

**Finehope**

This product is customized for  
the customer, not for sale





This product is customized for  
the customer, not for sale





This product is customized for  
the customer, not for sale





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2003 ISO 9001

**IATF16949** 00:

Finehope 2021 IATF16949

2007 Finehope Caterpillar SPC, MSA, FMEA, APQP PPAP 5000000000 Caterpillar 5000000000 - 5000000000.

## Our Advantages



**PU** 00 00 00 00  
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### 3. 如何選擇合適的數據類型？

- 1) 問 問: 問 問 (APQP).
- 2) Finehope 問 問問 問問 問問 問問 問問 問問.
- 3) 問問問 問問 問 問 問問 問問 問問.
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#### 4. Finehope 的 4 个 4 的 4 次方?

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## 5. PU 如何 如何 如何如何?

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## About us









## Our Certification



2019-2020

Finehope 2019 "Xiamen Growth-oriented Micro, Small & Medium Enterprises"

Finehope 2019 "Xiamen Growth-oriented Micro, Small & Medium Enterprises" award certificate. The certificate is issued by the Xiamen Municipal Science and Technology Administration, recognizing Finehope's achievements in the field of micro, small, and medium enterprises.

2020-2022

Finehope 2020 "Xiamen Specialized, Refining, Differentiate, Innovative SMEs" award certificate. The certificate is issued by the Xiamen Municipal Science and Technology Administration, recognizing Finehope's achievements in the field of specialized, refining, differentiate, innovative SMEs.

2019-2020

Finehope 2019 "Xiamen Science And Technology Little Giant Leading Enterprise" award certificate. The certificate is issued by the Xiamen Municipal Science and Technology Administration, recognizing Finehope's achievements in the field of science and technology.







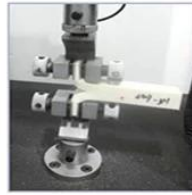
## Quality Assurance



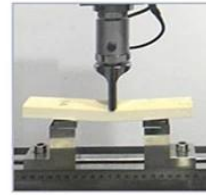
UNIVERSAL TESTING MACHINE(UTM)



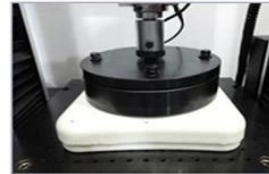
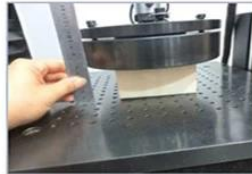
Tensile Test



Tear Resistance Test

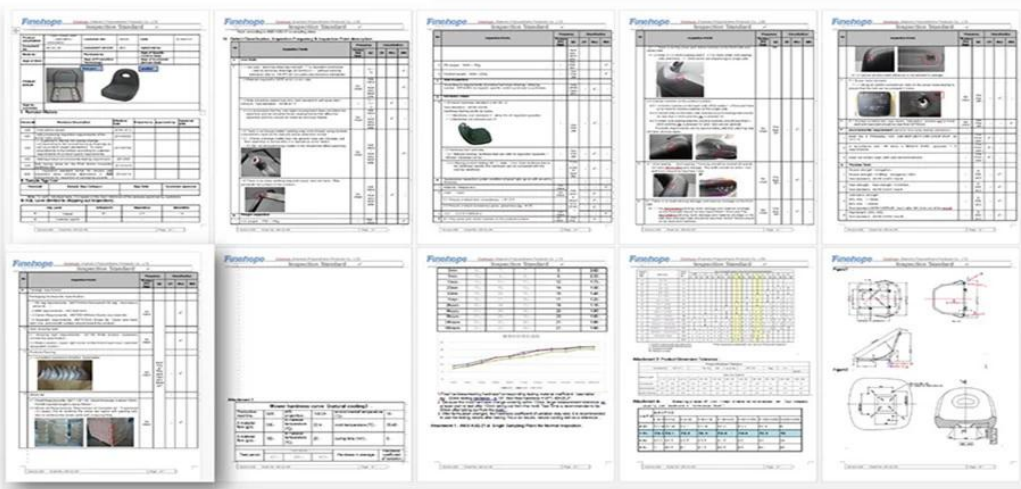


Compressive Strength



Indentation Force Deflection

## INSPECTION STANDARD



## MATERIAL PERFORMANCE TEST REPORT





|                        |                                                                                                                                                 |  |  |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|--|--|
| <b>Customer</b>        |                                                                                                                                                 |  |  |
| <b>Location</b>        | New Zealand                                                                                                                                     |  |  |
| <b>Customer Code</b>   | G1019                                                                                                                                           |  |  |
| <b>Risk Assessment</b> | New: Site <input type="checkbox"/> Technology <input type="checkbox"/> Process <input type="checkbox"/><br>Other Risks <input type="checkbox"/> |  |  |

|                          |            |  |  |
|--------------------------|------------|--|--|
| <b>Project</b>           |            |  |  |
| <b>Finehope Contact</b>  | Wendy Yang |  |  |
| <b>Part No.</b>          |            |  |  |
| <b>Part Name</b>         | G1019Y04   |  |  |
| <b>Change Level/Date</b> |            |  |  |
| <b>User Plant(s)</b>     | Finehope   |  |  |

| Core Team Members | Company/Title   | Phone/Fax/E-Mail   |
|-------------------|-----------------|--------------------|
| Tiger Xu          | G.M.            |                    |
| Yibin Lim         | Vice G.M.       |                    |
| Cindy Wu          | Sales Manager   | cindy@finehope.com |
| Liangquan Wan     | Project Manager |                    |
| Wendy Yang        | Sales           | wendy@finehope.com |

| Build Level                    | Material Required Date | Quantity | No. Concurrent |        |
|--------------------------------|------------------------|----------|----------------|--------|
|                                |                        |          | SRCs           | Majors |
| Product Design and Development | 21-Jun-21              | 10       |                |        |
| Product and Process Validation | 25-Jun-21              | 15       |                |        |
|                                |                        |          |                |        |
|                                |                        |          |                |        |

| APQP Deliverable                                                      | Finehope APQP Reference Only | G<br>Y<br>R | Project Need Date | Supplier Timing Date | Actual Closure Date | Supplier Lead Resp Initials | Finehope Acceptance Complete | Remarks or Assistance Required |
|-----------------------------------------------------------------------|------------------------------|-------------|-------------------|----------------------|---------------------|-----------------------------|------------------------------|--------------------------------|
| <b>AIAG APQP Phase 2 - Product Design and Development</b>             |                              |             |                   |                      |                     |                             |                              |                                |
| 1. Project Timeline (Synchronized w/Production Time Plan)             | 2030                         | G           | 20-Jun-21         | 21-Jun-21            | 21-Jun-21           | 22-Jun-21                   | 23-Jun-21                    | /                              |
| 2. Customer Inputs / Requirements                                     | 2030                         | G           | 23-Jun-21         | 24-Jun-21            | 24-Jun-21           | 25-Jun-21                   | 26-Jun-21                    | /                              |
| 3. Warranty & Quality Mitigation Plan                                 | 2030                         | G           | 24-Jun-21         | 25-Jun-21            | 25-Jun-21           | 26-Jun-21                   | 27-Jun-21                    | /                              |
| 4. Customer Specific Requirements                                     | 2030                         | G           | 25-Jun-21         | 26-Jun-21            | 26-Jun-21           | 27-Jun-21                   | 28-Jun-21                    | /                              |
| 5. Design FMEA                                                        | 2080                         | G           | 26-Jun-21         | 27-Jun-21            | 27-Jun-21           | 28-Jun-21                   | 29-Jun-21                    | /                              |
| 6. Preliminary Bill of Materials (BOM)                                | 2030                         | G           | 27-Jun-21         | 28-Jun-21            | 28-Jun-21           | 29-Jun-21                   | 30-Jun-21                    | /                              |
| 7. Prototype Control Plans                                            | 2110                         | G           | 28-Jun-21         | 29-Jun-21            | 29-Jun-21           | 30-Jun-21                   | 1-Jul-21                     | /                              |
| 8. Prototype Builds                                                   | 2110                         | G           | 29-Jun-21         | 30-Jun-21            | 30-Jun-21           | 1-Jul-21                    | 2-Jul-21                     | /                              |
| 9. Design Verification Plan & Report (DVP&R)                          | 2120                         | G           | 30-Jun-21         | 1-Jul-21             | 1-Jul-21            | 2-Jul-21                    | 3-Jul-21                     | /                              |
| 10. Design / Process Review                                           | 2130                         | G           | 1-Jul-21          | 2-Jul-21             | 2-Jul-21            | 3-Jul-21                    | 4-Jul-21                     | /                              |
| 11. Team Feasibility Commitment                                       | 2130                         | G           | 2-Jul-21          | 3-Jul-21             | 3-Jul-21            | 4-Jul-21                    | 5-Jul-21                     | /                              |
| 12. APQP Status Sub-Supplier                                          | 2130                         | G           | 3-Jul-21          | 4-Jul-21             | 4-Jul-21            | 5-Jul-21                    | 6-Jul-21                     | /                              |
| 13. Production Drawing & Specifications                               | 2220                         | G           | 4-Jul-21          | 5-Jul-21             | 5-Jul-21            | 6-Jul-21                    | 7-Jul-21                     | /                              |
| 14. Subcontractor Purchase Orders (Customer Tooling)                  | 2220                         | G           | 5-Jul-21          | 6-Jul-21             | 6-Jul-21            | 7-Jul-21                    | 8-Jul-21                     | /                              |
| 15. Facilities, Equipment, Tools and Gages                            | 2260                         | G           | 6-Jul-21          | 7-Jul-21             | 7-Jul-21            | 8-Jul-21                    | 9-Jul-21                     | /                              |
| <b>AIAG APQP Phase 3 - Process Design and Development</b>             |                              |             |                   |                      |                     |                             |                              |                                |
| 16. Product/Process and Quality System Review                         | 3030                         | G           | 9-Jul-21          | 10-Jul-21            | 10-Jul-21           | 10-Jul-21                   | 11-Jul-21                    | /                              |
| 17. Manufacturing Process Flow Chart                                  | 3040                         | G           | 11-Jul-21         | 12-Jul-21            | 12-Jul-21           | 12-Jul-21                   | 13-Jul-21                    | /                              |
| 18. Process FMEA                                                      | 3100                         | G           | 13-Jul-21         | 14-Jul-21            | 14-Jul-21           | 14-Jul-21                   | 15-Jul-21                    | /                              |
| 19. Pre-Launch Control Plan                                           | 3110                         | G           | 15-Jul-21         | 16-Jul-21            | 16-Jul-21           | 16-Jul-21                   | 17-Jul-21                    | /                              |
| 20. Process Work Instructions                                         | 3120                         | G           | 17-Jul-21         | 18-Jul-21            | 18-Jul-21           | 18-Jul-21                   | 19-Jul-21                    | /                              |
| 21. Measurement Systems Evaluation                                    | 3130                         | G           | 19-Jul-21         | 20-Jul-21            | 20-Jul-21           | 20-Jul-21                   | 21-Jul-21                    | /                              |
| 22. Packaging Specifications & Approvals                              | 3160                         | G           | 21-Jul-21         | 22-Jul-21            | 22-Jul-21           | 22-Jul-21                   | 23-Jul-21                    | /                              |
| 23. Manufacturing Team Training                                       | 3170                         | G           | 23-Jul-21         | 24-Jul-21            | 24-Jul-21           | 24-Jul-21                   | 25-Jul-21                    | /                              |
| <b>AIAG APQP Phase 4 - Product and Process Validation</b>             |                              |             |                   |                      |                     |                             |                              |                                |
| 24. Subcontractor PPAP Approval                                       | 4005                         | G           | 9-Jul-21          | 10-Jul-21            | 10-Jul-21           | 10-Jul-21                   | 11-Jul-21                    | /                              |
| 25. Production Control Plan                                           | 4008                         | G           | 11-Jul-21         | 12-Jul-21            | 12-Jul-21           | 12-Jul-21                   | 13-Jul-21                    | /                              |
| 26. Production Readiness Review (PRR)                                 | 4009                         | G           | 13-Jul-21         | 14-Jul-21            | 14-Jul-21           | 14-Jul-21                   | 15-Jul-21                    | /                              |
| 27. Production Trial Run (PTR)                                        | 4010                         | G           | 15-Jul-21         | 16-Jul-21            | 16-Jul-21           | 16-Jul-21                   | 17-Jul-21                    | /                              |
| 28. Process Capability Studies                                        | 4030                         | G           | 17-Jul-21         | 18-Jul-21            | 18-Jul-21           | 18-Jul-21                   | 19-Jul-21                    | /                              |
| 29. Production Validation Plan & Report (PV&R)                        | 4090                         | G           | 19-Jul-21         | 20-Jul-21            | 20-Jul-21           | 20-Jul-21                   | 21-Jul-21                    | /                              |
| 30. Production Part Approval (PPAP)                                   | 4110                         | G           | 21-Jul-21         | 22-Jul-21            | 22-Jul-21           | 22-Jul-21                   | 23-Jul-21                    | /                              |
| <b>AIAG APQP Phase 5 - Feedback, Assessment and Corrective Action</b> |                              |             |                   |                      |                     |                             |                              |                                |
| 31. Initial Production Shipment                                       | 5005                         | G           | 28-Jul-21         | 30-Jul-21            | 30-Jul-21           | 30-Jul-21                   | 31-Jul-21                    | /                              |
| 32. Production Ramp-up Plan                                           | 5005                         | G           | 31-Jul-21         | 2-Aug-21             | 2-Aug-21            | 2-Aug-21                    | 3-Aug-21                     | /                              |
| 33. Full Production Date                                              | 5005                         | G           | 5-Aug-21          | 7-Aug-21             | 7-Aug-21            | 7-Aug-21                    | 8-Aug-21                     | /                              |
| 34. Conduct Lessons Learned                                           | 5005                         | G           | 8-Aug-21          | 10-Aug-21            | 10-Aug-21           | 10-Aug-21                   | 11-Aug-21                    | /                              |

## Design Failure Mode and Effects Analysis

### (Design FMEA)

FMEA No.:  
DFMEA-001

Page: page 1, totally 3 pages

Made: Xiaodong Qiu

FMEA Date: Nov.10th.2015

Product Name: Injection moulding

Procedure responsible dept: Production Dept

Model year/vehicle types: CRV

Soybean Milk Maker

Important date: Nov.10th.2015

People participated: Develop dept:GaoLin Wei

Sales:Haiyan Wu

PC:Jiannan Yan

Technology Dept:Jianyu Zhou

Purchaser:Yuanyuan Gou

Production dept:Shuwen Dong

QC:Bingxiang Zheng

| procedure function requirements | Potential failure mode    | Potential effects analysis | severity (S) | grade | potential causes/mechanism of failure                                                                                                                                                       | frequency (O) | Current prevention process control                                                                       | Current detection process control | detection (D) | RPN | recommended measures                                                                                        | Responsibility and target completion date | Action Taken                                                                                                       | severity (S) | frequency (O) | difficult to check (D) | RPN |
|---------------------------------|---------------------------|----------------------------|--------------|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------------------------------------------------------------------------------------------------------|-----------------------------------|---------------|-----|-------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------|---------------|------------------------|-----|
| scaphus                         | size changes of handle    | handle cover fall off      | 6            | A     | PP size change                                                                                                                                                                              | 6             | By adjusting the product of the injection molding process, and measure or test the clasp of product size | measure and test product size     | 3             | 108 | Add the number of button bit in handle design, in order to keep the connection strength                     | Xiaodong Qiu 2015/08/25                   | By adjusting the product of the injection molding process, and measure or test product size                        | 6            | 1             | 1                      | 6   |
| scaphus                         | warping of scaphus handle | Poor appearance break      | 4            | C     | high handle wall                                                                                                                                                                            | 6             | Add the stiffener to handle wall to prevent deformation                                                  | measure and test product size     | 2             | 48  | If this problem appears, make improvement by adding the stiffener                                           | Xiaodong Qiu 2015/09/30                   | Add the stiffener to handle wall to prevent deformation                                                            | 4            | 2             | 1                      | 8   |
| scaphus                         | Deformation of cup-mouth  | Micro switch without power | 8            | A     | PP material deformation, Resulting in a perpendicular direction to connect the cup and handle inward deformation, So that both sides of the bit, the micro switch column opposite sink, and | 3             | Adjust the injection molding process, to prevent extrusion                                               | measure and test cup-mouth size   | 3             | 72  | in the cup packing control the direction of the lateral dimension of no force, stipulate the way of packing | Xiaodong Qiu 2015/09/10                   | stipulate the cup packing control the direction of the lateral dimension of no force, stipulate the way of packing | 8            | 1             | 3                      | 24  |

H-R-P-001-1

## Process Failure Mode and Effects Analysis

### (PFMEA)

#### 潜在失效模式和后果分析

FMEA No.FMEA20150325-01

Page 3

Maker:Wenhong-Huang

FMEA Date (Original):2015.03.25

Item:Welding Improvement

Process Responsibilities: Production welding group

Model year/project

Key Dates

| Item                                                                                      | Potential failure mode<br>潜在失效模式  | Potential consequences of failure modes<br>失效模式造成的后果                                                  | Severity<br>严重度 | Grade<br>等级 | Potential causes of failure<br>失效模式的主要原因                                                      | Occurrence degree<br>发生程度 | Current process control and prevention<br>现行过程控制与预防                                                                                                            | Current process control detection<br>现行过程控制检测                              | Detection rate<br>检测率 | RPN | Suggest measures<br>建议措施                                                                                                                     | Responsibility and target completion date<br>责任人和目标完成日期 | Measure results<br>措施结果 | Severity<br>严重度 | Incidence rate<br>发生率 | Detection degree<br>检测度 | RPN |
|-------------------------------------------------------------------------------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------|-----------------|-------------|-----------------------------------------------------------------------------------------------|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------------|-----|----------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------|-------------------------|-----------------|-----------------------|-------------------------|-----|
| Request<br>问题                                                                             | Size/NG<br>尺寸/NG                  |                                                                                                       | 6               | B           | ● Staff negligence<br>作业人员疏忽<br>● Failure for bad<br>不良件的不良                                   | 4                         | ● Make the operation standard book<br>制定作业标准书<br>● Make maintenance standards, regular maintenance<br>制定保养标准、定期保养、维护                                           | ● Visual inspection<br>目视检查<br>● Finished 100% full inspection<br>完成100%全检 | 6                     | 144 | ● Pre-service training of staff<br>岗前培训<br>● Regular maintenance<br>工前定期维护                                                                   |                                                         | 6                       | 3               | 4                     | 72                      |     |
| Clamping (clamping required is in place, no making or welding loaded)<br>紧固（紧固需在位，无漏装、漏锁） | Clamping is not in place<br>紧固不在位 | Welding error, leak, welding deviation, affect the assembly or use function<br>焊接错误、漏焊、焊接偏差、影响装配或使用功能 | 8               | A           | ● Staff negligence<br>人员作业疏忽<br>● Failure for bad<br>不良件的不良<br>● Failure inaccurate<br>不良度不准确 | 4                         | ● Make the operation standard book<br>制定作业标准书<br>● Make maintenance standards, regular maintenance<br>制定保养标准、定期保养、维护<br>● Regular checking of future<br>定期检查未来 | Visual inspection<br>目视检查                                                  | 6                     | 192 | ● Pre-service training of staff<br>岗前培训<br>● Regular maintenance<br>定期维护<br>● Make inspection checklist for future<br>制定检查清单未来               |                                                         | 8                       | 3               | 4                     | 96                      |     |
|                                                                                           | Attachment missing<br>附件漏装        | Affect product strength or influence the assembly<br>影响产品强度或影响装配                                      | 8               | A           | Staff negligence<br>作业人员疏忽                                                                    | 3                         | Make the operation standard book<br>制定作业标准书                                                                                                                    | Visual inspection<br>目视检查                                                  | 4                     | 96  | Final inspection personnel do 100% full inspection for each bead with mark<br>终检人员100%全检，每颗点打点100%全检                                         |                                                         | 8                       | 2               | 2                     | 32                      |     |
|                                                                                           | Attachment error<br>附件错装          | Influence assembly<br>影响装配                                                                            | 7               | A           | No mistake proofing future<br>未来无防错                                                           | 3                         | Make the operation standard book<br>制定作业标准书                                                                                                                    | Visual inspection<br>目视检查                                                  | 6                     | 126 | ● Increase the mistake proofing devices<br>增加防错装置<br>● Inspection for final inspection tools<br>终检工具检查                                       |                                                         | 7                       | 2               | 4                     | 56                      |     |
|                                                                                           | False welding<br>假焊               | Lack of strength, affect the use of function<br>强度不足、影响使用功能                                           | 9               | A           | Current, voltage, welding angle, speed setting is not reasonable<br>电流、电压、焊接角度、速度设定不合理        | 4                         | ● Welding process guidance marking<br>焊接工艺指导书<br>● Condition confirmation check<br>条件确认检查<br>● Confirm the failure test on a regular basis<br>定期检查失败测试         | Destructive testing<br>破坏性试验                                               | 8                     | 288 | After the procedure is set up to confirm the processing conditions, the execution and marking of the failure test is performed<br>程序设定加工完毕确认 |                                                         | 9                       | 3               | 4                     | 108                     |     |

## Production Device

### KRAUSS MAFFEI

Finehope has successively introduced many of the world's most advanced German KraussMaffei high-pressure injection machines since 2010.



Reaction Injection Molding (RIM)  
High Pressure Machine  
KRAUSS MAFFEI  
Made in Germany!



### Self-invented fully automatic production line

Finehope has independently developed a number of fully automatic P-U injection production lines since 2010. These production lines reduce production costs and meet customer delivery requirements.



### Welding Robots



Since 2016, Finehope has continued to purchase welding robots and automatic fixture turntables for welding metal parts. The independent processing of accessories saves the waiting time and procurement cost of outsourcing processing.

### CNC Machine

Finehope has continued to purchase CNC equipment since 2016. CNC (Computer Numerically Controlled) machining is a manufacturing process in which pre-programmed computer software dictates the movement of factory tools and machinery. Using this type of machine versus manual machining can result in improved accuracy, increased production speeds, enhanced safety, increased efficiency and most importantly, help customers save costs and improve product quality.



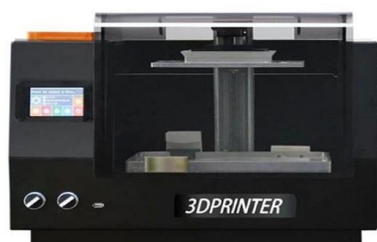
### Mould Release Agent Painting Robot



Since 2019, Finehope has purchased robots for spraying water-based release agents to improve the working environment, improve spraying quality and material utilization, and reduce labor costs.

### 3D printer

Finehope started to purchase 3D printers in 2015. 3D printing can realize rapid proofing of new product prototypes and templates for resin molds, and can also be used for faster and cheaper small batch production.







## Social Responsibility

- **Audited by Sedex**

( Supplier business ethics information  
exchange )

Labor standard · health and safety · Environmental  
protection · Business ethics practice

- **Public-spirited**



Voluntary tree planting after Super Typhoon Meranti in 2016

## A VALUE-BASED COMPANY

CUSTOMER FIRST

TEAMWORK

EMBRACE CHANGES

PASSION

INTEGRITY

COMMITMENT

