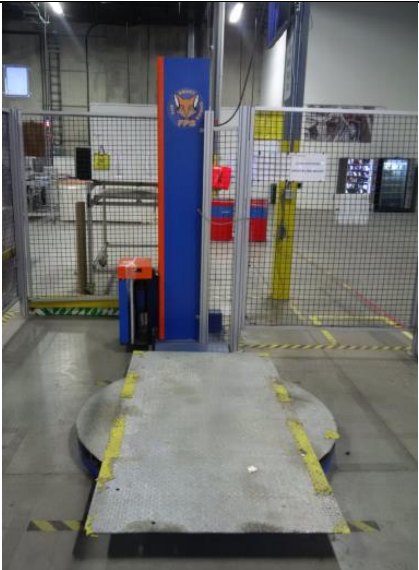
Photos	
Notes	


H - STN 510 - 530

Equipment name	Fixture removal/Label apply
Qty	2
Make/Model number	Weber label printers
Specification/current configuration	
Equipment Layout	<div style="text-align: center;"> <p><b>Sta 530 Pack out</b></p> <p><b>Sta 520 Label Apply &amp; Final Inspection</b></p> <p><b>Sta 510 Label Apply, Remove Test Block &amp; Apply J-Box Cover</b></p>  </div>
Photos	
Notes	

## Line C London


Equipment name	Wrapping Machine
Qty	1
Make/Model number	FPS 300
Specification/current configuration	115 VAC, 15 A, 60 Hz, 1.3 HP

Equipment Layout	
Photos	
Notes	

Equipment name	Stringer 3BB
Qty	1
Make/Model number	Komax, X2
Specification/current configuration	38 A, 480 VAC, 6 bar, 30 HP
Equipment Layout	
Photos	
Notes	Only 1 side is runnable. Other side require parts to run.


Equipment name	Layup Robot
Qty	1
Make/Model number	ABB, IRC5
Specification/current configuration	480 V, 11 A, 3 Ph
Equipment Layout	

Photos	
Notes	

Equipment name	EL Inspection
Qty	1
Make/Model number	NPC, NEL-100X200-C
Specification/current configuration	200 V, 17 KVA, 3 Ph, 60 Hz
Equipment Layout	
Photos	
Notes	

Equipment name	Laminator
Qty	1
Make/Model number	Meier, 50-14219, OP05
Specification/current configuration	480 V, 200 A, 3 Ph, 60 Hz
Equipment Layout	

Photos	
Notes	

Equipment name	Laminator
Qty	2
Make/Model number	Meier, 50-14384, OP05
Specification/current configuration	480 V, 200 A, 3 Ph, 60 Hz
Equipment Layout	
Photos	
Notes	

Equipment name	Lift
Qty	2
Make/Model number	Pentalift
Specification/current configuration	4000 lbs, 110 V
Equipment Layout	



Photos



Notes