

MDC Precision, LLC  
30962 Santana St  
HAYWARD, CA 94544

Telephone .....: 800-443-8817  
Fax .....: 510-887-0626  
Giro .....:  
Tax exempt number .....:  
Enterprise number .....



Ship to:

JEFFERSON LAB  
MIKE DICKEY BLDG 55 RM2500  
12000 JEFFERSON AVE  
NEWPORT NEWS, VA 23606

*LAHE Project*

*07/28/21*

*83*

Bill to:

FERMI NATIONAL LABORATORY  
apinvoices@fnal.gov

PO BOX 500

## Packing slip



Number .....: **SPS-0407854**

PO number .....: 672577

Ship date .....: 7/24/2021

Page .....: 1 of 5

Sales order .....: **SO-218445**

*618746*

*TO*

*618757*

Requisition .....: ITEM 1

Our ref. ....: 1251

Mode of delivery .....: FED EX 2 DAY

Terms of delivery .....: FOB Orig Collect

Freighted by .....: Carrier

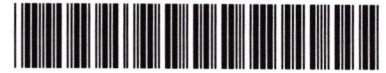
Line #	Item number	Revision	Description Search name	Ordered Unit	Delivered	Remaining quantity
	205690-01	A	SPEC# FLANGE A - F10060827, CAVITY 1Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 1 per silkscreen input.Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 1	11.00 EACH	11.00	
Quantity : 11.00 Site : 01						
	205690-02	A	SPEC# FLANGE A - F10060827, CAVITY 2Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 2 per silkscreen input.Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 2	11.00 EACH	11.00	
Quantity : 11.00 Site : 01						

Receipt: \_\_\_\_\_

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 Page .....: 2 of 5  
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Line #	Item number	Revision	Description Search name	Ordered	Unit	Delivered	Remaining quantity
	205690-03	A	SPEC# FLANGE A - F10060827, CAVITY 3Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 3 per silkscreen input.Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 3	11.00	EACH	11.00	
Quantity : 11.00 Site : 01							
	205690-04	A	SPEC# FLANGE A - F10060827, CAVITY 4Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 4 per silkscreen input.Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 4	11.00	EACH	11.00	
Quantity : 11.00 Site : 01							

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Line #	Item number	Revision	Description Search name	Ordered Unit	Delivered	Remaining quantity
	205690-05	A	SPEC# FLANGE A - F10060827, CAVITY 5Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 5 per silkscreen input. Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 5	11.00 EACH	11.00	
Quantity : 11.00 Site : 01						
	205690-06	A	SPEC# FLANGE A - F10060827, CAVITY 6Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 6 per silkscreen input. Material 304/316L Stainless steel SPEC#FLANGEAF10060827CAVITY 6	11.00 EACH	11.00	
Quantity : 11.00 Site : 01						
	MATERIAL CERT		Certification of Material	1.00 EACH	1.00	
Quantity : 1.00 Site : 01						
			CertificationofMaterial			

### Backorder

Item number	Description	Remaining quantity	Ship date
205690-07	SPEC# FLANGE A - F10060827, CAVITY 7 Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 7 per silkscreen input. Material 304/316L Stainless steel		7/26/2021

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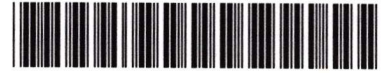


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Freighted by .....: Carrier

Line #	Item number	Revision	Description Search name	Ordered	Unit	Delivered	Remaining quantity
	<u>Item number</u>		<u>Description</u>			<u>Remaining quaShip date</u>	
	205690-08		SPEC# FLANGE A - F10060827, CAVITY 8 Weldment flange A per drawing F10060827. Flanges are silkscreened as Cavity 8 per silkscreen input. Material 304/316L Stainless steel Certificate of Leak Check WELDER CERTIFICATION			7/26/2021	
	LEAK CHECK NRE-CHARGE					7/30/2021 7/30/2021	

Tracking numbers



**Certificate of certification**

This is to certify that the material referenced on the above PO and listed on the attached pick list were manufactured to the customer's requirements or to MDC's internal drawings

Materials used in the production of this order are certified as new and not counterfeit. Any deviation to specifications has been authorized by the customer.

MDC Precision, LLC is an ISO 9001:2008 registered company. Key elements of our fully implemented Quality Management System include our Quality Manual, Quality Policy, Product Objectives, Process Measurements, Design Capability and Validation, detailed production process travelers, Corrective / Preventive Action system, Nonconforming Material System, Calibration, First Article / first Piece / CNC Program qualification Process, Internal Audits, and Sub-Supplier Program.

Quality Management Contact:

MDC Precision, LLC Hayward, CA (510) 265-3500

**Return Policy:**

- Unused standard catalog items may be returned within 30 days of the date the item was shipped, provided the item is properly packaged and shipping charges are pre-paid.
- Special order items may not be returned without specific, pre-approval from MDC.
- All returns must have a RMA number assigned by Customer Service.
- Returned items will not be accepted if the revision has changed or the material is now obsolete. Please check with Customer Service prior to returning items.
- Installed, used or damaged items are not eligible for reprocessing and will be returned with no credit applied.
- A minimum of 25% restocking fee applies.
- Items should be returned freight prepaid as collect shipments will not be accepted.

**Note:**

Please note: We are in the process of updating our branding and changing our legal name from MDC Vacuum Products, LLC to MDC Precision, LLC. We anticipate completing the transition by the end of 2020 and will notify you once this change is officially completed. In the interim, please continue to send all purchase orders, confirmations, notifications and remittances to MDC Vacuum Products, LLC.

There will be up to a \$500.00 evaluation charge for non-warranty repairs. This evaluation fee will be credited to the repair cost if the repair is ordered.

The evaluation fee plus applicable return shipping charges will be assessed for any returned item you elect not to repair.

A \$50 fee will be applied to any returned item requested to be scrapped.



# Leak Test Certificate

<b>Part Number</b> 205690-99	<b>DATE</b> 7/23/2021
<b>Production Order</b> 431254	<b>Quantity</b> 168
<b>PO Number</b>	<b>Sales Order Number</b>
<b>Serial Number</b>	

## Equipment

<input type="checkbox"/>	<b>Inficon UL3000</b> - serial # 90001382652 Standard Leak serial # 90001381627 calibration due: 3/03/2022
<input checked="" type="checkbox"/>	<b>Inficon UL1000</b> - serial # 90001133469 Standard Leak serial # 90001283803 calibration due: 3/03/2022
<input type="checkbox"/>	<b>Agilent VSMD30</b> - serial # MY1608007 Standard Leak serial # MY1816P112 calibration due: 10/9/2021

## Test Specifications

Test is based on a maximum allowable leak rate of  $2 \times 10^{-10}$  cc/sec of helium unless otherwise specified below.

Other specified allowable leak rate: \_\_\_\_\_

## Results

MDC certifies that the product(s) listed on this document passed the above tests and were conducted by qualified personnel, on calibrated equipment, to the specifications listed above.

**Tested By:** 

**Remarks:**



**MDC PRECISION**

30962 Santana St. • Hayward CA 94544 •

Web: [www.MDCPrecision.com](http://www.MDCPrecision.com)

# *Special Certificate of Conformance*

Customer PO Number	MDC Sales Order Number	Description:	Part Number	Qty.
PO-672577	SO-218450 SO-218452	WELDMENT FLANGE B PRODUCTION	205691-99	168

MDC certifies that the material referenced above meets all customer PO requirements. All welds were in accordance with ASME Section IX version 2021. All work performed was per our ISO Quality Management System which is registered with TUV through 9/30/21, Registration #74 300 9502. Additionally, MDC certifies that the product is not suspect, used, or counterfeit.

***Heidi Richardson***

**Quality Assurance**

e-mail: [hrichardson@mdcprecision.com](mailto:hrichardson@mdcprecision.com)

Phone: (510) 265-3500

***Date: 01/01/21***





**VALBRUNA**

SLATER STAINLESS, INC.  
2400 TAYLOR STREET WEST  
FORT WAYNE IN 46802 USA  
PHONE 260.434.2800 - FAX 260.434.2801

**Product Certification Report**

**Report Number: 5746510**

Certified on May 19, 2020 Page 1 of 2

Order I.D. OA20000661 0150		Order Date 4/26/20	Commodity Code 316D7.0	
Dim 1 7.0000	Dim 2 .0000	Heat I.D. 282563	Customer I.D. 0008000061	Customer Purchase Order 67149
Product Shape Round		Product Surface HR and Rough Turned		Customer Grade 316/316L
Length (Inches) 120.000 Min. 168.000 Max.		Bill of Lading # PL20001728/1	Weight 006630 LBS	

**Ship To**  
VALBRUNA STAINLESS, INC  
13950 BENSON AVE  
CHINO, CA 91710

**Sold To**  
VALBRUNA STAINLESS INC.  
2400 TAYLOR STREET WEST  
FORT WAYNE, IN 46802

**Lifts:** 0013 0016

AMS 5648M	AMS 5653J	ASTM A484-19
Condition A	EN 10204 3.1	MIL-S-862B
QQ-S-763F	ASTM A262-15	ASTM A370-19e1
ASTM A182-19A Chem only	ASTM A479-19	ASME SA182-14 (2017) (Chem)
ASME SA320-13 B8M CL.1	ASME SA276 13 ED	SAE-AMS QQ-S-763D
ASTM A276-17	ASTM A314-19	ASTM A473-17A (Chem)
ASME SA479-15 ED (2019)	ASME SA484 10ed	ASTM A193-19 GR B8M CL.1

**CHEMICAL ANALYSIS (Weight %)**

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	Co	N
.016	1.75	.030	.026	.45	16.64	10.07	2.07	.59	.13	.08

BRINELL Type A device E10-18

HBW  
156

**ROOM TEMP TENSILE ASTM E8-16a**

TS (PSI)	.2%YS (PSI)	%EL (4d)	%RA
83500	38200	58.6	79.7

**MACRO ASTM E340-15/E381-17**

MACRO  
OK

**GRAIN SIZE ASTM E112-13**

GRAIN SIZE	Etchant	Magnification X
6	Oxalic	100

**ASTM A262-15 PR E(A Utilized)**

OXALIC	Structure	Etchant	Magnification X	SENS(F)	SENS(HR)
OK	Step	Oxalic	500	1250	1.50

Free of mercury and low melting alloy contamination.

Solution annealed at 1900F min. and water quenched (heating time & temp appropriate for optimum quality).

No welding or weld repair done.

Electric Furnace melted; AOD refined.

Chemical testing to one or more of the listed ASTM methods:  
E1019-18, E1086-14.

Location of tensile fracture: inside middle of gage length. %elong after fracture.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

Results relate only to the items tested. Certification shall not be reproduced except in full, without written approval of Valbruna Stainless Inc. The recording of false, fictitious, or fraudulent statements on this document may be punished as a felony under federal statutes. Including Federal law Title 18, Chapter 47. Consult material safety data sheet (MSDS) for hazard info. I hereby certify that the reported figures are correct as contained in the records of the corporation.

Manager Laboratory Services

Annmarie C Asiala

email: AAsiala@valbruna.us



**VALBRUNA**

SLATER STAINLESS, INC.

2400 TAYLOR STREET WEST  
FORT WAYNE IN 46802 USA  
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report****Report Number: 5746510**

Certified on May 19, 2020 Page 2 of 2

Order I.D. OA20000661 0150	Order Date 4/26/20	Commodity Code 316D7.0		
Dim 1 7.0000	Dim 2 .0000	Heat I.D. 282563	Customer I.D. 0008000061	Customer Purchase Order 67149
Product Shape Round	Product Surface HR and Rough Turned			Customer Grade 316/316L
Length (Inches) 120.000 Min. 168.000 Max.		Bill of Lading # PL20001728/1	Weight 006630 LBS	

**Ship To**  
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13950 BENSON AVE  
CHINO, CA 91710

**Sold To**  
VALBRUNA STAINLESS INC.  
2400 TAYLOR STREET WEST  
FORT WAYNE, IN 46802

No mercury or low melting alloy contamination. No weld repair.  
Material melted in Italy, manufactured in the United States.  
Conforms to listed specifications. DFARS-BAA 252.225-7009 compliant. Heat treat furnaces-air atmosphere.  
Quality system is compliant with ISO 9001:2015. Produced in accordance with EN 10204 3.1.

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Manager Laboratory Services

email: AAsiala@valbruna.us

  
Annmarie C Asiala

F00304902

**VALBRUNA**

SLATER STAINLESS, INC.

2400 TAYLOR STREET WEST  
FORT WAYNE IN 46802 USA  
PHONE 260.434.2800 - FAX 260.434.2801**Product Certification Report**Report Number: **5733140**

Certified on Apr 06, 2020 Page 1 of 1

Order I.D.	Order Date	Commodity Code		
OA19000862 0070	5/23/19	304D2.0		
Dim 1	Dim 2	Heat I.D.	Customer I.D.	Customer Purchase Order
2.0000	.0000	281329	0008000061	62994
Product Shape	Product Surface			Customer Grade
Round	Turned/Burnished Cold Finished			304/304L
Length (Inches)	Bill of Lading #	Weight		
132.000 Min. 156.000 Max.	PL20001391/1	011570 LBS		

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CHINO, CA 91710

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FORT WAYNE, IN 46802

Lifts: 0013 0014 0015 0016

ASTM A484-19	Condition A	NACE MR0175/ISO 15156-3 2015
NACE MR0103-2015	UNS S30400 and S30403	ASTM A479-19
AMS 5639J	AMS 5647K	ASTM A276-17
SAE-AMS QQ-S-763D	ROHS COMPLIANT	

**CHEMICAL ANALYSIS (Weight %)**

C	Mn	P	S	Si	Cr	Ni	Mo	Cu	N
.022	1.72	.030	.030	.41	18.38	8.11	.46	.45	.08

BRINELL Type A device E10-18

HBW

171

ROOM TEMP TENSILE ASTM E8-16a

TS (PSI)	.2%YS (PSI)	%EL (4d)	%RA
87000	42000	51.0	70.0

MACRO ASTM E340-15/E381-17

MACRO

OK

GRAIN SIZE ASTM E112-13

GRAIN SIZE	Etchant	Magnification X
6	Oxalic	100

ASTM A262-15 PR E(A Utilized)

OXALIC	Structure	Etchant	Magnification X	SENS(F)	SENS(HR)
OK	Step	Oxalic	500	1250	1.50

Free of mercury and low melting alloy contamination.

Electric Furnace melted; AOD refined.

Chemical testing to one or more of the listed ASTM methods:

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Location of tensile fracture: inside middle of gage length. %elong after fracture.

Chemical Analysis performed at Acciaierie Valbruna, Italy.

No mercury or low melting alloy contamination. No weld repair.

Material melted in Italy, manufactured in the United States.

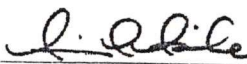
Material conforms to listed specifications. DFARS compliant. Our heat treat furnaces use air atmosphere.

Quality system is compliant with ISO 9001:2015. Produced in accordance with EN 10204 3.1.

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