

stock code:920368

LINTON

**The World's Leading PV And
Semiconductor Equipment Supplier**

**Integrated PV Ingot and Wafer Lines with
Enhanced Automation and Productivity**

LINTON Technologies Group



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**PART 01
INTRODUCTION
TO LINTON**



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ADVANCED TURNKEY
SOLUTION**

stock code: 920368

01

INTRODUCTION TO LINTON

Linton Technologies Group

The world's leading PV and semiconductor equipment supplier

A Better Linton
A Better Self

COMPANY PROFILE

LINTON

Linton Technologies Group

- ★ **Founded:** September 2007.
- ★ **Employees:** **2000+** including 500+ in R&D.
- ★ **Listed:** Beijing Stock Exchange, Stock Code: 920368.
- ★ **Acquired Kayex of Rochester, USA (from SPX), in 2013**
bringing over **70+** years of expertise in **puller design, manufacturing, and crystal growth.**



3

Wholly-Owned
Subsidiaries



23

Holding
Subsidiaries



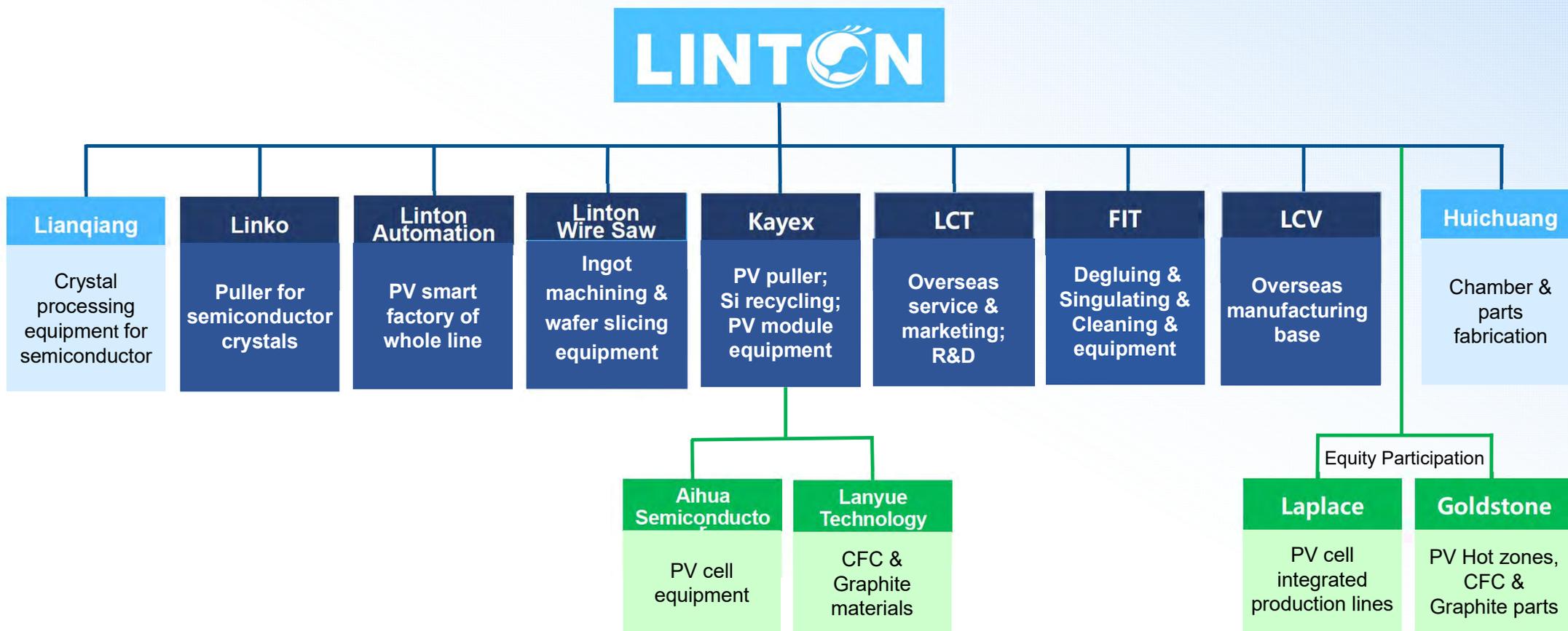
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Affiliated
Companies

Guided by “Reliable, Value-Adding, and Sunshine,” Linton is committed to adding value to every solution to our customers and empowering the future of global clean energy and semiconductor technology.

GROUP STRUCTURE & PRODUCT PORTFOLIO

LINTON



R&D AND MANUFACTURING BASES



Dalian R&D and Manufacturing Base



- **Wafer slicers**
- **Cropper, Squarer, Grinder**
- **Automation and smart factory solution**
- Si microwave crushing equipment;
- Si, SiC, Sapphire slicing equipment;

Wuxi R&D and Manufacturing Base



- **Pullers for PV Crystal growth;**
- Puller for semiconductor crystals;
- Ge, Gallium oxide, sapphire crystal growing equipment
- SiC crystal growers & synthesizers
- Si wafer cleaning, PV cells & module equipment

US Sevice R&D Base



- **70+ years of puller design & manufacturing experience (via Kayex);**
- Advanced R&D of crystal growth;
- **Service & Support to US customers (from Rochester NY)**

Vietnam Manufacturing Base



- **Overseas manufacturing base**
- Monocrystal furnace
- Wafer slicer
- Ingot machining equipment
- Other equipment

Wuxi Base

180,000+

Square Meters

Dalian Base

100,000+

Square Meters

Ingot Puller Output

1200+

Unit/Month

Slicer & Machining output

500+

Unit/Month

Equal to

200+GW

Annual Capacity

■ GROWTH PATH

Path of Linton Technologies Group

2007

Founded on September 25th.



2008

Developed **1st PV wire saw (squarer)** in China.



2012

Developed **1st PV diamond wire slicer**.



2013

Acquired KAYEX (Est. in 1952). From SPX of USA.
Became the global leader of Pullers for crystal growth.
Quantity delivery of DW slicers.



拥有近70年单晶炉设计制造及晶体生长经验
Almost 70 years of single crystal furnace design and manufacturing and crystal growth experience

2013年4月 收购美国五百强公司斯必克 (SPX) 旗下的凯克斯 (KAYEX) 单晶炉事业部, 获得凯克斯全部知识产权、商标和18项技术专利

2014

Quantity delivery of ingot machining equipment: **grinders croppers, etc.**



GROWTH PATH



Path of Linton Technologies Group

2017

Developed **world's 1st 1600 model crystal puller**, setting standard for PV crystal growth.



2019

Developed **1st** ingot & wafer automation line for PV industry.



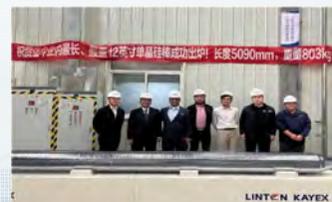
2020

Listed on **Beijing Stock Exchange**.



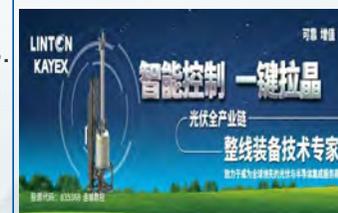
2021

Developed **world's 1st 1700 model crystal puller**, leading the trend of PV crystal growth. Starting quantity delivery of SiC furnaces.



2023

Developed **AI based "One-click Crystal Pulling"** for KX380PV & KX520PV platforms.



2024

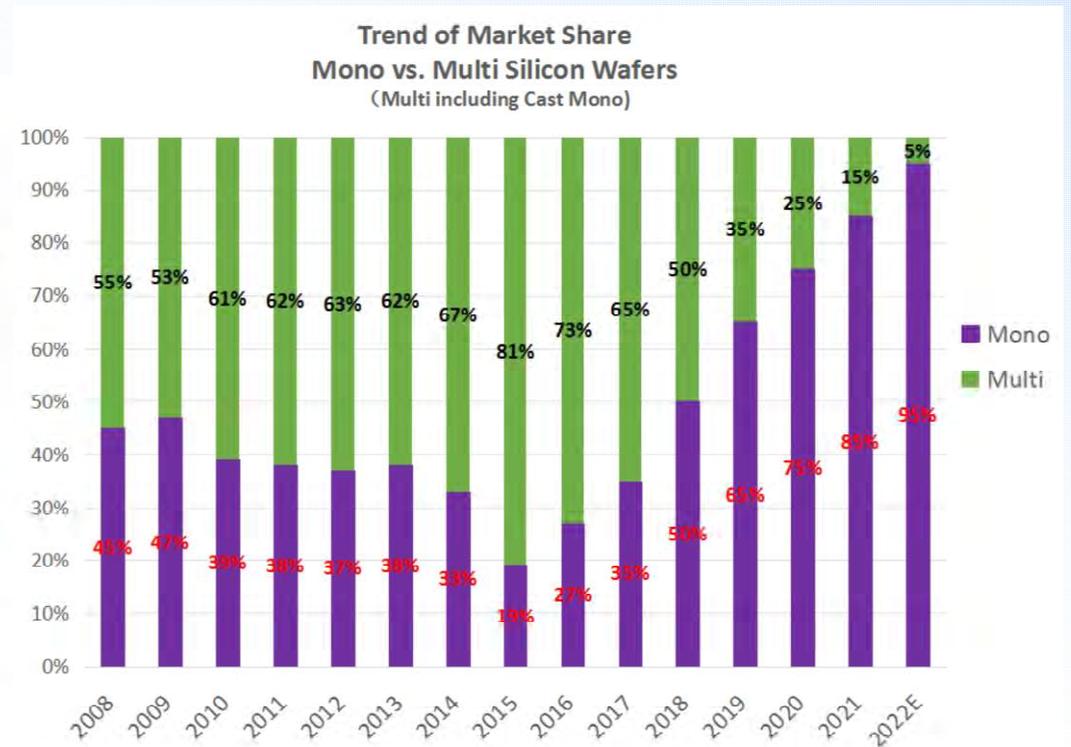
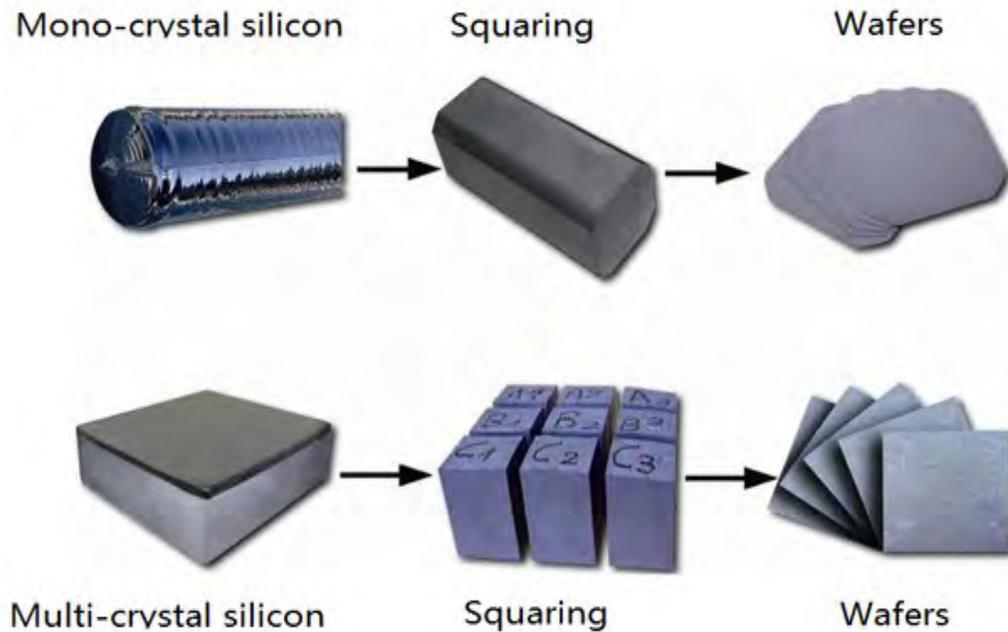
Established Linton crystal Vietnam.

Developed newer generation 1800 model crystal puller.



TECHNICAL LEADERSHIP OF LINTON - 1

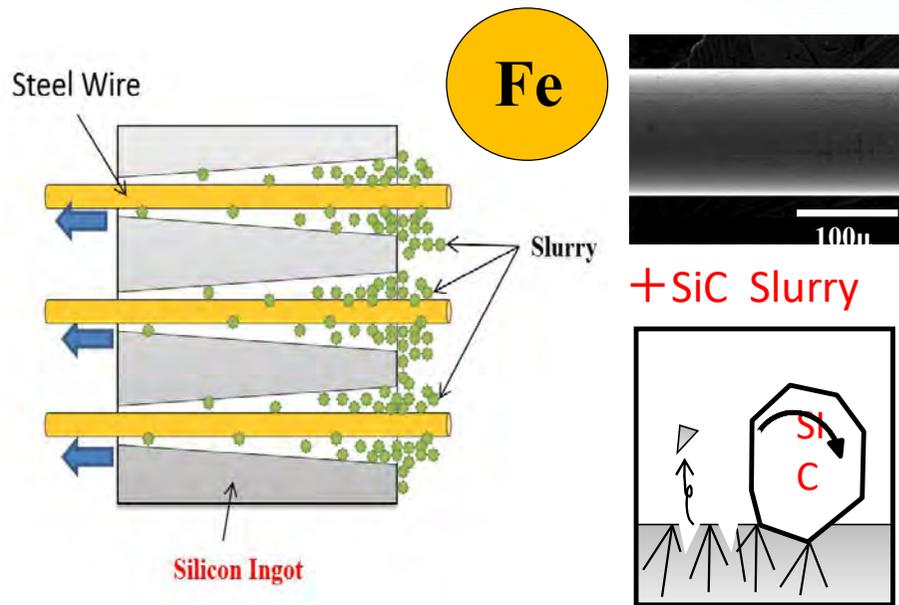
Linton promoted mono-crystal technology while most companies in PV industry believed in multi-crystal technology. Linton finally reshaped the PV industry together with our partners.



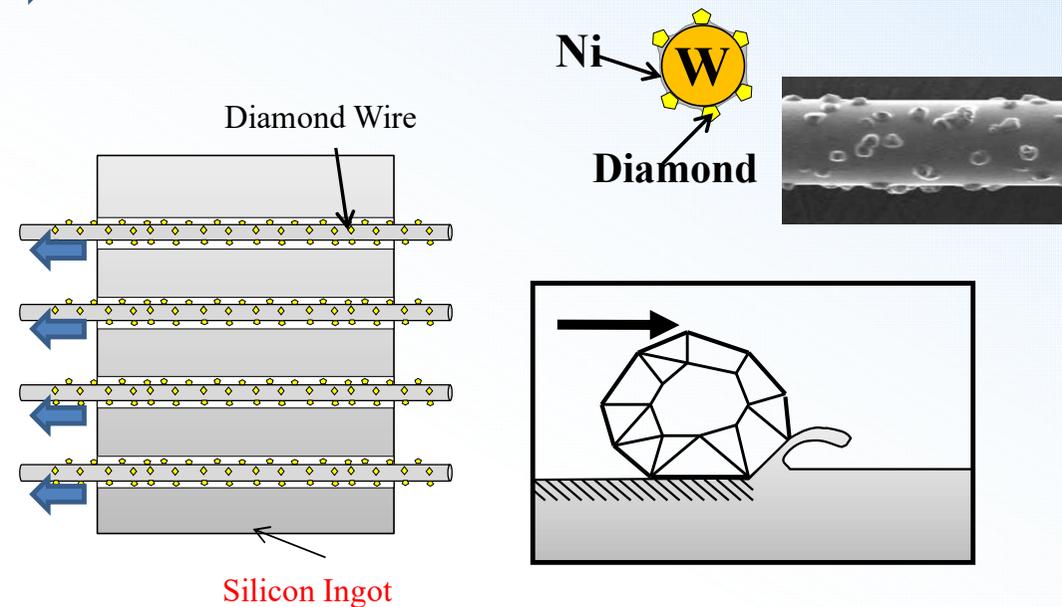
TECHNICAL LEADERSHIP OF LINTON - 2

Linton promoted diamond wire slicing technology while most companies in PV industry believed in slurry slicing technology. Linton again reshaped the PV industry together with our partners.

Slurry Slicing



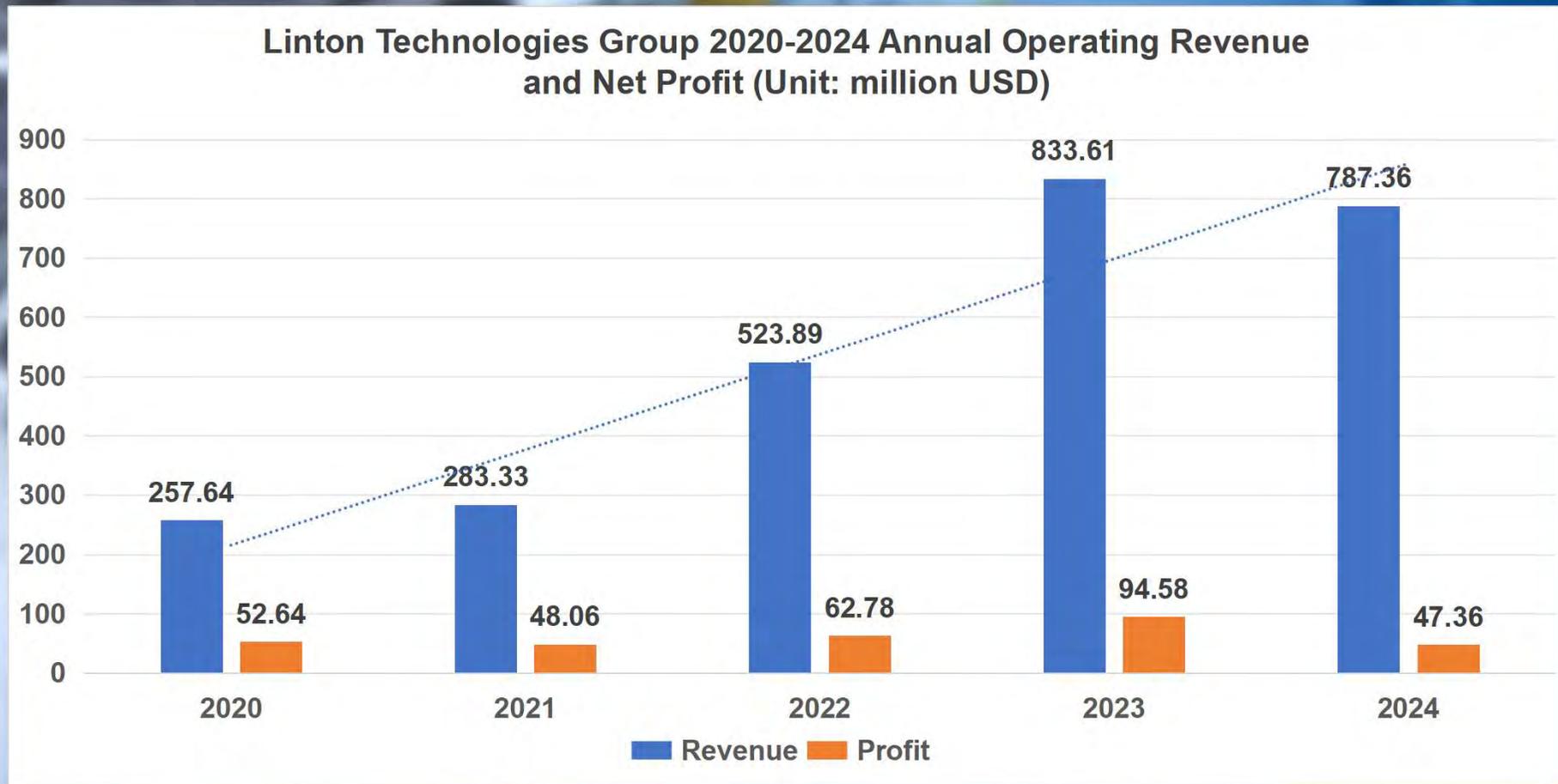
DW Slicing



20+ times increase in productivity

REVENUE AND PROFIT

Sustained Growth



■ PRODUCTION CAPACITY

Reliable Project Execution

500+ GW
in total delivery

150+ GW
peak annual delivery



SHIPMENT VOLUME OF CORE PRODUCTS

LINTON

Steady Sales Market Leadership

As of 2025

20000+ unit

Monocrystal furnace
Global Shipment Volume

40+%

Market share (approx.)

10000+ unit

Wafer Slicers & Ingot
Processing Machines
Global Shipment Volume

35+%

Market share (approx.)



>> Monocrystal Pullers



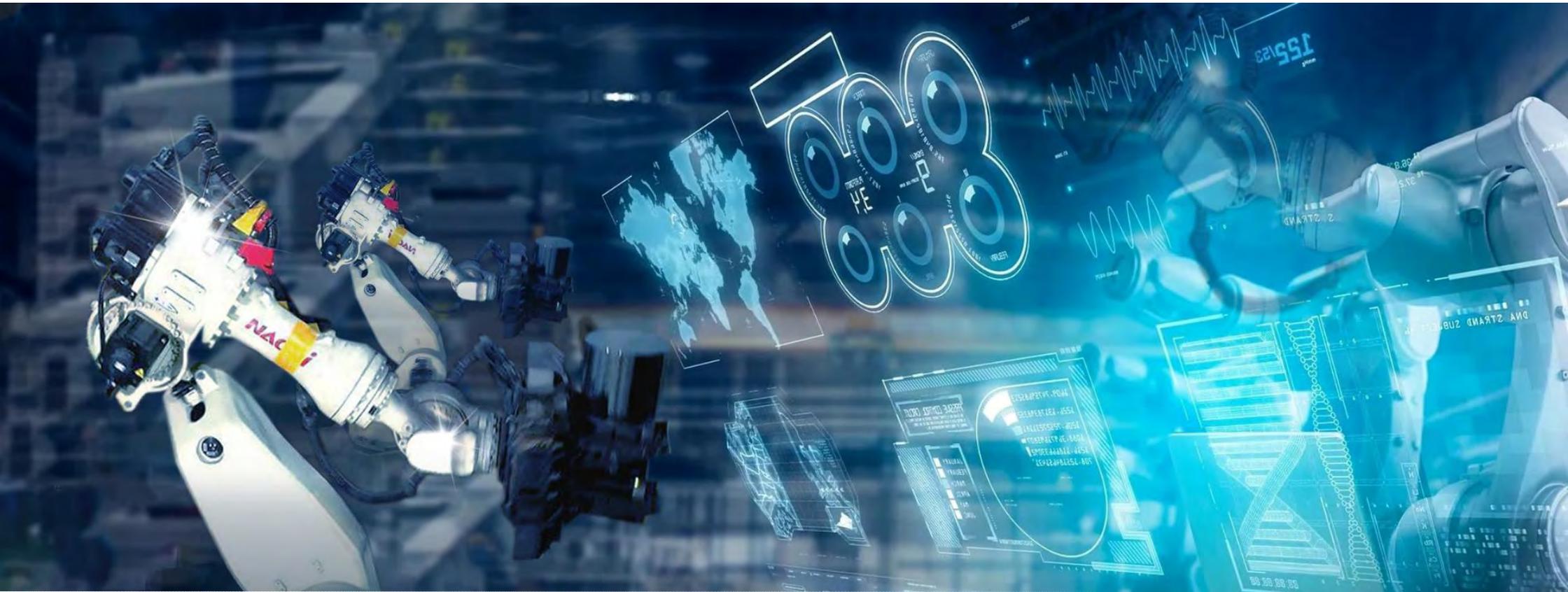
>> Wafer Slicing Machines

GLOBAL PRESENCE



Linton has service teams in the **USA**, Vietnam, Singapore, Europe, India, Turkey, and Malaysia, with businesses spanning 20+ countries and regions worldwide.





TECHNOLOGY LEADERSHIP

Technological innovation

Driving the advancement of the PV and semiconductor equipment industries

Delivering long-term customer value through sustained technological innovation

stock code:920368

■ ADVANCED TECHNOLOGY

R&D and Intellectual Property Rights

Experts from all around the world cooperated with top level universities and academia, together built a R&D system with global competitiveness.

• Core Laboratories:

- ◆ PV Crystal Growth Laboratory;
- ◆ Semiconductor Crystal Growth Laboratory;
- ◆ SiC Crystal Growth Laboratory;
- ◆ CCz Crystal Growth Laboratory;
- ◆ Sapphire Crystal Growth Laboratory;

- ◆ Wire Saw Technology Laboratory;
- ◆ Ingot Machining Technology Laboratory;
- ◆ Center for PV Production Automation;
- ◆ National Engineering Lab for PV and Semiconductor Cutting Equipment;

70+

Million R&D
investment / Year

500+

Researchers

25%+

of total employees

689+

Domestic and
foreign patents

146+

Software
copyrights

31+

Trademarks

SCIENTIFIC RESEARCH STRENGTH



Technology Support Through University Enterprise Cooperation

Joint Linton-Academia Research Center with the Chinese Academy of Science.



4 National Scientists

4 SEMI Standards Directors, State Honored Experts

2 University-Enterprise Joint R&D Centers



兰州大学
LANZHOU UNIVERSITY

“连城数控定制班”人才联合培养项目
磁流体密封轴承中磁流体密封与润滑性能提升

同济大学
TONGJI UNIVERSITY

蓝宝石晶体生长炉及加工氧化镧晶体生长炉及长晶工艺技术研发中心
碳素材料表面热解涂覆与纯化工艺与设备项目

PULLER

Type	Model	Chamber (mm)	Throat (mm)	Receiving chamber (mm)	Seed Lift load (Kg)	Crucible Lift Load (Kg)	Total equipment weight	Crucible charge weight	Crucible diameter				
									33 in.	37 in.	40 in.	42 in.	44 in.
1600+	KX380PV	∅ 1600*2050	∅ 410	∅ 410*5500	1500	2000	≈16 tons	Total charge	700kg	1000kg	1150kg	/	/
1700	KX520PV	∅ 1700*2100	∅ 450	∅ 450*5500	1500	2000	≈17 tons	Total charge	700kg	1000kg	1150kg	1300kg	/

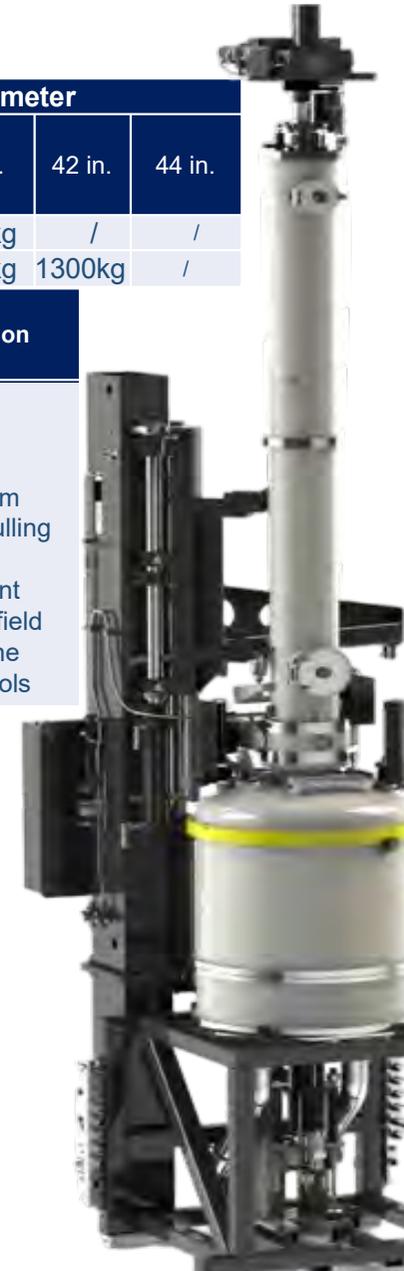
Type	Delivery	Hot zone compatibility	Compatibility	Product description	Standard Configuration	Optional Configuration
1600+	The 1st in the industry to develop and deliver over 8,000 units in Qty.	Standard 37 in. Max 40 in.	Compatible with 1700 equipment factory layout.	Meets the demand for larger charging capacity and larger crystal growth, with multiple modules reserved for cost-effective upgrades.	1.One-click crystal pulling 2.Centralized control sys. 3.Low oxygen crystal pull 4.High-efficiency heating power supply 5.High-speed vacuum pump 6.High-efficiency filtration tank;	1.Data center & big data analysis 2.Vision server 3.Production MES system 4.Low Oxygen crystal pulling 5.Extension chamber 6.CCz process equipment 7.MCz/MCCz magnetic field 8.High-efficiency hot zone 9.Production auxiliary tools
1700	The 1st in the industry to develop and deliver over 3,000 units in Qty.	Standard 37/40 in. Max 42 in.	Compatible with 1600+ equipment factory layout.	The 1700 model meets the growth requirements of 16-inch crystals.		

Technological Leadership:

- 1.Equipped with the next-generation digital intelligence platform, **daily output greatly increased, leading the industry.**
- 2.Power consumption reduced by more than 10%, leading the industry.
- 3.Reduced water usage, with cooling water flow as low as 30m³/h.
- 4.**Multiple oxygen control solutions and configurations available, as low as 6PPM, ensuring more uniform resistivity and longer minority carrier lifetime.**
- 5.Maximum hot zone size of 42 inches, compatible with CCz and magnetic fields.

Intelligent Crystal Pulling:

- 1.Integration of BI and AI based on equipment big data to optimize the entire process flow.
- 2.Intelligent control system with one-click crystal pulling & full process automation, automatically recommending pulling power and necking-shouldering profile with accuracy rate of ≥99%.
- 3.**AI-based visual inspection and automatic crucible placing modules with improved accuracy, stability, and safety.**



THE 6TH GENERATION WAFER SLICER

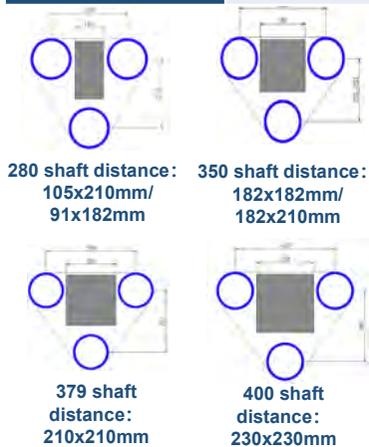


Wafer Spec.	Shaft Distance	Linton	Competitor/ A	Competitor/ B	Competitor/ C
182&210 half wafer	Horizontal	280mm	315mm	310mm	325mm
	Vertical	245mm	260mm	245mm	255mm
182 wafer & 182*210 rectangular wafer	Horizontal	350mm	360mm	360mm	375mm
	Vertical	220/240mm	230mm	220/240mm	230mm
210*210 wafer	Horizontal	379mm	390mm	395mm	410mm
	Vertical	250mm	260mm	250mm	273mm
230*230 wafer	Horizontal	400mm	415mm	410mm	425mm
	Vertical	265mm	280mm	265mm	255mm



QP950

Space Requirement	
QP950	4700mm×2100mm×3350mm
Competitor A	3980mm×3100mm×3200mm
Competitor B	5435mm×2430mm×3430mm
Competitor B	4778mm×2168mm×3257mm



1. Optimized and adjustable wheelbase for cutting wafers of different specifications.
2. Supports full & half-brick formats, flexible configurations accommodate all wafer specifications.
3. Small wheelbase: 350mm for 182×182mm wafers and 379mm for 210×210mm wafers.
4. Up to 1200mm brick length (Optional).

P e r f o r m a n c e

- Brick Length: Max 1000mm×1PCS (standard length 950mm)
- Brick Size: 182 & 210 full & half wafer, ~230 wafer compatible
- Slicing Structure: 3-shaft structure
- DW wire running speed: Max 45m/s
- Horizontal adjustable distance: 280~400mm
- Vertical adjustable distance: 221~280mm
- Main roll diameter & length: 3-Max Φ150mm*1060mm
- Electrical system: Inovance customized system
- Automatic loading mode: front/rear loading & unloading (optional)
- Slurry tank volume: Max 800L

S p e c i f i c a t i o n

- Average TTV ≤10 μm; Average saw mark value ≤10 μm, A product rate ≥97%
- 19 different shaft pitch is fully compatible with 182-230 specifications for square, rectangular and half wafers
- **Thickness of silicon wafer can be ≤55μm**
- **Automatic feeding centering, automatic centering of wings**
- **Automatic detection of wire jump, bow, cut through**
- **Automatic cleaning of machine chamber, automatic cleaning fluid tank and pipes**
- Reduce cycle time by 20min



02 TURNKEY SOLUTION

Transition from equipment
maker to solution provider.

COOPERATIVE PARTNERS

Served **10+** leading enterprises

Delivered **60+** automatic factory projects

Linton provides **1** station service for setting up integrated ingot & wafer production lines

LINTON



Customers in PV industry

Customer for PV Turnkey Solution

The largest project:
Erdos Inner Mongolia
60+GW

PROJECT EXPERIENCE

Overseas Project Highlights



South East Asia Project L



North America Project Q



European Project A



South Asia Project B



South East Asia Project E

Scale: **10** GW
Delivery: 2023
Location: Malaysia

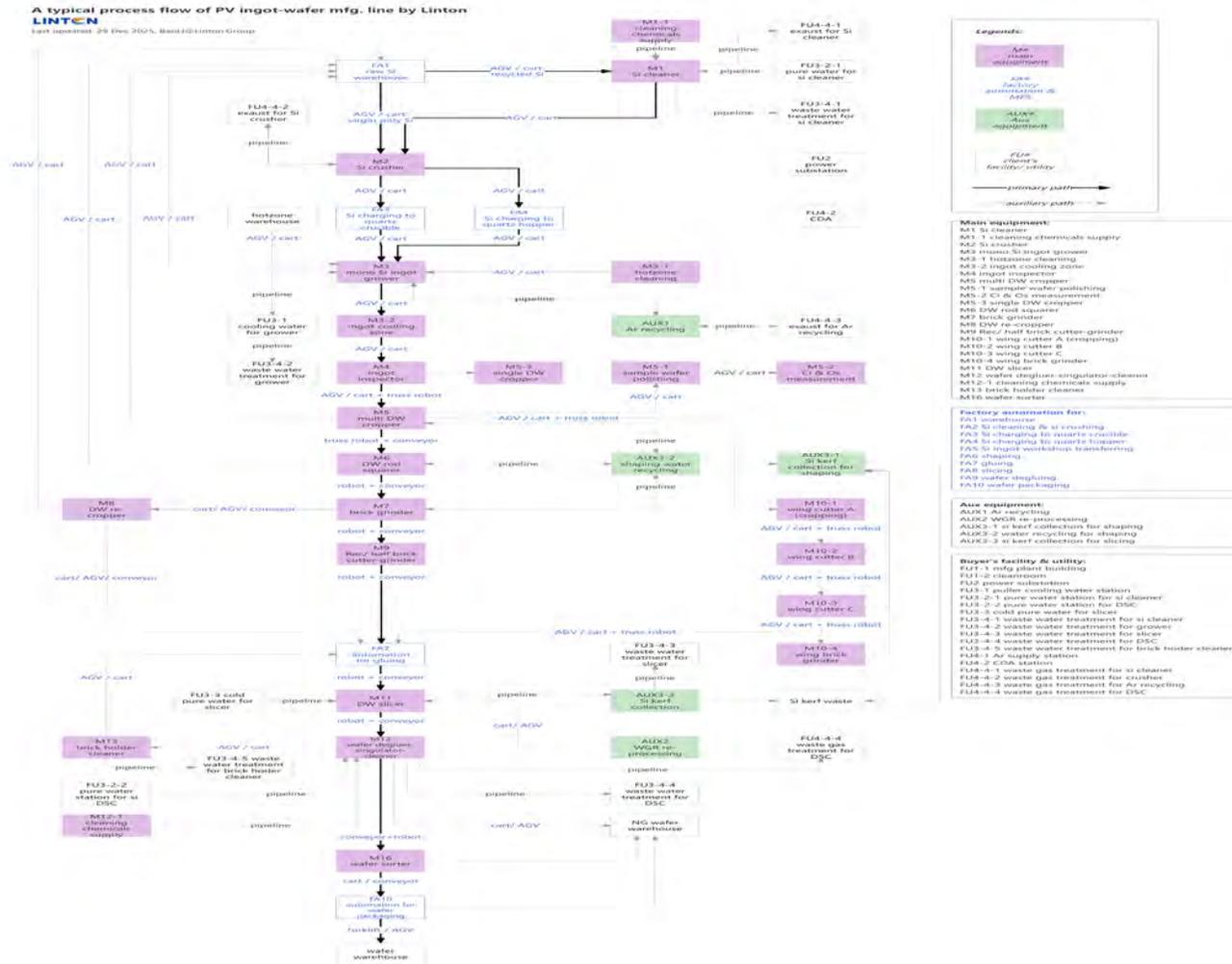
Scale: **3.3** GW
Delivery: 2025
Location: US

Scale: **2** GW
Delivery: 2023
Location: Europe

Scale: **12** GW
Delivery: 2025
Location: India

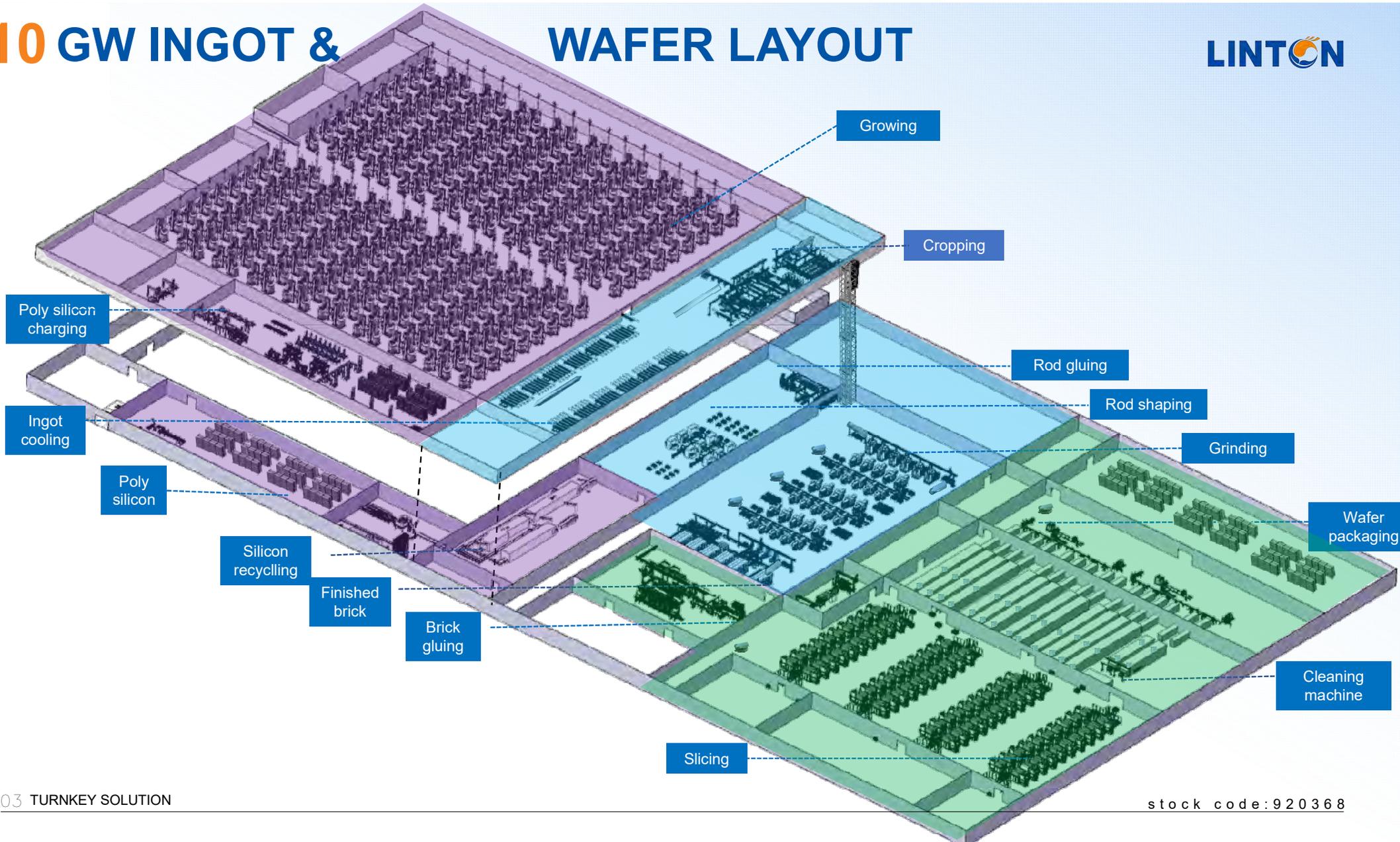
Scale: **3** GW
Delivery: 2025
Location: Vietnam

PV INGOT & WAFER PROCESS FLOW

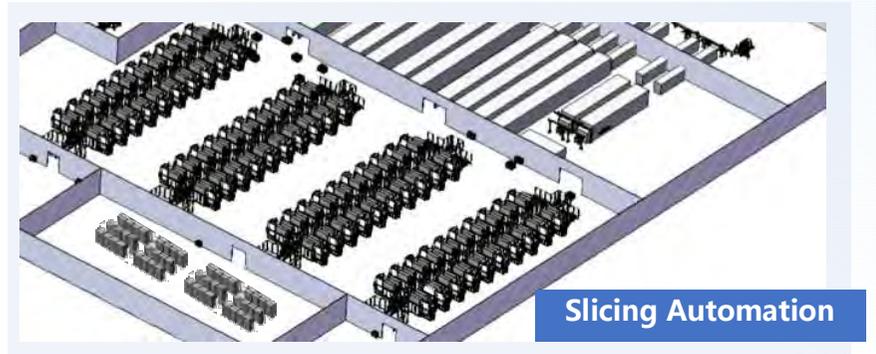
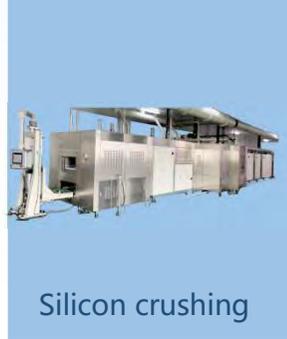


10 GW INGOT &

WAFER LAYOUT

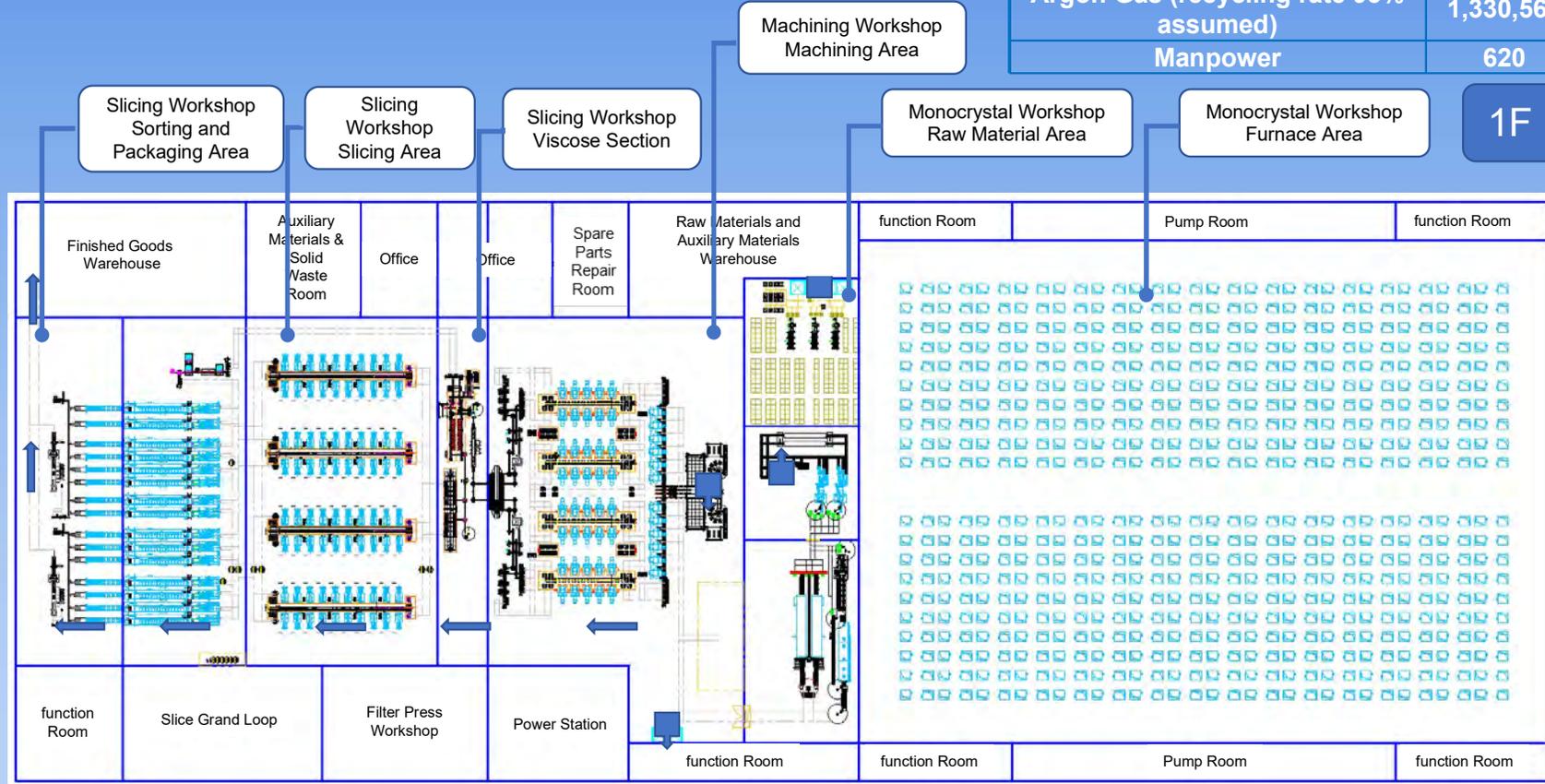


10 GW INGOT & WAFER SMART FACTORY SOLUTION LINTON



10 GW INGOT & WAFER LAYOUT

Total Power	75,000	KW
Total Power (consumption)	505,000,000	KWh/Year
Water (consumption)	1,980,000	CBM/Year
Workshop Area	92000	m ²
Argon Gas (recycling rate 95% assumed)	1,330,560	CBM/Year
Manpower	620	Pers.



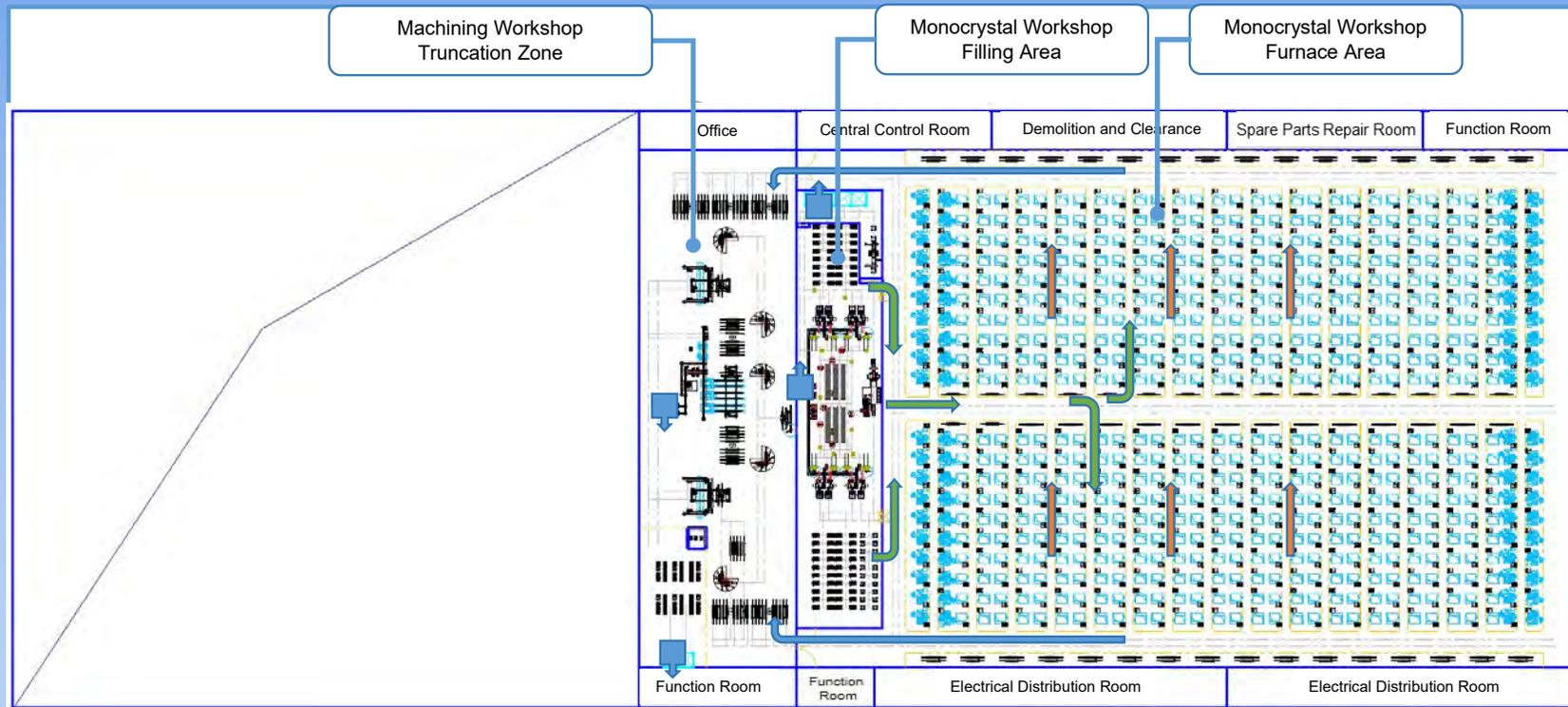
↓
Rod and re-drawn materials downstairs

↑
Raw materials upstairs

←
Material Flow Direction

10 GW INGOT & WAFER LAYOUT

Total Power	75,000	KW
Total Power (consumption)	505,000,000	KWh/Year
Water (consumption)	1,980,000	CBM/Year
Workshop Area	92000	m ²
Argon Gas (recycling rate 95% assumed)	1,330,560	CBM/Year
Manpower	620	Pers.



2F

Round bars and re-drawn materials being lowered downstairs

Raw materials upstairs

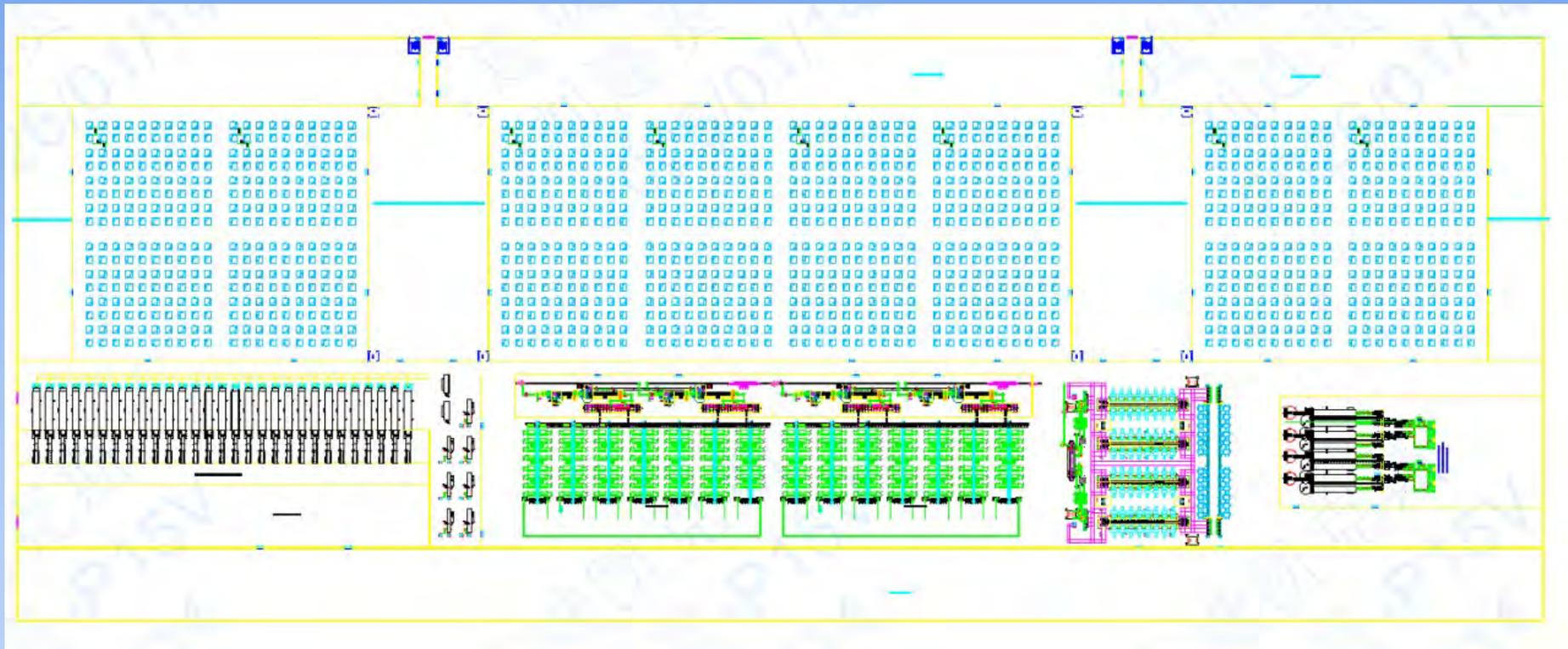
Ingot Conveying

Crucible and remelting bucket conveying

Disassembly and Conveyance

20 GW INGOT & WAFER LAYOUT

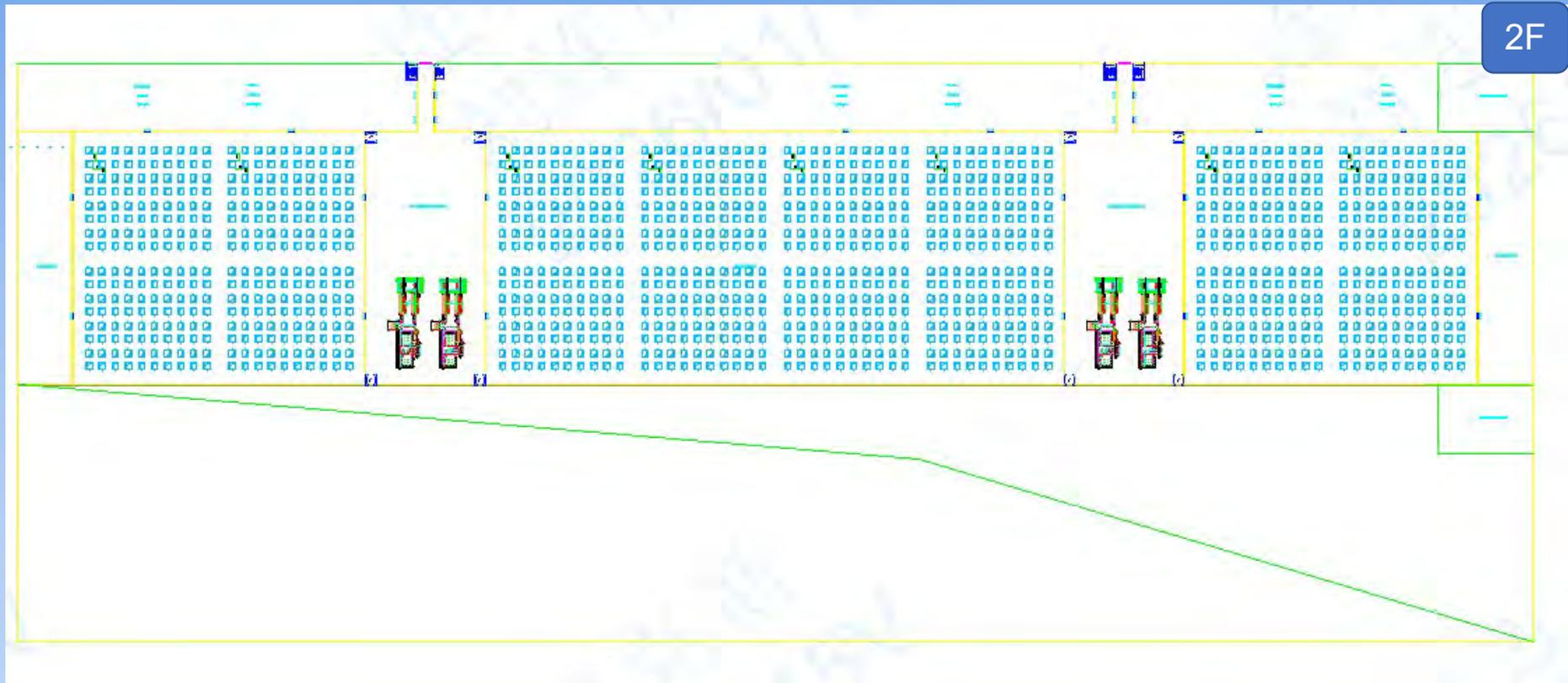
Total Power	150,000	KW
Total Power (consumption)	1,098,000,000	KWh/Year
Water (consumption)	3,960,000	CBM/Year
Workshop Area	186,300	m ²
Argon Gas (recycling rate 95% assumed)	2,661,120	CBM/Year
Manpower	1,180	Pers.



1F

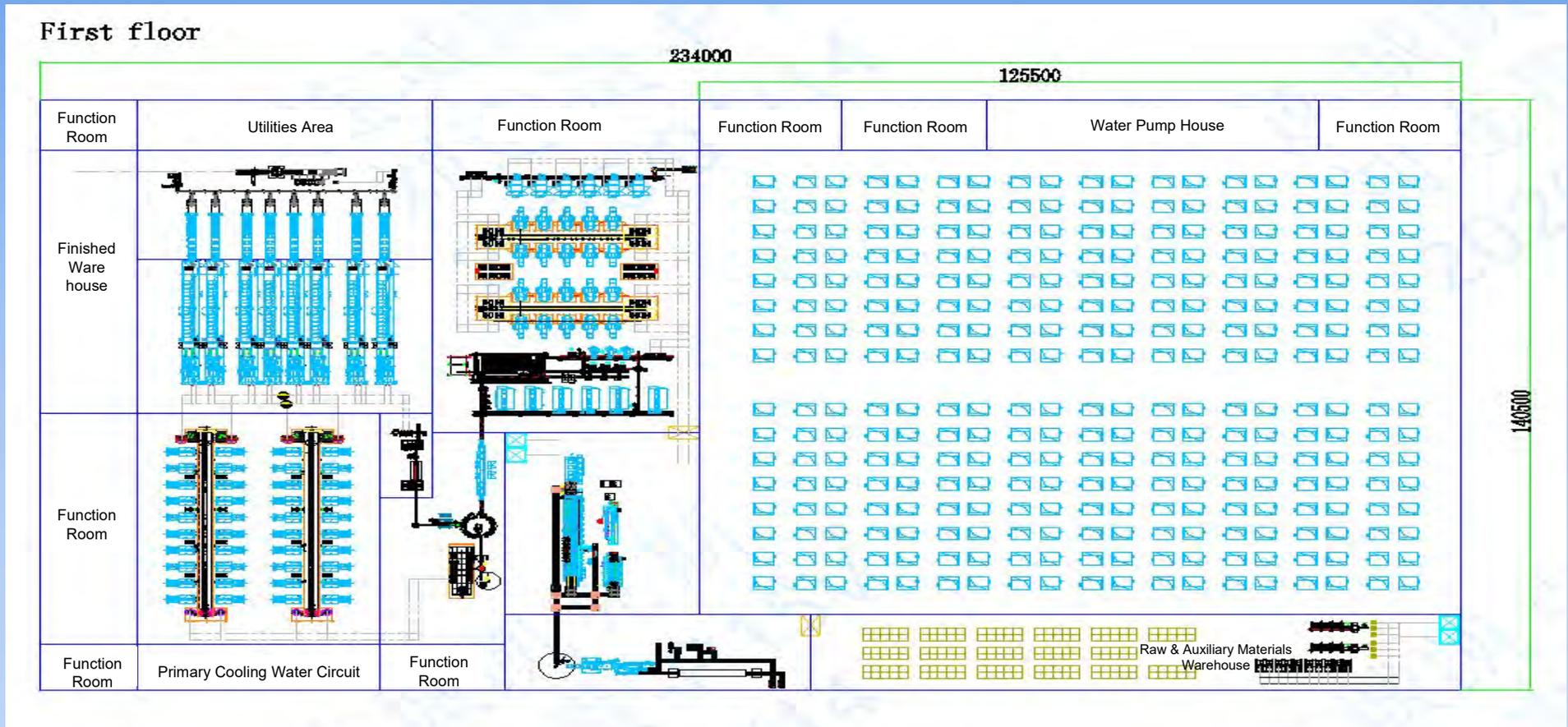
20 GW INGOT & WAFER LAYOUT

Total Power	150,000	KW
Total Power (consumption)	1,098,000,000	KWh/Year
Water (consumption)	3,960,000	CBM/Year
Workshop Area	186,300	m ²
Argon Gas (recycling rate 95% assumed)	2,661,120	CBM/Year
Manpower	1,180	Pers.



5 GW INGOT & WAFER LAYOUT

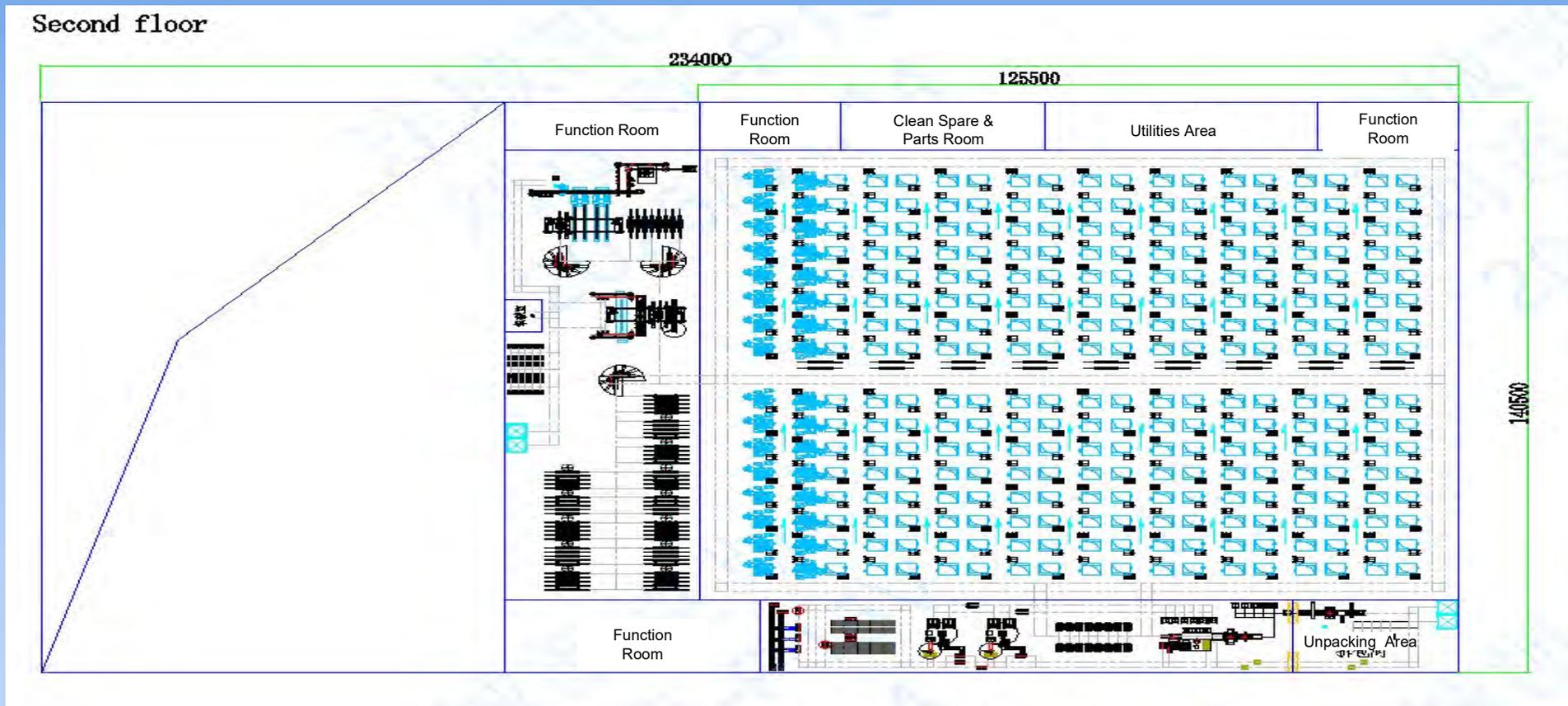
Total Power	37,500	KW
Total Power (consumption)	253,000,000	KWh/Year
Water (consumption)	990,000	CBM/Year
Workshop Area	45,200	m ²
Argon Gas (recycling rate 95% assumed)	665,280	CBM/Year
Manpower	360	Pers.



5 GW INGOT & WAFER LAYOUT

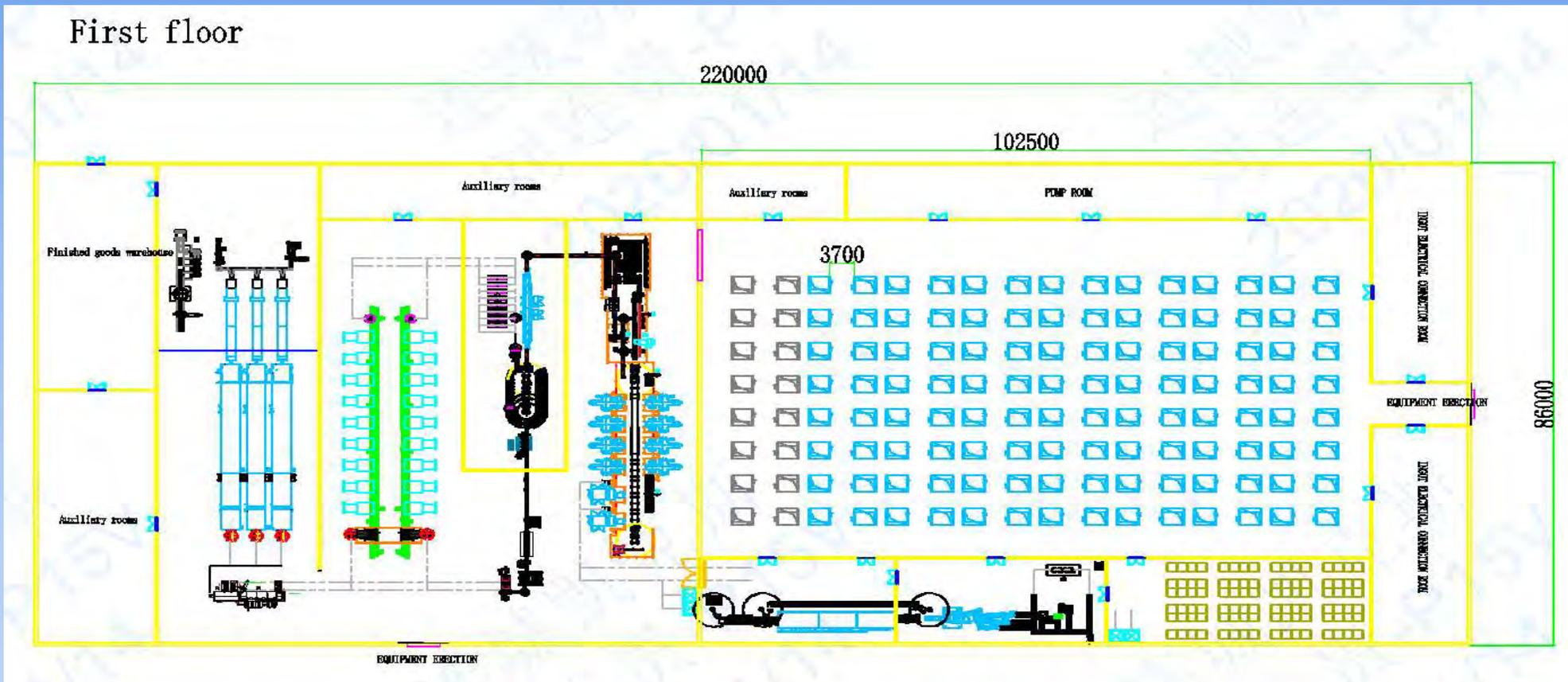
Total Power	37,500	KW
Total Power (consumption)	253,000,000	KWh/Year
Water (consumption)	990,000	CBM/Year
Workshop Area	45,200	m ²
Argon Gas (recycling rate 95% assumed)	665,280	CBM/Year
Manpower	360	Pers.

Second floor



2 GW INGOT & WAFER LAYOUT

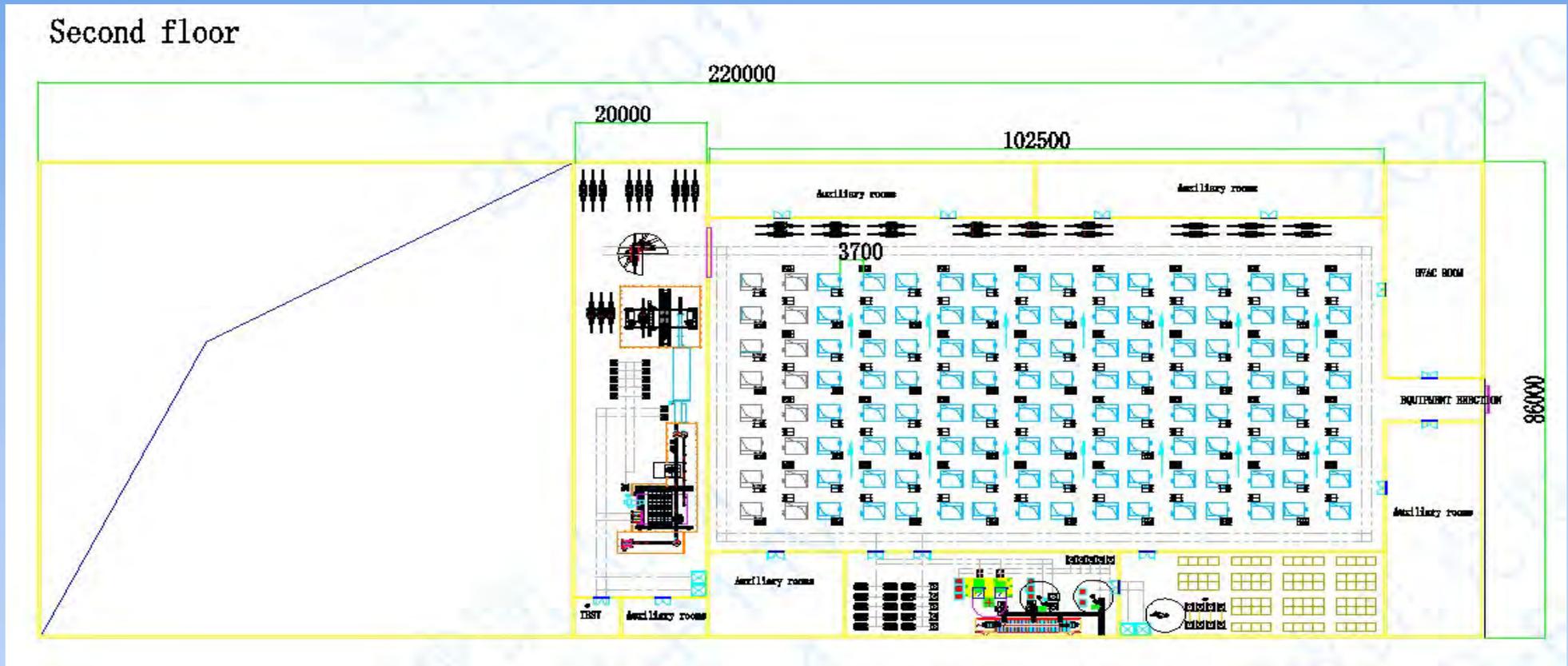
Total Power	15,000	KW
Total Power (consumption)	103,900,000	KWh/Year
Water (consumption)	396,000	CBM/Year
Workshop Area	18,920	m ²
Argon Gas (recycling rate 95% assumed)	266,112	CBM/Year
Manpower	180	Pers.



2 GW INGOT & WAFER LAYOUT

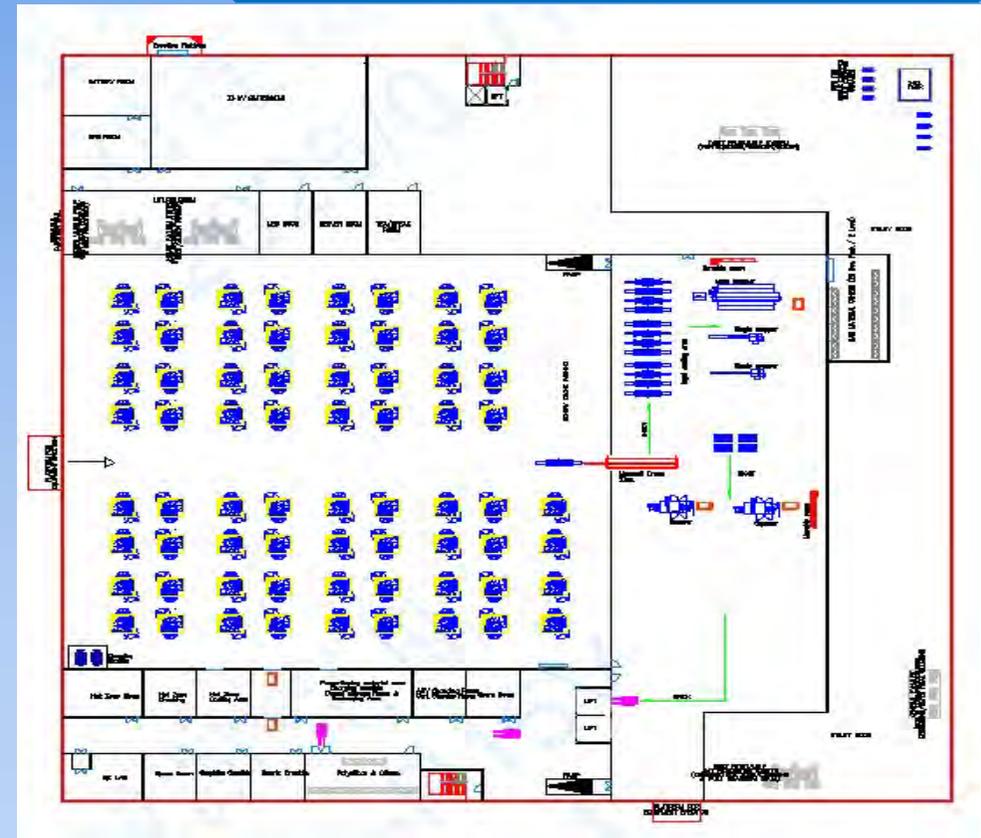
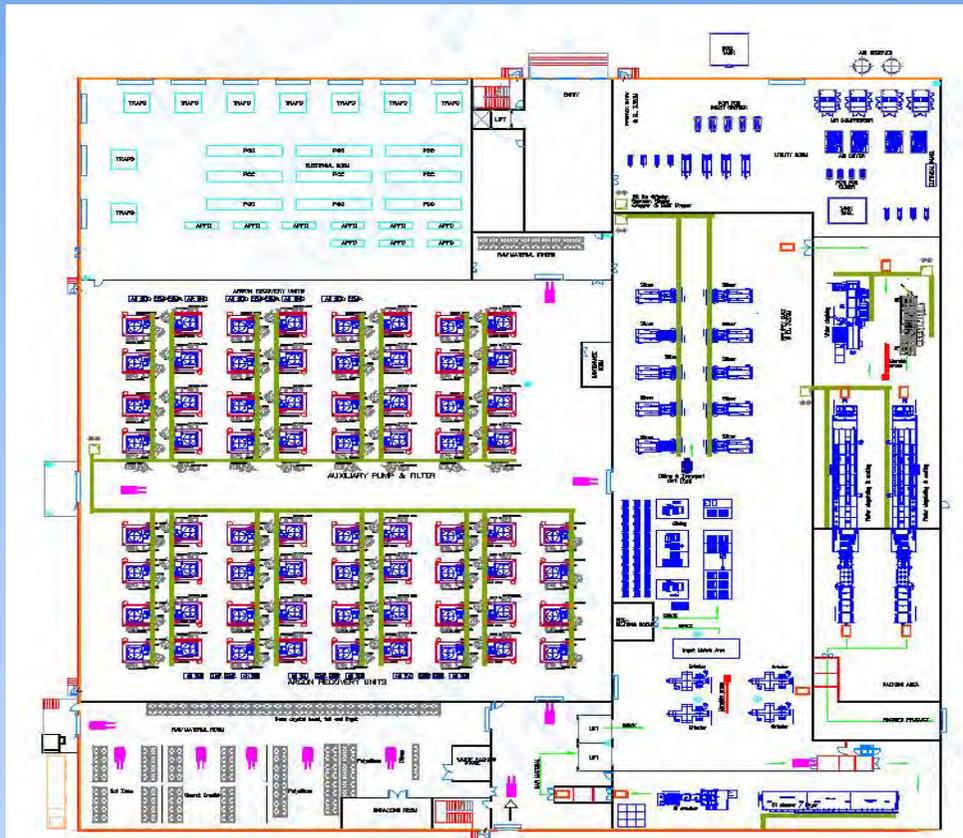
Total Power	15,000	KW
Total Power (consumption)	103,900,000	KWh/Year
Water (consumption)	396,000	CBM/Year
Workshop Area	18,920	m ²
Argon Gas (recycling rate 95% assumed)	266,112	CBM/Year
Manpower	180	Pers.

Second floor



1 GW INGOT & WAFER LAYOUT

Total Power	7,800	KW
Total Power (consumption)	52,700,000	KWh/Year
Water (consumption)	198,000	CBM/Year
Workshop Area	11,800	m ²
Argon Gas (recycling rate 95% assumed)	133,056	CBM/Year
Manpower	105	Pers.



INGOT & WAFER TURNKEY SOLUTION

Intelligent Manufacturing + Digitalization+AI Big Data



■ GROWING AUTOMATION

GROWING AUTOMATION - CORE MODULES



Material box turnover

Auto crusher connection (loading / weighing) & AGV / roller conveyor transfer

Smart warehouse

Auto formula management, precise feeding per charging plan

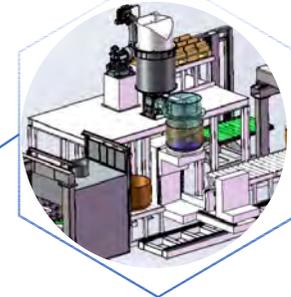


Hopper charging

Auto tilt-charging for hoppers, metal isolation design to prevent contamination

Crucible charging

Auto crucible rotation-charging & Metal isolation anti-contamination



Puller area AGVs

Automatic transfer of Puller area materials

Automatic crystal extraction

Automatic crystal extraction & Multi-rod length compatibility



Automation Rate



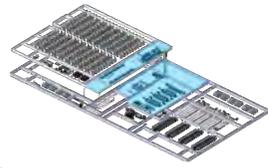
Automation Rate

- Crushing / cleaning, intelligent material preparation, charging & transfer modules form a fully automated growing workshop production line

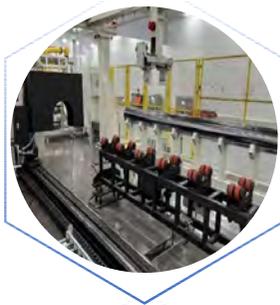
Automation Rate

- Modular design for customer needs
- Integrates puller central control, builds crystal growth shop smart manufacturing system with auto material management & AGV transport

SHAPING AUTOMATION



SHAPING AUTOMATION - CORE MODULES



Ingot inspection

Ingot length / diameter / facet line inspection, with laser coding. Optional hidden crack detection system

Electrical testing

Automatic ingot resistivity testing, 6-axis robot for increased accuracy & flexibility



Ingot gluing

Integrated ingot rotation for facet line alignment, fully automated rod adhesive bonding

Automatic loading and unloading

Auto loading /unloading for cropping, squaring, grinding & recropping



Brick inspection

Auto brick inspection (size / angle / perpendicularity), optional chipping & hidden crack detection

Brick stacking and packaging

Fully automated stacking & packaging of finished square bricks



Automation Rate



Performance

- Shaping automation with multi-module integration for a fully automated shaping workshop

Performance

- Modular design for customer needs
- Integrated control, scheduling & MES enable ingot-to-brick auto-digital-intelligent processing, lower labor requirement, higher production efficiency

■ GLUING AUTOMATION

AUTOMATIC GLUING LINE - CORE MODULES



Microwave heating of Si bricks

Bricks are heated to the optimum process temperature by microwave heating, so that the glue can adhere better and improve quality of gluing

Brick destacking & feeding

- Automatic destacking of bricks and packaging materials for brick feeding operation



Brick Inspection and rolling-over

Inspect perpendicularity and edge chipping of brick end face, automatically turn and match the surfaces for optimized brick gluing results

Positioning & pre-curing warehouse

- Use three-in-one positioning & curing warehouse to ensure accurate positioning of bricks in the pre-curing process

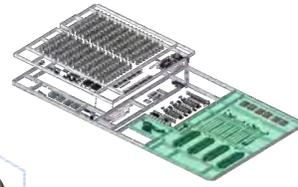
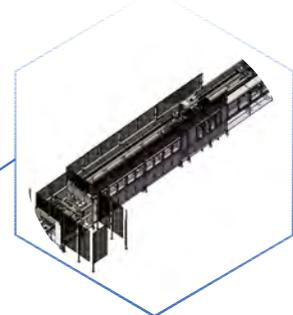


Finished product cache

Data system of incoming bricks linked with MES of slicing workshop, realizing the management of storage, waiting time and specification recording of the finished products

Brick holder degluing & cleaning

- Brick holder automatic loading, unloading, degluing & cleaning, automatically connecting with brick gluing line



Automation Rate



Performance

- Brick depalletizing, inspection and turning, microwave heating, automatic brick pairing, resin plate cleaning, brick holder degluing & cleaning, brick pre-curing, finished product testing & storage, constitute the automatic gluing line

Performance

- Unique three-in-one positioning & curing process closely links each process steps and realizes multi product gluing with higher curing accuracy
- Automatic gluing process eliminates manual intervention, enhancing production efficiency and product quality

SLICING AUTOMATION

SLICING AUTOMATION - CORE MODULES

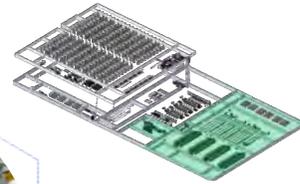


Discharging from warehouse, sorting and transferring

Automatic brick pairing for glue line, high efficiency material distribution per wafer slicing plan

Automatic loading & unloading of slicer

Automatic material distribution per wafer slicing plan, automatic slicer loading/unloading

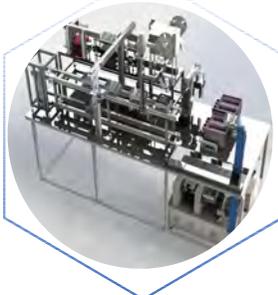


Unloading mechanism

Auto degluing rack positioning & sliced brick pickup, AGV docking for empty/full degluing rack exchange

Material separation and transfer after slicing

AGV realizes empty/full degluing rack turnover, automatically connecting wafer slicers & degluing units

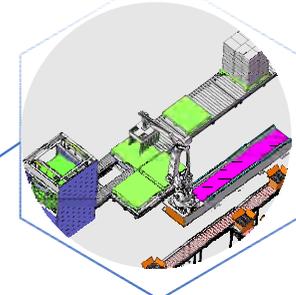


Reinspect & packaging of wafer

A-grade wafer reinspection & packaging, automatic wafer packaging with box opening & sealing

Finished product palletizing and packing

Automatic transfer of boxed wafers, palletizing & wrapping after packing



Automation Rate



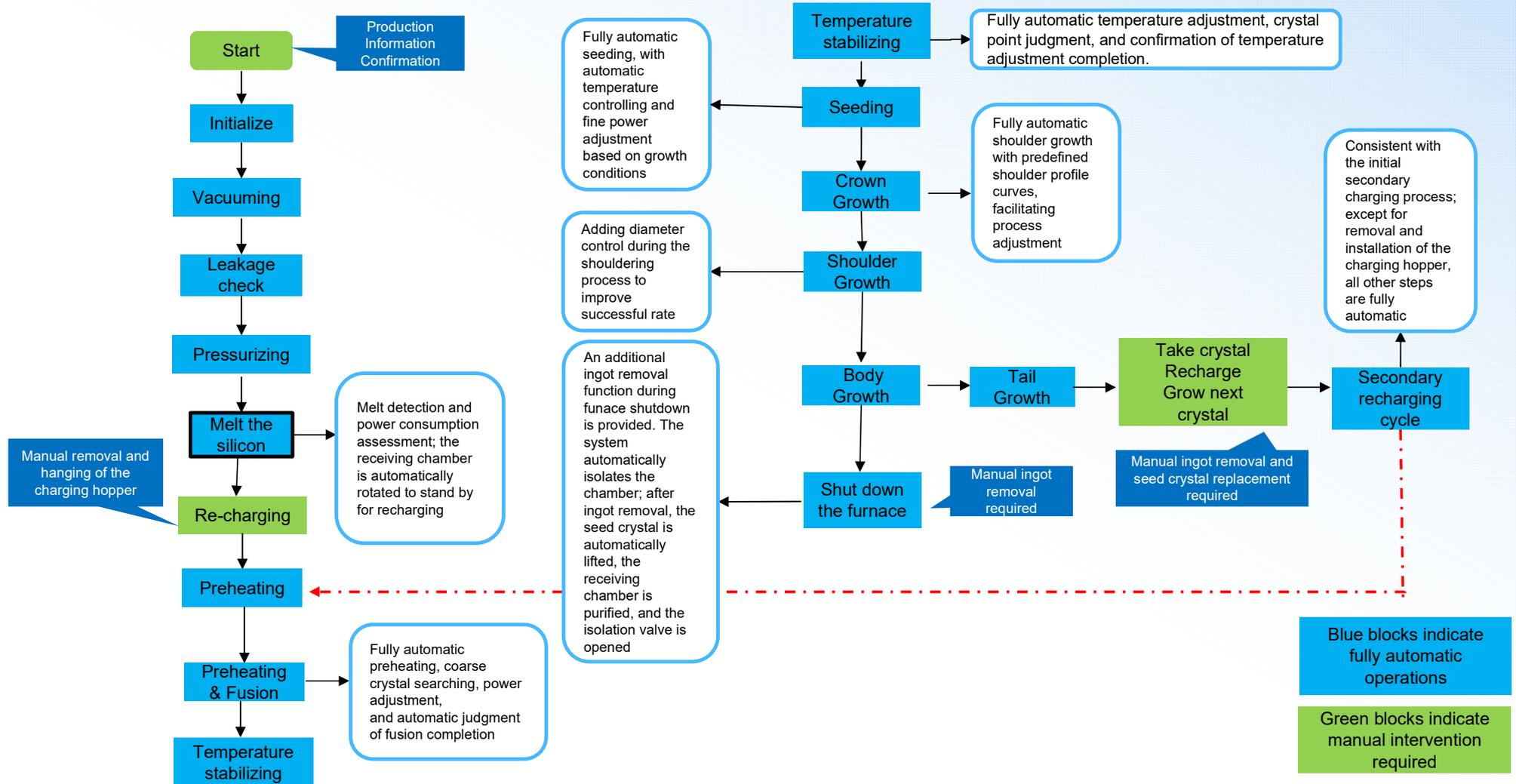
Performance

- Automatic slicing workshop with multi-modules forming an intelligent wafer production line

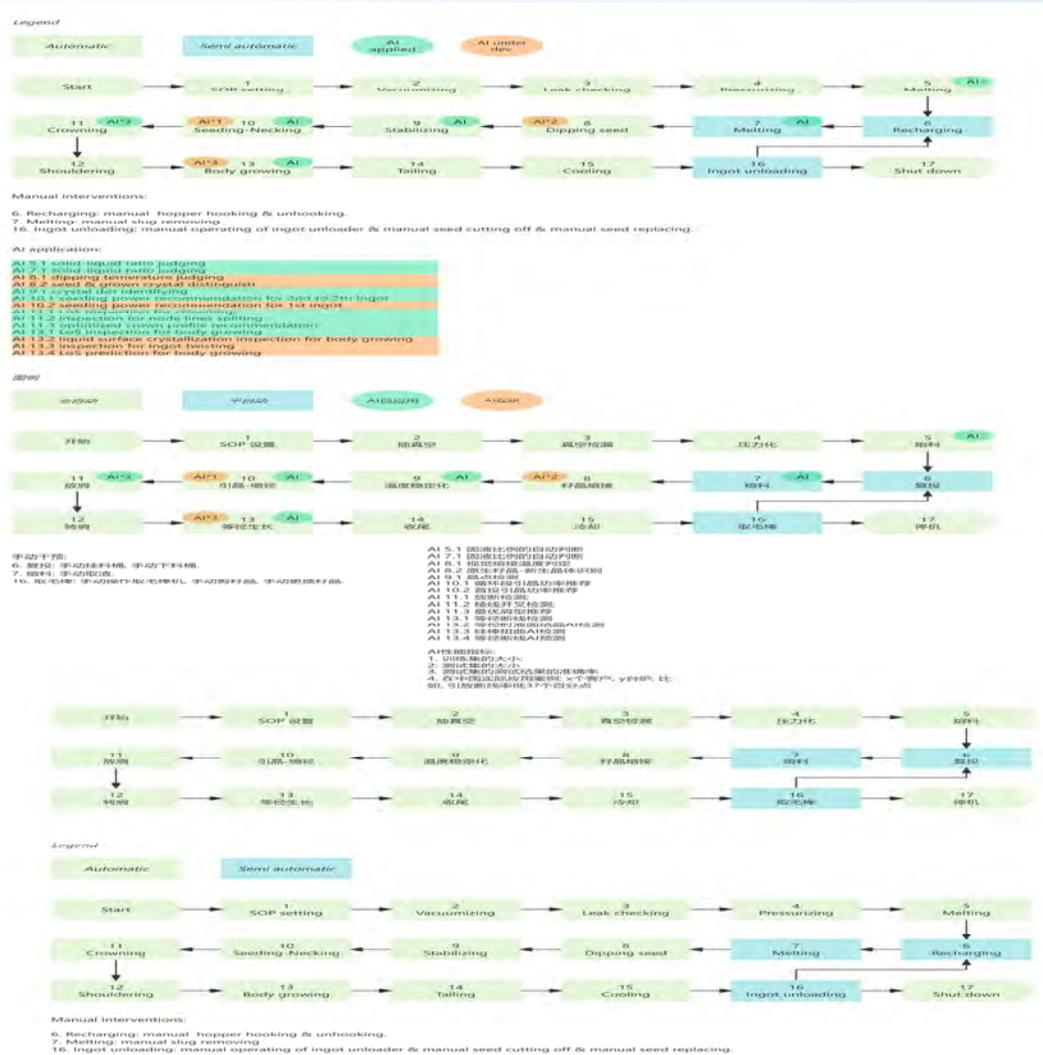
Performance

- Modular design for customer needs.
- Smart manufacturing system for wafer slicing workshop with intelligent scheduling, brick pairing, automatic slicing systems, degluing machine, wafer sorting & packaging line

ONE-CLICK CRYSTAL PULLING PROCESS



ONE-CLICK CRYSTAL PULLING PROCESS



AI & MES Integration

Process Positioning & Alignment Assistance



Output:

Centerline & Boundary & Deviation

Action:

Overlay alignment guide lines Out-of-tolerance alarm

Example Indicator:

Positioning accuracy $\leq 1\text{mm}$

Quantity Recognition & Automatic Update



Output:

Quantity Missing & Extra & Blocked piece alert

Action:

Auto-update indicators
Review task trigger

Value:

Reduce manual counting
Decrease errors

Automated Quality Control



Output:

Defect identification & Classification

Action:

Intercept & handle
Generate traceability report

Value:

Improve consistency
Reduce labor cost

Closed-Loop Delivery & System Integration



Input:

Camera & Sensor & Equipment data collection

Integration:

API service
Database write-back

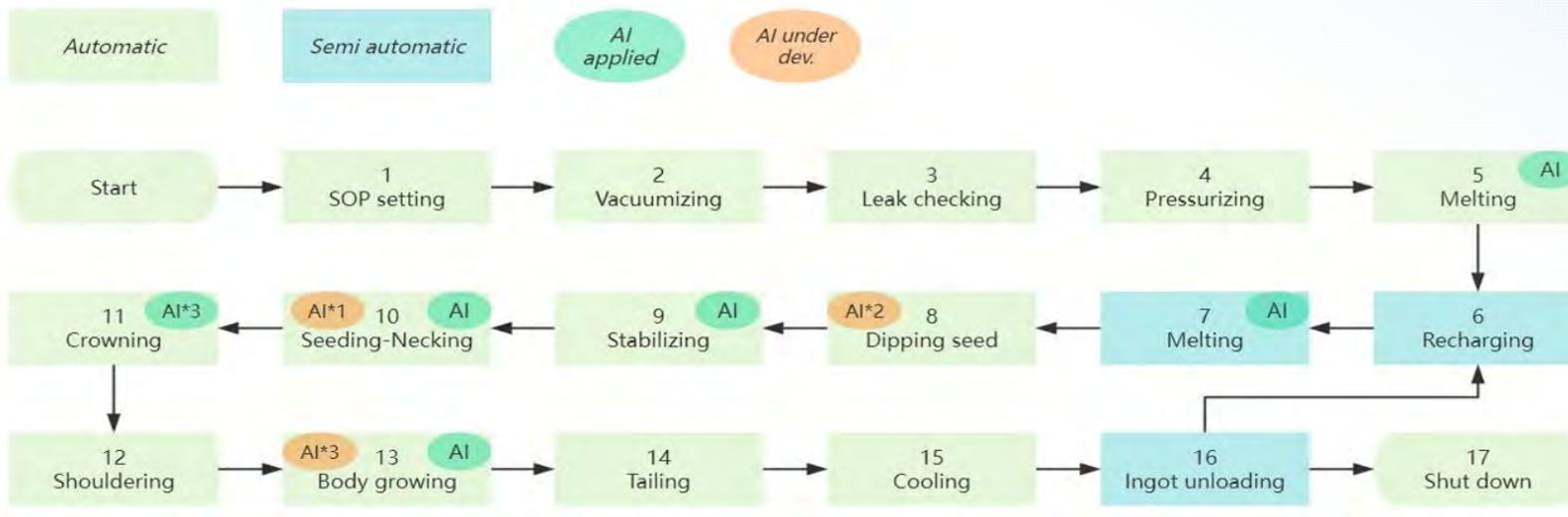
Execution:

Work order & traceability
Closed-loop operation

Visual/Sensor Data → AI Service → MES Write-back (Work Order/Traceability) → Closed-Loop Optimization

FULL-PROCESS AI & BI APPLICATION POINTS

Legend



Semi automatic operations:

6. Recharging: manual hopper hooking & unhooking.

7. Melting: manual slug removing

16. Ingot unloading: manual operating of ingot unloader & manual seed cutting off & manual seed replacing.

AI applications:

AI 5.1 solid-liquid ratio judging

AI 7.1 solid-liquid ratio judging

AI 8.1 dipping temperature judging

AI 8.2 seed & grown crystal distinguish

AI 9.1 crystal facet dot identifying

AI 10.1 seeding power recommendation for 2nd to 7th ingot

AI 10.2 seeding power recommendation for 1st ingot

AI 11.1 LoS inspection for crowning;

AI 11.2 inspection for node lines splitting

AI 11.3 optimized crown profile recommendation

AI 13.1 LoS inspection for body growing

AI 13.2 liquid surface crystallization inspection for body growing

AI 13.3 inspection for ingot twisting

AI 13.4 LoS prediction for body growing

■ QUALITY ASSURANCE

High-level Products & High-quality Services

LINTON



Large Quantity Delivery Capability

Supports customer scaling and rapid capacity expansion with industry-leading efficiency.

1

LINTON



2

"121" Service Objectives

- 1 hour inquiry response.
- 2 working days for a customized solution.
- 1 calendar week for product return/exchange

R&D Capability

Enables customers to achieve advanced production capacity through core technologies and smart factories.

3

4

Solutions

Provides customers with turnkey smart solutions for photovoltaic silicon wafering.

■ SERVICE GUARANTEE

Customer Satisfaction Is Top Priority



Quality Improvement



Cycle Shortening



Efficiency Enhancement



Cost Reduction

Service Model: Built on responsive support and driven by proactive value-added service. Our international teams across the U.S., Vietnam, Singapore, and Malaysia deliver fast service to our worldwide customers.

"Business-Technology-Service" model: addressing customers' full-lifecycle needs in business strategy, product solutions, and delivery support.



Response

1H



After sales service

24H



Professional service personnel

400+

■ CROPPER & RE-CROPPER

Multi wire cropper

LINTON

QDHD35700

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- Ingot Diameter: $\varnothing 240 \sim 350\text{mm}$
- Ingot length: Max7200mm
- Cropping speed: $0 \sim 100\text{mm/min}$
- Wire speed: $0 \sim 50\text{m/s}$
- Loop wire diameter: $0.42 \sim 0.65\text{mm}$
- Outer size of machine (main): $19670 \times 3100 \times 3200\text{mm}$
- Rated power: 50kW
- Weight: 32t

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- Improved ingot support structure, edge chipping $\leq 1\text{mm}$, end perpendicularity $\leq 0.5\text{mm}$
- It can be mounted in dual-wire configuration, and the **output per unit is $\geq 3.5\text{GW}$**
- Automatic wire breakage recognition
- Equipped with automatic facet line detection and alignment function

Single loop wire re-cropper

QDHA35100

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- Ingot Diameter: $\varnothing 240 \sim 350\text{mm}$
- Ingot Length: $2 \sim 980\text{mm}$
- Cropping speed: $\geq 50\text{mm/min}$
- Wire speed: $0 \sim 50\text{m/s}$
- Loop wire diameter: $0.42 \sim 0.65\text{mm}$
- Outer size of machine (main): $3100 \times 1900 \times 2700\text{mm}$
- Rated power: 5kW
- Weight: 3t

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- Automate the re-cropping process by connecting the workpiece with the servo feeding table
- High efficiency and stability, optional double wire double servo tension configuration, to achieve one-time cutting of sample wafers
- Algorithm update, optimize tension control, feed process, improve the quality of finished products
- **Loop wire life ≥ 120 cuts**
- The daily capacity is 100+ cuts

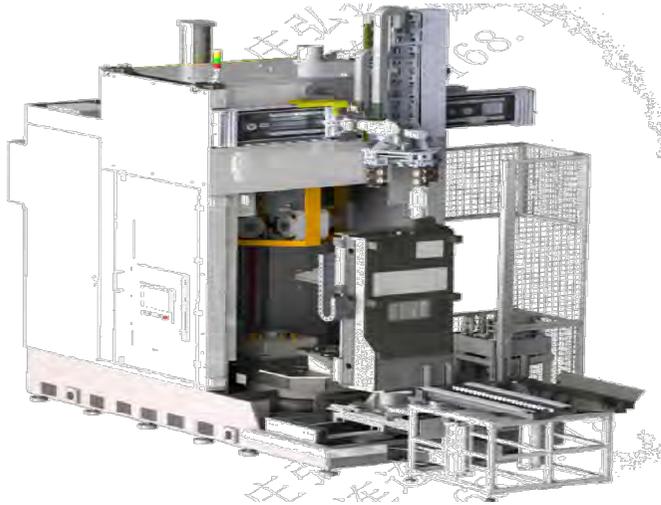


SQUARER & GRINDER

4-Loop Wire Squarer

QHFA2395

LINTON



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- Wafer side length: 180-235mm
- Ingot length: 200-950mm
- Squaring speed : 0~80mm/min
- Wire speed: 0 ~ 70m/s
- Loop wire diameter: 0.42~0.65mm
- Squaring time: ≤15min/cut
- Outer size of machine (main): 5410*2450*4580mm
- Rated power: 41kW
- Weight: 12t

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- Higher productivity, with superior capacity of 1 GW/Set
- Equipped with rotary exchanging table, preparation time ≤30s
- 4 loop wires cut at the same time with tension control algorithm, with variation ≤0.15mm
- 1200mm ingot length optional

Grinder

LT-GMSR2510



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- Wafer side length: 166-235mm (compatible with half brick: 182x91 210x105)
- Ingot length: 200-1050mm
- Cycle time: ≤35min/pcs (M10/830mm)
- Dimension accuracy: ≤±0.03mm
- Roughness: Ra≤0.1μm
- Grinding wheel spec: 250-320mm
- Outer size of machine: (main) 5410*2960*2400mm
- Rated power: 61kW
- Weight: 12t

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- Automatic feeding and centering, intelligent positioning of the workpiece, improved compatibility to abnormal bricks
- Automatic detection of dimensional margin, intelligent matching of cutting depth, improved processing efficiency
- Automatic detection of tool wear with intelligent compensation, improved accuracy of finished product
- Automatic 5-D feeding table enables **0.1mm margin grinding**
- **"High speed, large cutting depth, fast feed", daily output of square bricks ≥4.2 tons**
- 1200mm ingot length optional

DEGLUING, SINGULATING & CLEANING MACHINE



Wafer degluing machine

FIT-TJ8C-01A



Equipment performance

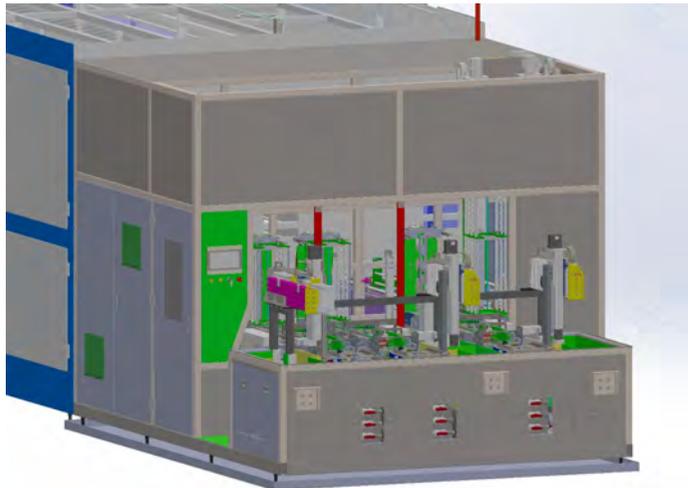
- Function: wafer degluing & cleaning after slicing
- Principle: ultrasonic + detergent cleaning + rinsing
- Process: spray → degluing → rinsing → unloading
- Capacity/hour: ≥12 sliced bricks
- Power: 150kW
- Water consumption (city water): 6m³/hour

Optional Configuration

- Automatic removal of wings
- Automatic time adding recognition
- Auto wafer picking at unloading point

Wafer singulating & cleaning machine

FIT-YT3T15C67LQ-01A



Equipment performance

- Function: wafer singulating & cleaning after slicing
- Principle: ultrasonic + detergent cleaning + rinsing + drying
- Process: Insert → rinsing → detergent cleaning → rinsing → drying
- Capacity/hour: 12000-18000pcs
- Power: 530KW
- Water consumption (pure water): 1.7m³/hour
- Water consumption (city water): 1.5m³/hour

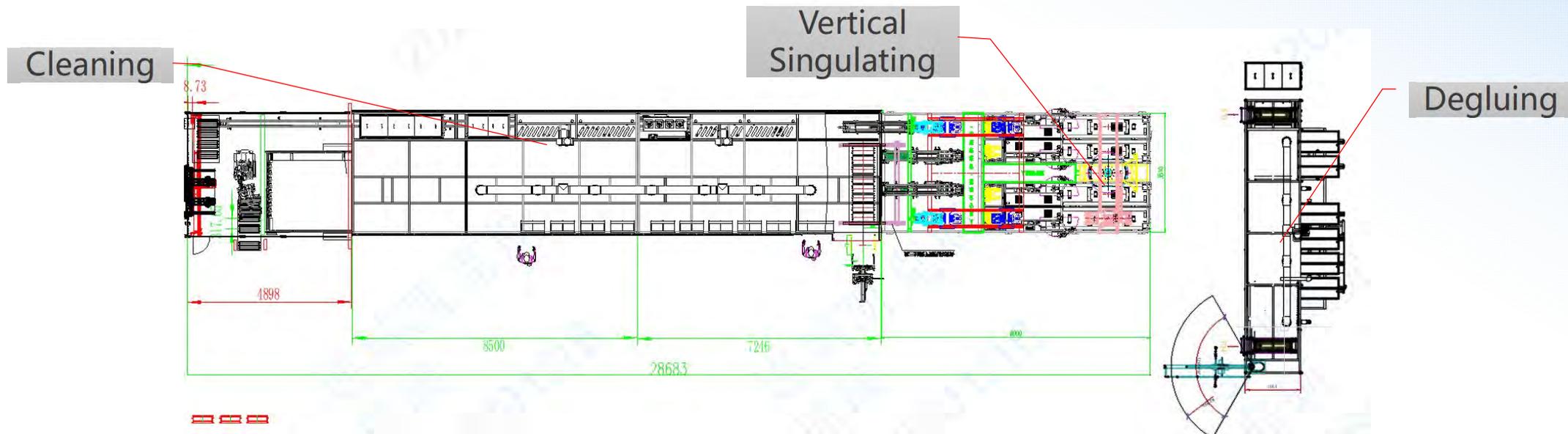
Optional items

- Vacuum drying
- Scrap detection
- Deformed Cassette detection

High compatibility

- Compatible with half size wafer with matching cassette
- Compatible with double-cassette for half wafer

DEGLUING → SINGULATING → CLEANING ARRANGEMENT



Layout:

Degluing machines are located behind slicing area and connected to the singulating / cleaning line via AGVs.

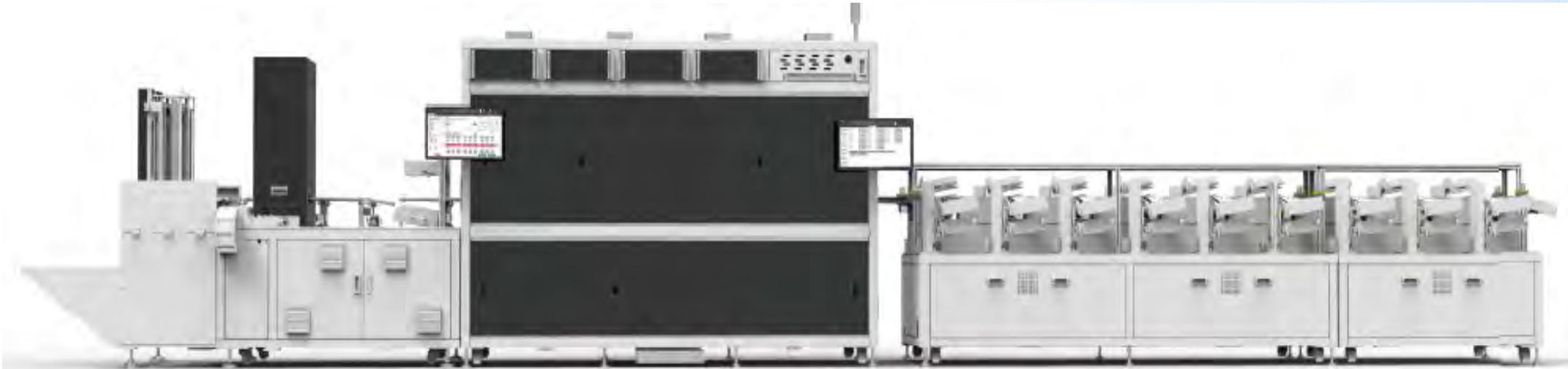
Equipment Dimensions:

Degluing Machine: L9145 × W3132 × H3624 (mm)

Singulating Machine: L8000 × W3500 × H3577 (mm)

Cleaning Machine: L21000 × W3500 × H3768 (mm) (including blower)

■ WAFER SORTING MACHINE



Main Specifications:

Power Supply: 380V, 5-lines 3-phase system, 6*5-core cable
Power: 15kW

Air Pressure: 0.5-0.7 MPa

Air Consumption: 550L/min, pipe diameter: Φ 16mm

Overall Dimensions: L12300mm×W1600mm×H2039mm

Wafer Size Range: 182×182mm-230×230mm

Wafer Thickness Range: 100-240 μ m

CT & Production Capacity: CT \leq 0.18s 20000 pcs/h @182
CT \leq 0.2s 18000 pcs/h @210

CDA:

Maximum solid particle size: 0.1 μ m

Minimum pressure dew point: -20 $^{\circ}$ C

Maximum oil mist concentration: 0.1mg/m³

Environmental Requirements:

Temperature: 20 $^{\circ}$ C~25 $^{\circ}$ C

Humidity: 50%~65%

Clean room class: \leq 60,000/m³
(particle count for particles $>$ 5 μ m)



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and solution provider for your PV
Ingot & Wafer projects

Thank you!

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