

## 背景资料

### 【货物信息】

我司于 2021 年 1 月 5日进口申报一台激光粒度分析仪货物。

青岛优瑞商贸有限公司

企业信用：（91370203MA3C8JL000）

海关十位数代码：3702960FAJ

进境关别：郑机场关（4604）

入境口岸：郑州新郑国际机场(410003)

货物存放地点：青岛华盛物流有限公司

境内货源地：青岛其他（37029）

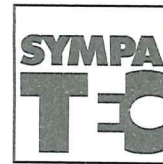
境外品牌(其它)

特殊关系确认：否 价格影响确认：否 支付特许权使用费确认：否

请根据背景单证，登录仿真中国国际贸易单一窗口填制报关单。

HAJ FRA 3129 1257		MAWB 172-3601 8872		Not Negotiable		HAJ-3129 1257	
Svmpatec GmbH				Air Waybill			
Am Pulverhaus 1				Issued by			
D-38678 Clausthal-Zellerfeld				SCHENKER DEUTSCHLAND AG			
Qingdao Yourui Trading Co., LTD				AIR-/SEAFREIGHT, LOGISTICS			
1307, BUILDING 2TH				POSTBOX 42 01 65			
CN - 266035 QINGDAO CITY, SHANDONG				30661 HANNOVER			
CHINA				Copies 1, 2 and 3 of this Air Waybill are originals and have the same validity.			
Issuing Carrier's Agent Name and City				It is agreed that the goods described herein are accepted in apparent good order and condition (except as noted) for carriage SUBJECT TO THE CONDITIONS OF CONTRACT (THE REVERSE HEREOF. ALL GOODS MAY BE CARRIED BY ANY OTHER MEANS INCLUDING ROAD OR ANY OTHER CARRIER UNLESS SPECIFIC CONTRARY INSTRUCTIONS ARE GIVEN HEREON BY THE SHIPPER, AND SHIPPER AGREES THAT THE SHIPMENT MAY BE CARRIED VIA INTERMEDIATE STOPPING PLACES WHICH THE CARRIER DEEM APPROPRIATE. THE SHIPPER'S ATTENTION IS DRAWN TO THE NOTICE CONCERNING CARRIER'S LIMITATION OF LIABILITY. Shipper may increase such limitation of liability by declaring a higher value for carriage and paying a supplemental charge if required.			
Accounting Information				CHENKAN1414@163.COM			
Agent's IATA Code				P.O. NO.: ICE/S			
Account No.				ECD: AES 1AB			
Airport of Departure (Addr. of First Carrier) and Requested Routing				Reference Number			
FRANKFURT				Optional Shipping Information			
By First Carrier				Declared Value for Carriage			
Routing and Destination				Declared Value for Customs			
to by toA by				Currency			
CGO CV				EUR			
Airport of Destination				Amount of Insurance			
QINGDAO				NIL			
Handling Information				INSURANCE - If carrier offers insurance, and such insurance is requested in accordance with the conditions thereof, indicate amount to be insured in figures in box marked "Amount of Insurance".			
NSC				DE/RA/00110-31			
* by				e-Frt.O.:EAI			
SHIPPING MARKS HAVE BEEN MARKED ON EACH PACKAGE				EU Customs Status.: "X"			
No. of Pieces RCP	Gross Weight	kg	Rate Class	Chargeable Weight	Rate	Total	Nature and Quantity of Goods (incl. Dimensions or Volume)
3	106.0K	0		130.5		AS AGREED	LASER DIFFRACTION PARTICLE SIZE ANALYSER
MARKS: ADDR., LBL.				HELOS-RHODOS.			
HE20200803-01AHU: 702596DE				QUANTITY:: 1 UNIT			
FOR NOTIFY: DELIVERY ADDRESS/CONSIGNEE: QINGDAO				HS CODE 90275000			
HOPES TRADING CO.,LTD., 1307, BUILDING 2TH,				DIMS:1x91/46/56cm			
NO.17 KUNSHAN ROAD, CN - QINGDAO CITY,				1x82/76/54cm			
SHANDONG, CHINA				1x77/58/47cm			
jetcargo ECONOMY				DOOR-TO-AIRPORT			
3 106.0K				AS AGREED			
Prepaid				SLAC: 3			
Weight Charge							
Collect							
Other Charges							
Valuation Charge							
Tax							
Total Other Charges Due Agent				Shipper certifies that the particulars on the face hereof are correct and that insofar as any part of the consignment contains dangerous goods, such part is properly described by name and is in proper condition for carriage by according to the applicable Dangerous Goods Regulations.			
Total Other Charges Due Carrier				7612001321 SCHENKER DEUTSCHLAND AG			
Total Prepaid				STT NO: 27670138617097			
Total Collect				EUGEN HEISER			
AS AGREED				Signature of Shipper or his Agent			
Currency Conversion Rates				SCHENKER DEUTSCHLAND AG			
CC Charges in Dest. Currency				AS CARRIER			
Charges at Destination				22.12.2020 D-30855 LANGENHAGEN			
Total Collect Charges				Executed on (date)			
For Carrier's Use only at Destination				Signature of Issuing Carrier or its Agent			
				HAJ-3129 1257			





Sympatec GmbH  
System-Partikel-Technik

Sympatec GmbH · Am Pulverhaus 1 · D-38678 Clausthal-Zellerfeld

Qingdao Yourui Trading Co., LTD

1307, Building 2th,  
Mr. Chen  
No.17 Kunshan Road  
266035 Qingdao City

CHINA

**PULVERHAUS**

Telefon +49/5323/717-0  
Telefax +49/5323/717-229  
Am Pulverhaus 1  
D-38678 Clausthal-Zellerfeld

Amtsgericht Braunschweig  
HRB 110809  
Geschäftsführer:  
Dr.-Ing. E. h.  
Stephan Röhle

Zeichen/reference/object

Jge/Dse

Datum/date

01. Dec. 2020

## Packing List

Packinglist No. : 702596DE

Commission No. H4278 / 2000

your order : Your purchase order with contract no. HE20200803-01Ahu of 03. Aug. 2020

Pos.	Description	Quant.	Gross weight kg	Net weight kg	Dimensions cm (metric)	Packing units (carton)
1	HELOS/BR-OM, laser diffraction sensor for particle size analysis in One Module version for selection of one range module out of 5 available modules between 0.1 micron - 875 micron:	1,00	38,00	29,00	91/46/56	1
2	HP EliteDesk 800 G5 SFF, i7-9700 3,00GHz, SSD	1,00	38,00	29,00	82/76/54	2
3	HP TFT display 27",	1,00				
4	PAQXOS software,	1,00				
5	SUBMICRON module, R2,	1,00				
7	VIBRI, intelligent vibratory feeder,	1,00				
8	Reference material set 1	1,00				
6	RODOS, dry dispersing system,	1,00	30,00	21,00	77/58/47	3
Total			106,00	79,00		



Sympatec GmbH  
System-Partikel-Technik  
Am Pulverhaus 1  
D-38678 Clausthal-Zellerfeld



Sympatec GmbH  
System-Partikel-Technik

invoice

Sympatec GmbH · Am Pulverhaus 1 · D-38678 Clausthal-Zellerfeld

CLAUSTHAL

**BUYER: QIngdao Yourui Trading Co., LTD**  
1307, Building 2th  
No.17 Kunshan Road  
266035 Qingdao City, Shandong

Telefon 0 53 23/7 17-0  
Telefax 0 53 23/7 17-2 29  
Am Pulverhaus 1  
D-38678 Clausthal-Zfd

CHINA

Amtsgericht Braunschweig  
HRB 110809 (chem. 2454 Gs)  
Geschäftsführer:  
Dr.-Ing. E.h.  
Stephan Röttele

StNr. 21/203/04801  
EORI Nr.: DE3756874  
AEO Nr.: DEAE0C112487

Deutsche Bank, Goslar  
IBAN: DE62

Datum/date BLZ: 268 700 32

Jge/Fl 01. Dec. 2020 Kto-Nr. 0013 4502 00  
SWIFT: deut de 2h 268

invoice  
confirmation  
your order  
delivery  
User

Zeichen/reference/object

64952 2. deposit /pre-invoice

702596DE of 09. Nov. 2020 / Commission H4278 / 2000

Your purchase order with contract no. HE20200803-01Ahu of 03. Aug. 2020

702596DE of \_\_. Dec. 2020

66013 / Grirem Advanced Materials (Rongcheng) Co.,Ltd

Pos.	Description	Quant.	Unit	Price	Total(EUR)
1	<b>HELOS/BR-OM, laser diffraction sensor for particle size analysis, with</b> - PC & Monitor - PAQXOS software package - R2S lens module - RODOS dispersing system - VIBRI feeding unit <b>and accessories, CIP Incoterms 2020 Qingdao Airport, China</b> item code: R01000	1,00	piece	46.000,00	46.000,00
Subtotal					46.000,00
Total, EUR					<b>46.000,00</b>

**青岛优瑞商贸有限公司**  
QIngdao Yourui Trading Co., LTD



Sympatec GmbH  
System-Partikel-Technik  
Am Pulverhaus I

Delivery conditions : CIP Incoterms 2020 Qingdao Airport, China.

D-38678 Clausthal-Zellerfeld

# Contract

**Contract no. HE20200803-01Ahu**

**Date: Aug 3<sup>th</sup>, 2020**

**The Buyers**      Qingdao Yourui Trading Co., LTD  
1307, Building 2th, No.17 Kunshan Road, Qingdao  
city, China P.R. 266035  
Tel: +86-0532-66023886  
Fax: +86-0532-66023898

**买方**              青岛优瑞商贸有限公司  
青岛市市北区昆山路 17 号 2 栋 1307  
Tel: +86-0532-66023886  
Fax: +86-0532-66023898

**The Sellers**      **Sympatec GmbH**  
System-Partikel-Technik  
Am Pulverhaus 1  
D - 38678 Clausthal-Zellerfeld  
Germany  
Tel: +49-5323-717-0  
Fax: +49-5323-717-229

**卖方**              **Sympatec GmbH**  
System-Partikel-Technik  
Am Pulverhaus 1  
D - 38678 Clausthal-Zellerfeld  
Germany  
Tel: +49-5323-717-0  
Fax: +49-5323-717-229

本合同由买卖双方缔结。按下列条款，卖方同意售出，买方同意购买下列设备和使用技术：  
This contract is made by and between the Sellers and the Buyers, whereby the Sellers agree to sell  
and the Buyers agree to buy the equipment mentioned below and use technology subject to terms  
and conditions set forth hereinafter as follows.

1. 商品名称, 规格, 数量, 单价, 金额:

**Commodity, Specification, Quantity, Unit Price and Amount:**

商品名称及规格 COMMODITY & SPECIFICATION	数量 Quantity	单价 Unit Price	总价 Amount
激光粒度分析仪 LASER DIFFRACTION PARTICLE SIZE ANALYSER HELOS-RODOS  DETAILS AS PER ATTACHMENT	1unit	EUR46,000.00	EUR46,000.00
总计(Total)	1unit		EUR46,000.00

2. 交货条件: **CIP 青岛**

**Delivery Term:** CIP Qingdao AIRPORT, CHINA (INCOTERMS 2020)

3. 合同总价: **EUR 欧元 46,000.00**

以上价格为欧元价格, 包含德国出口包装、德国的清关费用, 以及运输保险费, 总价欧元肆万陆仟元整。此价格不包括中国境内的清关费以及增值税等其他费用。

**Total Value of the Contract:** Forty-six Thousand EURO only. Prices are in EURO, including packing, clearance in Germany, and insurance, however un-cleared at port of destination and exclusive of VAT.

4. 付款方式:

签订合同后 2 周内支付 30%的货款;

剩余的 60%的货款最迟在发货前、在收到卖方的发货通知 1 周内支付;

尾款 10%在验收合格之日起一周内支付。

**Terms of payment:**

30% will be paid by T/T within 2 weeks after signing the contract.

60% will be paid latest by T/T within 1 week after the reception of the Sellers' delivery notification before shipment.

10% will be paid within one week from the date of acceptance.

银行名称和地址:

Deutsche Bank AG, Filiale Goslar  
Rosentorstrasse 15  
DE-38640 Goslar,  
Germany

账号详细信息:

IBAN : DE62268700320013450200

Swift no./BIC : Deut DE 2H 268

BLZ / German bank code: 26870032

银行账号: account no. 0134502

5. **交货期:** 收到买方 30%预付款之后的 9-11 周内生产, 卖方将在最迟的预计发货日期前 1 周发送“准备发货通知”。只有在收到 90%付款后才能进行仪器交付。

如果卖方发出“发货通知”四周后没有收到买方的第二笔付款, 则卖方有权将这套设备用于其他订单/项目。在这种情况下, 交货时间开始重新计算, 但仅在卖方收到 90%的付款后才开始计算。

如卖方一直未收到第二笔付款, 买方的预付款不予退还, 签订的合同仍然有效。

**Delivery time:** 9-11 weeks production time after reception of first down payment of 30% contract value prepayment by T/T. The SELLER will send a “ready for delivery notification” 1 week before the estimated shipping date at latest.

Delivery will only happen after 90% payment is received.

In case no second payment has been received within 4 weeks after the SELLER has sent the “ready for delivery notification” to the BUYER, the SELLER has the right to use the manufactured instrument for other customers/projects.

In this case the delivery time starts to count again but only after 90% of the payment has been finally received by the SELLER.

No refund of any down payment made by the BUYER is granted in this case and the contract remains fully valid.”

6. **产地和生产厂家:** 德国新帕泰克公司

**Country of Origin and Manufacturer:**

Germany, Sympatec GmbH, System-Partikel-Technik

7. **装船港口:** 德国机场

**Port of Loading:** Airport in Germany

8. **目的港:** 中国青岛机场

**Port of Destination:** Qingdao Airport, China

9. **包装:** 包装必须坚固, 并有防湿, 防潮, 防震, 防锈等措施, 适合于远程空运及多次搬运。由于包装不良引起的任何损失均由卖方负担。

**Packing:** To be packed solidly suitable for long distance land/air freight transportation, multi-handling and well protected against dampness, moisture, shock, rust etc. The Sellers shall be liable for any loss attributable to inadequate packing by the Sellers.

10. **唛头:** 卖方负责在每件货物上用牢固的不褪色的颜料明显的印刷或标明下列唛头, 以及目的口岸, 件号, 毛重及净重, 尺码和其他买方要求的标记。如系危险或有毒货物, 卖方保证在每件货物上明显地标明货物的性质说明及习惯上被接收的标记。

**Shipping Marks:** The Sellers shall be obliged to have the shipping marks shown as below in addition to the port of destination, package number, gross and net weights, measurements and other marks as the Buyers may require stencilled or marked conspicuously with fast and unfading pigments on each package. In the cases of dangerous or poisonous cargos, the Sellers are obliged to take care to ensure that the nature and the generally adopted symbol shall be marked conspicuously on each package.

Shipping Mark: HE20200803-01Ahu

QINGDAO PORT

12. **装运条款:** 卖方负责在装运期限内将本合同所列货物由装运口岸发往目的地口岸, 不得转运及分装。

**Terms of shipment:** The Sellers shall deliver the contracted goods within the time of delivery from the port of loading to the port of destination. Partial shipment is not allowed.

13. **装运通知:** 卖方在货物装运后 24 小时内将合同号、品名、件数、毛重、净重、发票金额、航班号及装运日期、装运口岸、目的口岸及提单号以邮件或传真通知买方。

**Advice of shipment:** The Sellers shall, upon the completion of the loading, advise the Buyers within 24 hours by email or by fax of the Contract No., commodity, number of packages, gross and net weight, invoice value, Shipper No., loading date, port of loading, port of destination.

14. **保险:** 在 CIP 价格条件下, 由卖方按发票金额的 110% 办理航空运输一切险及战争险。

**Insurance:** In case of CIP terms, insurance shall be covered by the Sellers for 110% of the invoice value, covering Air Transportation All Risks and War Risks.

15. **质量保证期** 卖方保证所提供的货物是全新的, 其品质、技术参数和性能与该合同中所述完全一致。质量保证期为从买卖双方在仪器验收合格并签署验收协议后的 12 个月。卖方对设备完成安装调试, 设备正常运转一周未发生故障或其他质量问题, 视为验收合格, 买方与卖方签署验收协议, 并开始计算设备质量保证期。质保内容包括仪器制造过程中的质量问题和部件本身的缺陷, 但不包括磨损件。用户在使用过程中自己造成的任何丢失或损坏, 卖方不负任何责任。保质期内, 一切因仪器本身的缺陷所产生的全部费用应由卖方负责, 卖方收到买方通知后在 48 小时内做出答复。

**Warranty:** The Sellers shall guarantee that the commodity is completely new and in conformity to all respects with the quality, specifications and performances as stipulated in this Contract. The guarantee period shall be 12 (twelve) months counting from the date on which the representatives of the Sellers and the Buyers issue the Certificate of Acceptance. After the Sellers completes the installation and debugging of the equipment, and the equipment has been in normal operation for one week without any failure or other quality problems, it shall be deemed as qualified for acceptance. The Buyers and the Sellers shall sign the Certificate of Acceptance and start to calculate the quality warranty period of the equipment.

This excludes wear parts. Sellers cannot be held liable for any losses or damages related to the use or application of the equipment delivered to the Buyers.

Within the warranty period, all cost related to the repair of the defective instrument will be borne by the Sellers. For service requests, the Sellers should reply within 48 hours.



16. **安装和培训:** 卖方会派出工程师在客户处对设备进行安装和调试, 并对买方的工作人员进行为期两天的培训(不少于 16 个工作小时)。安装和培训的费用已包括在合同的成交价中。安装设备的时间将会按照买方安排尽快进行。

**Installation and Training:** Commissioning of the instrument at customer's site in China, installation and twoday's (no less than 16 working hours) training of the operators by Sellers' service engineers is included in above prices. The Sellers are responsible for the training of the Buyers' operator. Date of installation will be mutually agreed between Sellers and Buyers and be performed as soon as possible after delivery.

17. **检验和索赔:** 货卸目的口岸, 买方有权向中华人民共和国海关认可的相关鉴定机构申请进行检验。如发现货物的品质及 / 或数量 / 重量与合同或发票或品质/重量证明书不符。除属于保险公司及 / 或船公司的责任外, 买方有权在货卸目的口岸后 60 天内, 根据凭中华人民共和国海关认可的相关鉴定机构出具的检验检疫证明书向卖方提出索赔, 因索赔所发生的一切费用(包括检验费用)均由卖方负担。

**Inspection and Claims:** The Buyers shall have the right to apply to the related identification agencies recognized by the customs of the People's Republic of China for inspection after discharge of the goods at the port of destination. Should the quality and/or quantity/weight be found not in conformity with the Contract or invoice or quality / quantity certificate, the Buyers shall be entitled to lodge claims with the Sellers on the basis of the related identification agencies' inspection certificate within 60 days after discharge of the goods at the port of destination, with the exception, however, claim supported by the related identification agencies recognized by the customs of the People's Republic of China. All expenses incurred on the claim including the inspection fees are to be borne by the Sellers.

18. **违约责任条款 Liability for breach of contract**

**(1) 延期交货及罚款:**

除本合同第(18)条不可抗力原因外, 如卖方不能如期交货, 买方有权撤销该部分的合作, 或经买方同意在卖方缴纳罚款的条件下延期交货。罚款率为每 7 天按货款总额的 0.5%, 不足 7 天者按 7 天计算, 罚款最多不超过货款总额的 5%。

**(1) Delayed Delivery and Penalty:**

Should the Sellers fail to effect delivery on time as stipulated in this Contract owing to causes other than Force Majeure as provided for in Clause (18) of this Contract the Sellers may, with the Buyers' consent, postpone delivery on payment of penalty to the Buyers. Penalty shall be charged at the rate of 0.5% of the total value for every 7 days. Odd days less than 7 days should be counted as 7 days. The total penalty shall not exceed 5% of the total value of the goods involved.

**(2) 未按时付款及罚款:**

除本合同第(18)条不可抗力原因外, 如买方不能按时付款, 在经卖方同意在买方缴纳罚款的条件下延期付款。罚款率为每 7 天按货款总额的 0.5%, 不足 7 天者按 7 天计算, 罚款最多不超过货款总额的 5%。

**(2) Delayed Payment and Penalty:**

Should the Buyers fail to effect payment on time as stipulated in this Contract owing to causes other than Force Majeure as provided for in Clause (18) of this Contract the Buyers may, with the Sellers' consent, postpone payment on payment of penalty to the Sellers. Penalty shall be charged at the rate of 0.5% of the total value for every 7 days. Odd days less than 7 days should be counted as 7 days. The total penalty shall not exceed 5% of the

total value of the goods involved.

(3) 如卖方交付产品与约定不符或存在质量问题的, 买方有权要求卖方调换, 卖方应当在 60 天内予以调换合格产品, 由此造成的逾期, 按上述第 18 (1) 条处理; 调换后仍不符合要求的, 买方有权要求退货并解除合同, 同时卖方应向买方支付合同总额的 5 %作为违约金。买方要求退货或调换的, 卖方应承担因退货或调换产生的包装、运输等费用并赔偿因此给买方造成的直接损失。

(3) If the products delivered by the Sellers are not in conformity with the agreement or have quality problems, the Buyers shall have the right to request the Sellers to replace them, and the Sellers shall replace them with qualified products within 60 days. The delay caused thereby shall be handled in accordance with the above article 18 (1); If the replacement fails to meet the requirements, the Buyers shall have the right to return the goods and terminate the contract, and the Sellers shall pay the Buyers a penalty equal to 5% of the total contract price. If the Buyers requests the return of the goods or the replacement, the Sellers shall bear the expenses of packing, transportation and so on arising from the return or the replacement and shall indemnify the Buyers for the direct losses caused thereby.

19. **不可抗力:** 由于不可抗力, 使卖方不能在合同规定限期内交货或者不能交货, 卖方不负责任。但卖方必须立即 (说明时间) 以电传 / 传真通知买方, 并以挂号函向买方提出有关政府或者商会所出具的证明, 以证明事故的存在。由于人力不可抗拒事故致使交货延期一个月以上时, 买方有权撤销合同。卖方不能取得出口许可证不得作为不可抗力。

**Force Majeure:** In case of Force Majeure, the Sellers shall not be held responsible for delay in delivery or non-delivery of the goods but shall notify immediately the Buyers by telex/fax and deliver to the Buyers by registered mail a certificate issued by government authorities or chamber of commerce as evidence thereof. If the shipment is delayed over one month as the consequence of the said Force Majeure, the Buyers shall have the right to cancel this Contract. The Sellers' inability in obtaining export license shall not be considered as Force Majeure.

20. **仲裁:** 因履行本合同所发生的一切争议, 双方应友好协商解决。如协商仍不能解决争议, 则应将争议提交上海国际仲裁中心, 依据其仲裁规则仲裁。仲裁裁决是终局的, 对双方都有约束力。仲裁费应由败诉方承担, 但仲裁委员会另有裁定的除外。在仲裁期间, 除仲裁部分之外的其它合同条款应继续履行。

**Arbitration:** All disputes arising from the performance of this Contract should be settled through friendly negotiations. Should no settlement be reached through negotiation, the case shall then be submitted for arbitration to the Shanghai International Arbitration Centre and the rules of this Commission shall be applied. The award of the arbitration shall be final and binding upon both parties. The Arbitration fee shall be borne by the losing party unless otherwise awarded by the arbitration organization. During the course of the arbitration, the Contract shall be performed except for the part under arbitration.

21. **补充条款:** 本合同正本共肆份, 采取中、英文书就。两种文字具有同等效力。当中英文版本约定不一致时, 以中文版本为准。签字后双方各执两份为凭。

**Supplementary Condition:** This Contract is made out in Four originals in both Chinese and English, each language being legally of the equal effect. In case of any discrepancy between the English version and the Chinese version, the Chinese version shall prevail. Each party keeps two originals of the four after signing of the Contract.

22. **标准:** 卖方的激光粒度仪设备完全按照国际标准 DIN/ISO standard 13320“Laser Diffraction”来制造 DIN/ISO standard 13320。

The Sympatec system as supplied is in accordance with the DIN/ISO standard 13320 “Laser Diffraction”.

23. **技术文件和软件:** 乙方提供的技术资料包括: 仪器操作维护手册电子版, 安装手册电子版、软件操作说明书电子版, 仪器软件 PAQXOS 原版光盘, 仪器备件清单光盘。仪器操作维护手册和软件操作说明书的语言为英文, 但提供资料详细的简明中文操作和软件手册。对于版权, Sympatec Software License Agreement (SLA) 授权买方使用该操作软件。

**Documentation and Software:** The technical documentation includes the instrument's operation and maintenance manual as well as the installation handbook, software manual on CD, PAQXOSCD, spare parts CD. The language of the Operation manual, Software and the Software manual will be English. A simplified operation and software manual will be provided in Chinese. For copyright reasons the Sympatec Software License Agreement (SLA) applies to the use of the operation software.

**The Buyers:**

Qingdao Yourui Trading Co., LTD  
1307, Building 2th, No.17 Kunshan Road,  
Qingdao city,  
China P.R. 266035

Tel: +86-0532-66023886  
Fax: +86-0532-66023898

Signature:

\_\_\_\_\_  
Name:

Function:

**The Sellers:**

**Sympatec GmbH**  
**System-Partikel-Technik**  
Am Pulverhaus 1  
38678 Clausthal-Zellerfeld  
Germany

Tel: 0049-5323-717-0  
Fax: 0049-5323-717-229

Signature:

\_\_\_\_\_  
Name: Dr. Stephan Röthele

Function: Managing Director

**Attachment One to Contract No. HE20200803-01Ahu**  
**Configuration of Laser Diffraction Particle Size Analyser:**  
 激光粒度仪配置 HELOS-RODOS

<b>Pos. 项目</b>	<b>Description 描 述</b>	<b>Qty 数量</b>
1	HELOS/BR-OM, 激光粒度仪主机	1 piece
2	HP PC 数据处理系统主机原装进口惠普数据处理系统	1 piece
3	HP TFT display 27', 原装进口 27" 惠普液晶显示器	1 piece
4	PAQXOS software, 最新版本的粒度仪控制操作软件PAQXOS	1 piece
5	Measuring range, R2, 高精度光学镜头R2 (0.25-87.5微米)	1 piece
6	RODOS, dry dispersing system 干法分散系统RODOS	1 piece
7	VIBRI, intelligent vibratory feeder 干法震动进料装置 VIBRI	1 piece
8	Reference material set 1 用于 R1—R2 镜头的标准样 SiC-F1200	1 piece
9	Shipping charges Shipping this instrument from Germany to Qingdao, including packing and insurance. 仪器运输费用 从德国空运到青岛机场的运费 (含包装、保险费)	1 piece

**最终用户：有研稀土（荣成）有限公司**

**End user: Grirem Advanced Materials (Rongcheng)Co.,Ltd**

# 新帕泰克激光粒度分析仪 HELOS-RODOS 技术协议书

## 一. 技术参数:

- (1) 符合 ISO 13320 国际激光粒度仪制造标准。
- (2) ★粒度测试范围: 0.25-87.5 微米。
- (3) ★光源: He-Ne 气体激光光源, 波长 632.8nm, 强度 5mW。必须使用单一单色激光光源保证粒度测试结果的准确性, 不能使用双光源或多光源混合光路。
- (4) 光路设计: 平行光路设计, 测量结果与颗粒所在测试区域的位置无关。
- (5) ★仪器测量精度:  $\sigma < 0.04\%$  (单次取样重复测试结果的误差)  
 $\sigma < 0.3\%$  (分次取样测试结果的误差)  
 $\sigma < 2.5\%$  (多台相同规格仪器对同一个样品测试结果的比较)
- (6) 干法分散系统参数:
  - a. 分散介质: 压缩气体 (空气或惰性气体)
  - b. ★分散压力: 0.1—6Bar (根据物料的特性进行调节)
  - c. ★分散管: 直线型整体硬化钢管道, 无任何塑料弯管
  - d. ★测试区间: 敞开式、无任何玻璃窗设计, 不会导致样品二次团聚, 或污染玻璃窗
  - e. ★样品量: 毫克—千克
  - f. 自动进样方式: 振动槽漏斗进料, 保证样品均匀的进入到测试区域
  - g. ★测试时间: 10 秒以内 (从进样到出测试报告)
  - h. 检测效率: 一天可以连续检测几百个干样 (包含测试过程和仪器的自清洁时间), 一天 24 小时, 一周七天可连续测试
  - i. 遮光率: 最高可达 50%
- (7) ★检测器: 全自动对焦准直系统, 多元检测器, 扫描速率: 2000 次/秒
- (8) ★数据传输: 高速的 TCP/IP 传输
- (9) 数据处理: Fraunhofer 理论
- (10) 结果输出格式: 标准粒度分布曲线、客户自定义格式结果输出等
- (11) 配套文件: 全套仪器操作维护手册、软件操作说明书一套
- (12) 操作方法: 软件控制标准操作程序 (SOP)
- (13) 工作条件: AC65—260V, 50/60Hz, 温度: 0—40℃, 湿度 $\leq 80\%$ 无冷凝
- (14) 电脑: 原装进口惠普康柏数据处理系统, i7-9700 3,00GHz, 1T 硬盘, 8G 内存, 原装进口 27"惠普康柏液晶显示器
- (15) 提供对客户的技术培训和仪器安装服务
- (16) 一年质保期, 保修期间设备发生故障, 要求 2 小时内电话或传真响应, 48 小时内到现场。



二. 设备交期

9-11 周

三、验收标准

到货新帕泰克 HELOS-RODOS 设备技术参数与上述一致；实际使用中设备运行平稳，能达到设备技术参数中的技术要求，设备连续运行 20 个工作日无故障，视为验收合格。

**The Buyers:**

青岛优瑞商贸有限公司

青岛市市北区昆山路 17 号 2 栋 1307

Tel: +86-0532-66023887

Fax: +86-0532-66023898

签字:

日期:

\_\_\_\_年\_\_\_\_月\_\_\_\_日

**The Sellers:**

德国新帕泰克有限公司苏州代表处

江苏省苏州市吴中区旺墩路 188 号建屋大厦 1118 室

Tel: 0512-66607566

Fax: 0512-66607599

签字:

日期:

\_\_\_\_年\_\_\_\_月\_\_\_\_日

## TWIC

RE: 进口货物中文说明

品名: 全自动干法激光粒度仪 (海关编码: **9027500090**)

品牌: 德国新帕泰克 Sympatec GmbH System-Partikel-Technik

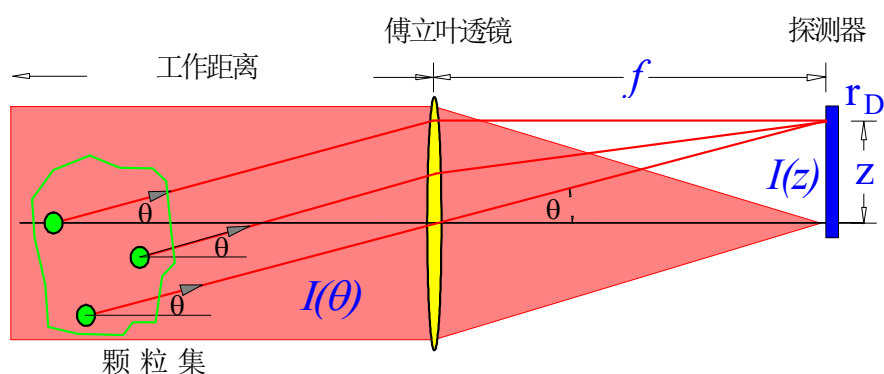
产品彩页:



原理:

利用光的衍射现象, 即大颗粒产生的衍射角小, 小颗粒产生的衍射角大, 通过计算探测器上收集到的不同衍射图形的光强分布, 来给出颗粒的粒度大小和粒度分布。

(见下图)

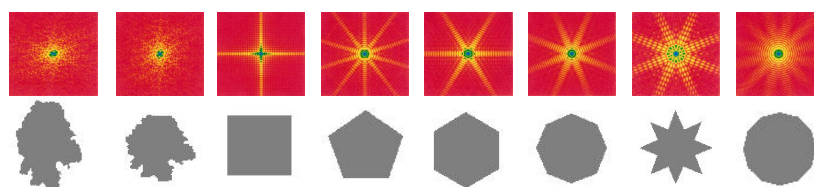


相同大小颗粒的衍射光强集中在探测器的相同部位，不同大小的颗粒的衍射光强集中在探测器的不同部位，根据在多元探测器上得到的衍射光强的分布，通过颗粒大小和光强分布之间的相关公式来计算得到颗粒的粒度分布：

颗粒大小和光强分布之间的关系：

$$I(r) = \int_{X_{\min}}^{X_{\max}} n \cdot q_0(x) I(r, x) dx$$

在实际测量中，不同形貌的颗粒所产生的衍射图形是不一样的。检测器上所得到的不同光强分布的衍射图形，已包含了真实颗粒的大小和其形状的信息：



通过探测器上收集得到的光强信号，以相应的数学公式处理得到颗粒的粒度大小和粒度分布。

功能：检测颗粒粒度大小及分布

检测对象：金属磁材

型号：HELOS-RODOS

技术参数：

参数	指 标
光源	5mw 氦氖激光、波长632.8nm
测量精度	$\sigma < 0.04\% \text{ typ.}$ (单次取样重复测试结果的误差) $\sigma < 0.3\% \text{ typ.}$ (分次取样测试结果的误差) $\sigma < 2.5\%$ (多台相同规格仪器对同一个样品测试结果的比较)
粒度范围	干法 0.25-87.5 微米（镜头可选）
进样方式：	振动漏斗进料
进样器：	VIBRI 震动进样器
检测器	全自动对焦准直系统，多元检测器，扫描速率：2000 次/秒
分散压力：	0.1—6.0Bar，可调
分散介质：	压缩气体（氮气）
	分散管寿命：至少 100,000 次
数据处理	Fraunhofer 或 Mie 理论
数据传输	高速的TCP/IP传输



结果输出格式	标准粒度分布曲线、客户自定义格式结果输出等
操作方法	软件控制标准操作程序（SOP）
电源	AC65—260V， 50/60Hz
环境要求	温度：0—40℃， 湿度≤80%无冷凝
配套文件	仪器的品质合格书一份（随每台仪器的原厂质保书） 仪器操作维护手册中英文各一套； 仪器软件操作说明书中英文各一套； WINDOX 操作软件原版 CD； 系统恢复 CD； 仪器配件备件清单CD。

Please contact for more information:

如有任何问题敬请随时联系：

德国新帕泰克有限公司苏州代表处

联系人：Aeon Huang Sales Engineer

电话：0512-66607566

传真：0512-66607599

手机：13915538679

邮箱：Ahuang@sympatec.com.cn

We trust that you will find our quotation of interest and remain.