

aconity^{us}



aconity3D

ELABORATING YOUR ADDITIVE PRODUCTION

CONSUMABLES AND PERIPHERAL EQUIPMENT

Within our service, we offer all parts of our machines as spare parts. For components that are subject to wear, we keep a stock to guarantee short delivery times. We also offer peripheral items furnished to conduct your facilities towards a smooth AM production environment. In addition to consumables and peripheral items, we support you throughout the entire life cycle of your system and provide services such as machine maintenance, service contracts, consulting and training as well as material development and testing facilities to become what we strive for: Your Partner for Innovation!

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Dear Customer,

we would like to thank you for choosing Aconity3D as your partner for innovation in additive manufacturing. Customer satisfaction has always been our utmost priority. Therefore, we have implemented company-wide support for all users of our laboratory systems to provide quick and efficient solutions for complex requests and technical challenges.

We are pleased to address your inquiries efficiently through our support platform (support.aconity3d.com). You can contact our experts directly via a ticket system and use our vastly expanding knowledge database all tailored towards providing best possible support and generate maximum customer satisfaction.

We would gladly like to help you maximize your machine uptime. For that we offer all components which have to be replaced continuously due to wear and listed them with helpful notations in this catalogue.

Besides offering a comprehensive list of all consumables and spare parts you can also address our further business units like material development! Challenge us to process your demanding material or trust in our expertise when it comes to part screening or application development.

We are very pleased and determined to assist you in making your additive production a success!

Best regards,

Your Aconity3D Team!



1 GENERAL INFORMATION

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After shipping our Aconity system, our work is not over. We will accompany you as a client through the whole lifecycle of your Aconity3D machines. The functionality of each component is important to secure process quality in mass or small series production, as well as the development of new processes. In order to support you, we listed a comprehensive overview of our consumables and recommended peripheral products for your equipment.

In addition to the listed items, we also offer all remaining spare parts of your equipment. If you need a spare part, no worries, just contact us and our service personnel will be happy to assist you in identifying your needed inventory. If necessary, we will help with assembly or integration.

Furthermore, you can retrofit most options on your system. To find out which options are available for your system we offer a detailed consultation. With your support, we can identify your needs and provide a complete solution all aimed toward maximizing your customer benefit.

To submit requests and orders please contact sales@aconityus.com.

Also, we are always eager to learn about your opinion on how we can improve. Therefore, for any remarks, questions and ideas for improvements, contact our info portal: info@aconityus.com.

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CONSUMABLES OVERALL

2.1

FILTER SYSTEMS

Depending on the amount of material changes and welding fumes of the processed material, filter changes are required. Typical intervals of filter change are one to six months. It is recommended to have one filter and tubing for each material in order to prevent contamination of the processed material.

Article No.	Component	Price
1001008399	Filter element (coarse)	\$ 225.-
	Add-On for Cyclone filter unit (1001008435) Filter element - coarse filter <ul style="list-style-type: none">Filter class M (DIN EN 60335-2-69)Filter area 1.5 m²	
1001008398	Filter element (fine)	\$ 155.-
	Add-On for Cyclone filter unit (1001008435) Filter element - fine filter <ul style="list-style-type: none">Filter class H13 (according to DIN EN 1822.2009)Filter class ISO 13 H (according to ISO 29463)Temperature resistance: 70 °CFilter medium: Micro glass fiber paperSeal: PU semi-circular profile, foamed	
1001009376	Filter housing (small)	\$ 102.-
	Filter housing for small filter <ul style="list-style-type: none">Material: Nylon filter housingPressure: 7 bar	
1001009375	Filter element (small) 10x	\$ 126.-

Add-On for Filter housing (1001009376)

Filter element – small filter

- Filter grade: 80K
- Material: Micro glass fiber paper




2.2 POWDERS

We offer approved materials for your machine. These powders are our most common materials in use and are tried and tested. In addition, we also offer further materials on demand. Please contact us for more information.

Article No.	Component	Price
1001008400	Aluminum powder (AlSi10Mg)	\$ 94.-
Price per kg <ul style="list-style-type: none">D₅₀ = 25 – 63 µm particle sizeSpherical particles		
1001008401	Stainless steel powder (1.4404)	\$ 76.-
Price per kg <ul style="list-style-type: none">D₅₀ = 15 – 45 microns particle sizeSpherical particles		
1001009337	Cobalt chrome powder (CoCr)	\$ 174.-
Price per kg <ul style="list-style-type: none">D₅₀ = 15 – 45 microns particle sizeSpherical particles		




2.3 SEALINGS

Sealings serve the gas- and dust tightness of the process chamber. To ensure that function, sealing components are subject to change if damaged or aged. Therefore, O-rings should be changed, whenever the sealed component is dismantled. Felt sealings should be exchanged prior to every material change.

Article No.	Component	Price
1001008402	Felt sealing ring	\$ 42.-
	<div>Cylinder sealing<ul style="list-style-type: none">Cross section: 5 x 6 mmLength: 1600 mmRequired lengths for a sealing change:<ul style="list-style-type: none">AconityONE: 1260 mmAconityMIDI or AconityLAB: 550 mmAconityMINI: 450 mm</div>	
1001008403	Felt sealing ring for build plate reduction	\$ 42.-
	<div>Cylinder sealing<ul style="list-style-type: none">Cross section: 6 x 7 mmLength: 1600 mmSystem: AconityONE</div>	
1001007563	O-ring kit	\$ 132.-
	<div>This set contains the following items<ul style="list-style-type: none">1.5 mm x 10 m2.0 mm x 10 m2.5 mm x 10 m3.0 mm x 10 m3.5 mm x 10 m4.0 mm x 10 m4.5 mm x 10 mInstant adhesive</div>	

2.4 OPTICAL SYSTEMS

Listed below are cleaning sets and protective foil for the optical components of your Aconity3D machine. The optics cleaning set should last for six to twelve months depending on the amount of dust accumulation at the installation site.

Article No.	Component	Price
1001003608	Cleaning set for optical parts	\$ 41.-
	<div>Complete optics cleaning set including:<ul style="list-style-type: none">▪ Brush & bellows▪ Textile cloth and paper towels▪ Cotton buds▪ Cleaning substance (200 ml)</div>	
1001008404	Protective foil for optical parts	\$ 15.-
	<div><ul style="list-style-type: none">▪ Material: PVC▪ 55 mm x 60 m▪ Resistant to humidity and depleted acids or leaches▪ Translucent, blue</div>	
1001008405	Cleaned compressed air	\$ 17.-
	<div>Spray for the contactless cleaning of sensitive optical parts<ul style="list-style-type: none">▪ Volume: 400 ml</div>	



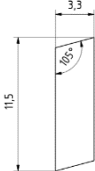
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CONSUMABLES ACONITY^{ONE}

3.1

POWDER DEPOSITION

The amount of spare parts needed for powder deposition depends on the applied material and on the quality of applied process parameters. A brush is more forgiving regarding warpage during build-up, but least resistant. Contrarily, a metal blade is highly resistant but least forgiving in terms of process interruptions due to warpage. The lifetime of a brush may vary heavily depending on usage. It is suggested to have one brush for each material.

Article No.	Component	Price
1001008450	Anti-static brush	\$ 162.-
	<div><div><ul style="list-style-type: none">Body: stainless steel V2AFiber: Carbon fiber matTotal length: 410 mmBody height: 10.00 mmFiber height: 1.70 mmSystem: Aconity^{ONE}</div><div></div></div>	
1001008446	Flexible rubber lip	\$ 58.-
	<div><div><ul style="list-style-type: none">Material: SiliconeLength: 410 mmFree height: 3.5 mmSystem: Aconity^{ONE}</div><div></div></div>	
1001008449	Metal blade	\$ 190.-
	<div><div><ul style="list-style-type: none">Material: Stainless steelLength: 410 mmHeight: 11.5 mmSystem: Aconity^{ONE}</div><div></div></div>	

3.2 SUBSTRATE PLATES

For manufacturing of LBM components, it is recommended to choose the alloy of substrate plate alike to the powder material to ensure similar melting temperature and thermal conductivity. This helps reduce internal stress and leads to a better bond between substrate plate and component. Substrate plates can be ordered for all our systems and heating options. Each substrate plate can be machined after usage and reused up to 20 times. We are happy to offer you our service in wire EDM your additive manufacturing parts from the substrate and finish your plate for reuse.

STANDARD D400

Article No.	Component	Price
1001007617	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	\$ 1,005.-
1001007616	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	\$ 405.-
1001006223	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	\$ 1,930.-
1001007618	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 400 mmThickness: 25 mmSystem: AconityONE	On Request

BUILD PLATE REDUCTION D200

Article No.	Component	Price
1001008866	Stainless steel	\$ 495.-
	<ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008865	Aluminum	\$ 250.-
	<ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008868	Titanium	\$ 435.-
	<ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008867	Inconel	On Request
	<ul style="list-style-type: none">Material: Inconel 718Diameter: 200 mmThickness: 25 mmSystem: AconityONE	

RESISTIVE 200°C PREHEATING D400

Article No.	Component	Price
1001008875	Stainless steel	\$ 1,005.-
	<ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	
1001008876	Aluminum	\$ 405.-
	<ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	
1001008873	Titanium	\$ 1,905.-
	<ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	
1001008874	Inconel	On Request
	<ul style="list-style-type: none">Material: Inconel 718Diameter: 400 mmThickness: 25 mmSystem: AconityONE	

RESISTIVE 500°C PREHEATING D200

Article No.	Component	Price
1001009579	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	\$ 495.-
1001009578	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	\$ 250.-
1001009580	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	\$ 435.-
1001009581	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 200 mmThickness: 25 mmSystem: AconityONE	On Request

RESISTIVE 500°C PREHEATING D350

Article No.	Component	Price
1001008869	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 350 mmThickness: 25 mmSystem: AconityONE	\$ 1,005.-
1001008870	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 350 mmThickness: 25 mmSystem: AconityONE	\$ 375.-
1001008871	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 350 mmThickness: 25 mmSystem: AconityONE	\$ 1,275
1001008872	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 350 mmThickness: 25 mmSystem: AconityONE	On Request

INDUCTIVE 1000°C PREHEATING D200

Article No.	Component	Price
1001008879	Stainless steel	\$ 305.-
	<ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008880	Aluminum	\$ 255.-
	<ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008877	Titanium	\$ 445.-
	<ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 200 mmThickness: 25 mmSystem: AconityONE	
1001008878	Inconel	On Request
	<ul style="list-style-type: none">Material: Inconel 718Diameter: 200 mmThickness: 25 mmSystem: AconityONE	


CUSTOM QUICK-RELEASE FASTENER D400

Special designs were made for some machines. These substrate plates offer the full construction volume due to their unique design. A quick-release fastener has been developed to fasten the substrate plates. This substrate plate only fits on special mounts which can be retrofitted by us.

Article No.	Component	Price
1001008886	Stainless steel quick-release fastener <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	\$ 735.-
1001008885	Aluminum quick-release fastener <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 400 mmThickness: 25 mmSystem: AconityONE	\$ 390.-
1001009476	Stainless steel quick-release fastener <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 350 mmThickness: 25 mmSystem: AconityONE	\$ 984.-
1001009115	Aluminum quick-release fastener <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 350 mmThickness: 25 mmSystem: AconityONE	\$ 375.-

3.3 TEST PLATES

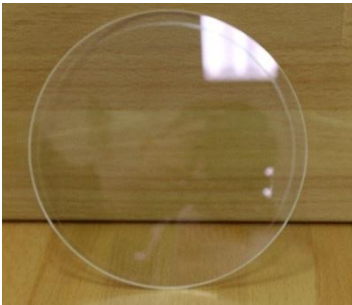
Black anodized plates are recommended for focus level calibration and for the execution of test burn-ins. On this black anodization, burn-ins are highly visible, and anomalies can be easily identified. These can be purchased from us, fitted to the geometry of the build platform.

Article No.	Component	Price
1001008464	Anodized Plate	\$ 88.-
	<ul style="list-style-type: none">Material: Black anodized aluminumDiameter: 398 mmThickness: 2 mmSystem: AconityONE	

3.4 OPTICAL COMPONENTS

If maintained properly, inlet glasses should not be subject to wear. However, in combination with the preheating unit extensive thermal load is applied to the glasses which may cause failure in case of absent air cooling. In addition, sediments of powder and smoke can accumulate on the inlet glass, which can cause burn-ins. In case of burn-ins, cracks or other damages, the inlet glass should be changed.

For laser powers larger than 500 W, use of fused silica glasses is recommended to minimize thermal shifts caused by thermal gradients induced by laser radiation.



Article No.	Component	Price
1001008468	Inlet glass low power	\$ 342.-
	For Laser power less than 500 W <ul style="list-style-type: none">Material: Borofloat®Diameter: 394 mmThickness: 5.5 mmAnti-Reflective Coating: 1070 nmSystem: AconityONE	
1001008467	Inlet glass high power	\$ 1,504.-
	For Laser power greater than 500 W <ul style="list-style-type: none">Material: Fused silicaDiameter: 394 mmThickness: 4 mmAnti-Reflective Coating: 1070 nmSystem: AconityONE	

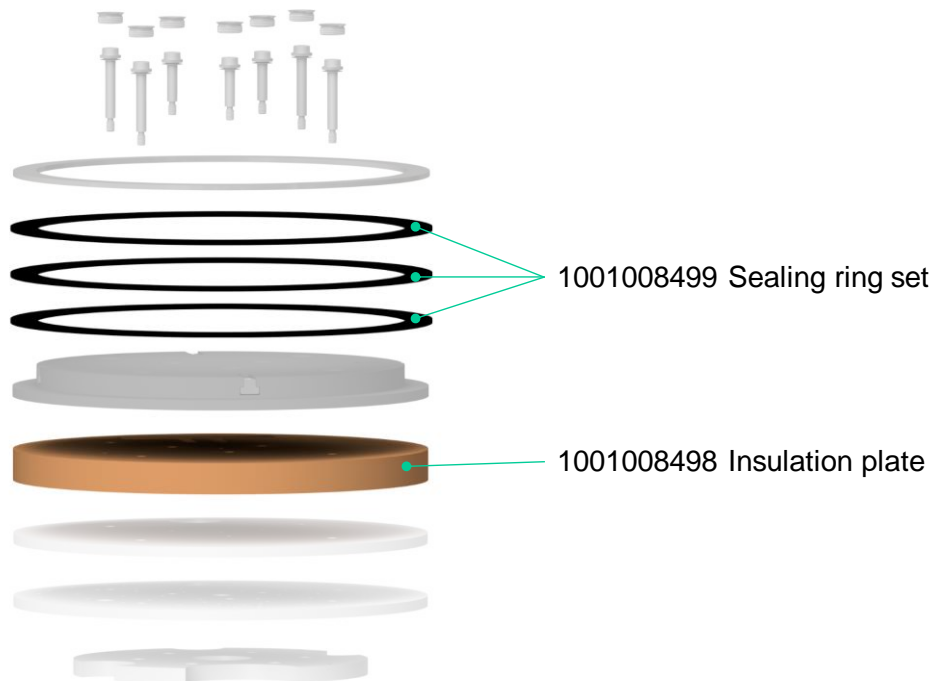
CUSTOM SIZES

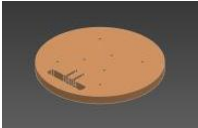

Special designs were made for some machines and can be found here. These inlet glasses are characterized by special diameters and designs.

Article No.	Component	Price
1001008481	Inlet glass low power	\$ 342.-
	For Laser power less than 500 W <ul style="list-style-type: none">Material: Borofloat®Diameter: 414 mmThickness: 5.5 mmAnti-Reflective Coating: 1070 nmSystem: AconityONE	
1001008480	Inlet glass high power	\$ 1,504.-
	For Laser power greater than 500 W <ul style="list-style-type: none">Material: Fused silicaDiameter: 414 mmThickness: 5 mmAnti-Reflective Coating: 1070 nmSystem: AconityONE	

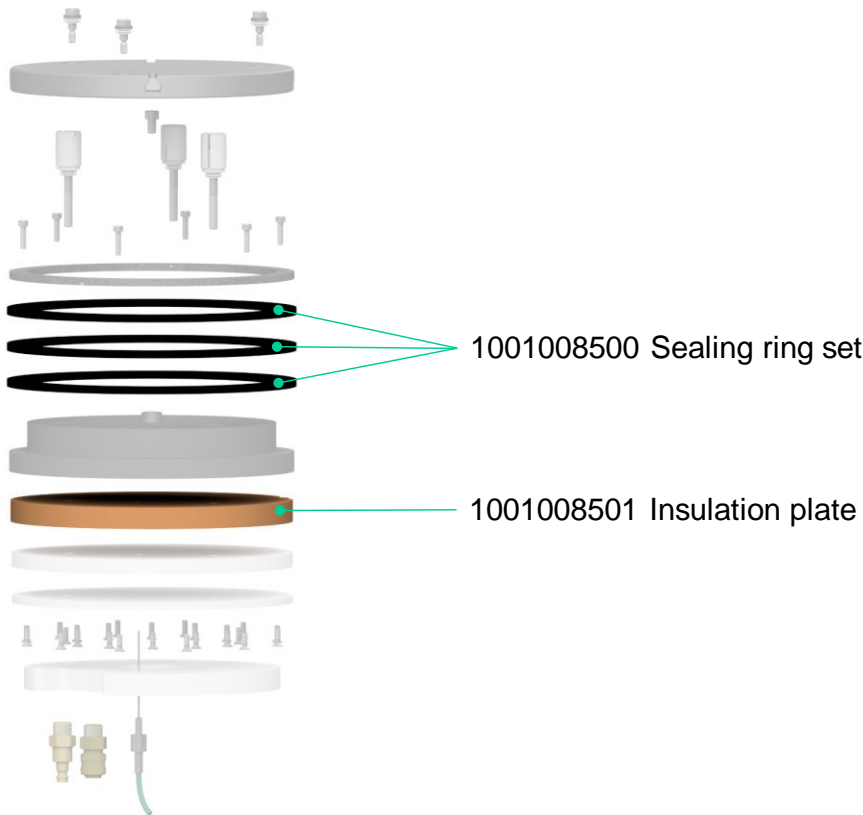
3.5 HEATING COMPONENTS



RESISTIVE 200°C PREHEATING



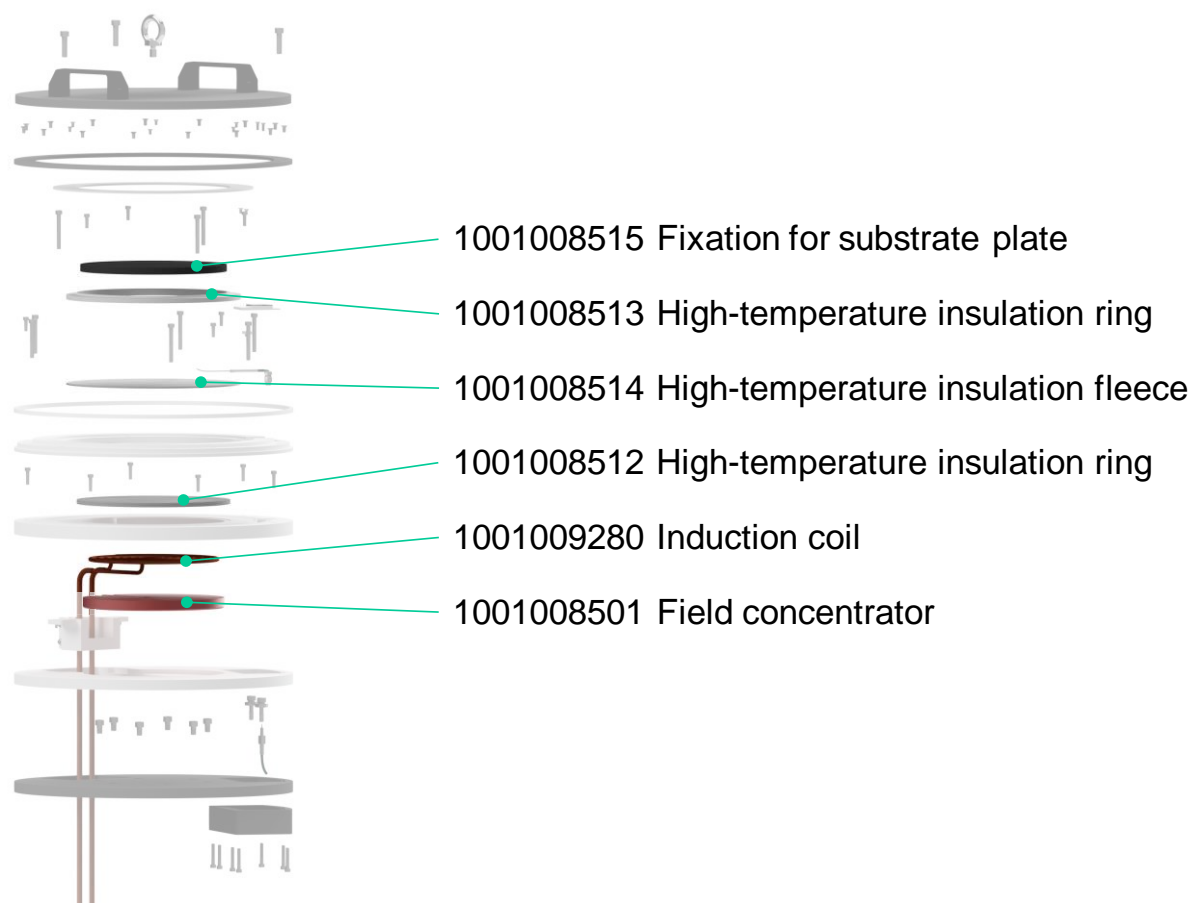
Article No.	Component	Price
1001008498	Insulation plate	\$ 582.-
	Low temperature insulation plate <ul style="list-style-type: none">▪ Diameter: 400 mm▪ Maximum temperature: 500 °C▪ System: AconityONE	
1001008499	Sealing ring set (3x)	\$ 102.-
	<ul style="list-style-type: none">▪ Material: Carbon fiber fleece▪ System: AconityONE	


RESISTIVE 500°C PREHEATING

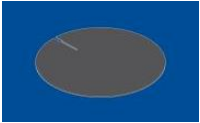

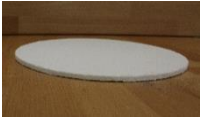




Article No.	Component	Price
1001008501	Insulation plate for build plate reduction	\$ 312.-
	Low temperature insulation plate <ul style="list-style-type: none">▪ Diameter: 200 mm▪ Maximum temperature: 500 °C▪ System: AconityONE	
1001008500	Sealing ring set (3x) for build plate reduction	\$ 92.-
	<ul style="list-style-type: none">▪ Material: Carbon fiber fleece▪ System: AconityONE	

INDUCTIVE 1000°C PREHEATING



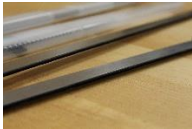

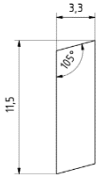
Article No.	Component	Price
1001008515	Fixation for substrate plate	\$ 1,875.-
	Molybdenum induction heating plate	
	▪ Substrate plate mount: D = 202 mm	
		
1001008514	High-temperature insulation fleece	\$ 26.-

	<div>High temperature sealing<ul style="list-style-type: none">Sealing for induction coilMaximum temperature: 1260 °C</div>	
1001008513	<div><ul style="list-style-type: none">High-temperature insulation ring</div>	\$ 35.-
	<div>High temperature sealing<ul style="list-style-type: none">Sealing for induction coilMaximum temperature: 1400 °C</div>	
1001008512	<div><ul style="list-style-type: none">High-temperature insulation plate</div>	\$ 28.-
	<div>High temperature sealing<ul style="list-style-type: none">Sealing for induction coilMaximum temperature: 1400 °C</div>	
1001008502	<div><ul style="list-style-type: none">High temperature resistant glue 200 ml</div>	\$ 145.-
	<div><ul style="list-style-type: none">High temperature resistant glue to fixate the substrate plate for high temp. preheating</div>	
1001009184	<div><ul style="list-style-type: none">Field concentrator</div>	\$ 2,340.-
	<div><ul style="list-style-type: none">The inductor plate serves as a field concentrator for induction heating and is located below the induction coil.</div>	
1001009280	<div><ul style="list-style-type: none">Induction coil</div>	\$ 2,736.-
	<div><ul style="list-style-type: none"></div>	

4 CONSUMABLES ACONITY *MIDI* & ACONITY *LAB*

4.1 POWDER DEPOSITION

The amount of spare parts needed for powder deposition depends on the applied material and on the quality of applied process parameters. A brush is more forgiving regarding warpage during build-up, but least resistant. Contrarily, a metal blade is highly resistant but least forgiving in terms of process interruptions due to warpage. The lifetime of a brush may vary heavily depending on usage. It is suggested to have one brush for each material.

Article No.	Component	Price
1001008455	Antistatic brush	\$ 99.-
	<ul style="list-style-type: none"> Body: stainless steel V2A Fiber: Carbon fiber mat Total length: 190 mm Body height: 10.00 mm Fiber height: 1.70 mm System: Aconity <i>MIDI</i> & Aconity <i>LAB</i> 	
1001008447	Flexible rubber lip	\$ 34.-
	<ul style="list-style-type: none"> Material: Silicone Length: 190 mm Free height: 3.5 mm System: Aconity <i>MIDI</i> & Aconity <i>LAB</i> 	
1001008451	Metal blade	\$ 176.-
	<ul style="list-style-type: none"> Material: Stainless steel Lengths: 190 mm Height: 11.5 mm System: Aconity <i>MIDI</i> & Aconity <i>LAB</i> 	

4.2 SUBSTRATE PLATES

For manufacturing of LBM components, it is recommended to choose the alloy of substrate plate alike to the powder material to ensure similar melting temperature and thermal conductivity. This helps reduce internal stress and leads to a better bond between substrate plate and component.

Substrate plates can be ordered for all our systems and heating options. Each substrate plate can be machined after usage and reused up to 20 times. We are happy to offer you our service in wire EDM your additive manufacturing parts from the substrate and finish your plate for reuse.



STANDARD D170

Article No.	Component	Price
1001008864	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 170 mmThickness: 15 mm	\$ 240.-
1001008068	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 170 mmThickness: 15 mm	\$ 156.-
1001005647	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 170 mmThickness: 15 mm	\$ 330.-
1001005648	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 170 mmThickness: 15 mm	On Request

BUILD PLATE REDUCTION D100

Article No.	Component	Price
1001008887	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 100 mmThickness: 10 mmSystem: AconityMIDI & AconityLAB	\$ 156.-
1001008881	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 100 mmThickness: 10 mmSystem: AconityMIDI & AconityLAB	\$ 126.-
1001008888	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 100 mmThickness: 10 mmSystem: AconityMIDI & AconityLAB	\$ 200.-
1001008889	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 100 mmThickness: 10 mmSystem: AconityMIDI & AconityLAB	On Request

BUILD PLATE REDUCTION D55

Article No.	Component	Price
1001008828	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 142.-
1001008827	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 123.-
1001008834	Titanium <ul style="list-style-type: none">Material: Titanium (TiAL6V4)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 145.-
1001008841	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	On Request

RESISTIVE 500°C PREHEATING D170

Article No.	Component	Price
1001008891	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 170 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB	\$ 216.-
1001008890	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 170 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB	\$ 150.-
1001008892	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 170 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB	\$ 330.-
1001008893	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 170 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB	On Request

RESISTIVE 800°C PREHEATING D100

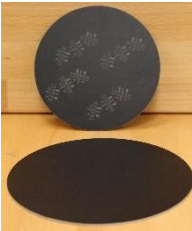
Article No.	Component	Price
1001008825	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 108.-
1001008826	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 85.-
1001008830	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 372.-
1001008863	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	On Request

INDUCTIVE 1200°C PREHEATING D70

Article No.	Component	Price
1001008894	<div>Stainless steel</div> <div><ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 70 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB</div>	\$ 102.-
1001008895	<div>Aluminum</div> <div><ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 70 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB</div>	\$ 92.-
1001008896	<div>Titanium</div> <div><ul style="list-style-type: none">Material: Titanium (TiAL6V4)Diameter: 70 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB</div>	\$ 156.-
1001008897	<div>Inconel</div> <div><ul style="list-style-type: none">Material: Inconel 718Diameter: 70 mmThickness: 15 mmSystem: AconityMIDI & AconityLAB</div>	On Request

4.3 TEST PLATES

Black anodized plates are recommended for focus level calibration and for the execution of test burn-ins. On this black anodization, burn-ins are highly visible, and anomalies can be easily identified. These can be purchased from us, fitted to the geometry of the build platform.

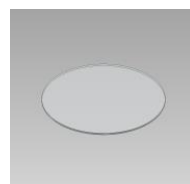
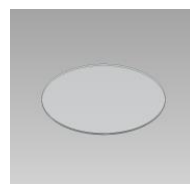
Article No.	Component	Price
1001008465	Anodized Plate	\$ 22.-
	<ul style="list-style-type: none">Material: Black anodized aluminumDiameter: 168 mmThickness: 2 mmSystem: AconityMIDI or AconityLAB	

4.4 OPTICAL COMPONENTS

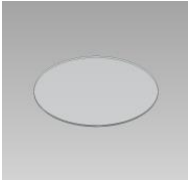
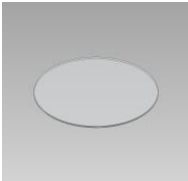
If maintained properly, inlet glasses should not be subject to wear. However, in combination with the preheating unit extensive thermal load is applied to the glasses which may cause failure in case of absent air cooling. In addition, sediments of powder and smoke can accumulate on the inlet glass, which can cause burn-ins. In case of burn-ins, cracks or other damages, the inlet glass should be changed.

For laser powers larger than 500 W, use of fused silica glasses is recommended to minimize thermal shifts caused by thermal gradients induced by laser radiation.



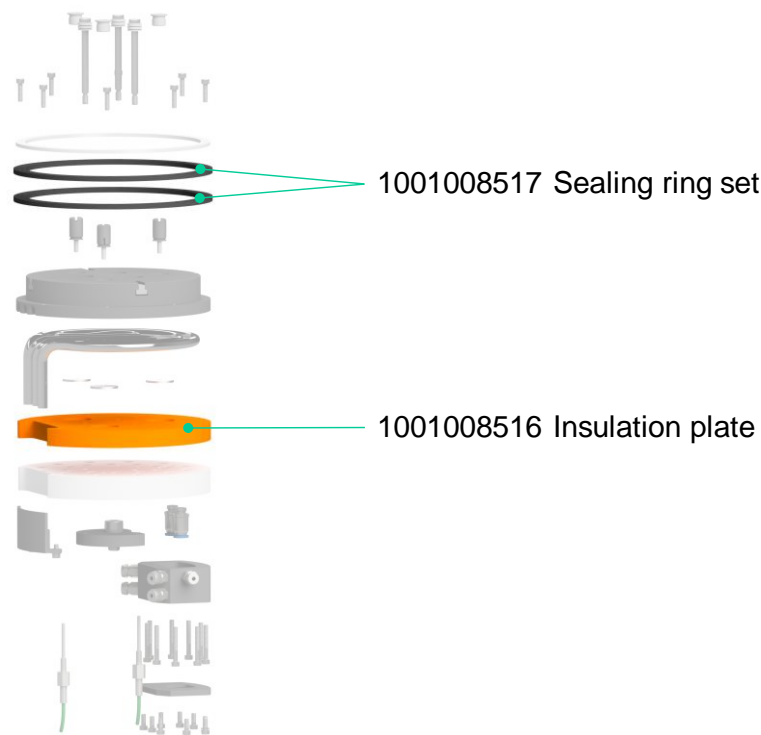
Article No.	Component	Price
1001008470	Inlet glass low power	\$ 198.-
	For laser power less than 500 W <ul style="list-style-type: none"> Material: Borofloat® Diameter: 240 mm Thickness: 4 mm Anti-Reflective Coating: 1070 nm System: AconityMIDI or AconityLAB 	
1001008469	Inlet glass high power	\$ 685.-
	For Laser power greater than 500 W <ul style="list-style-type: none"> Material: Fused silica Diameter: 240 mm Thickness: 4 mm Anti-Reflective Coating: 1070 nm System: AconityMIDI or AconityLAB 	



Vacuum D130

Article No.	Component	Price
1001010164	Inlet glass low power vacuum	\$ 126.-
	For laser power less than 500 W <ul style="list-style-type: none">Material: Borofloat®Diameter: 130 mmThickness: 5 mmAnti-Reflective Coating: 1070 nmSystem: AconityMINI, AconityMIDI or AconityLAB	
1001010165	Inlet glass high power vacuum	\$ 638.-
	For Laser power greater than 500 W <ul style="list-style-type: none">Material: Fused silicaDiameter: 130 mmThickness: 5 mmAnti-Reflective Coating: 1070 nmSystem: AconityMINI, AconityMIDI or AconityLAB	

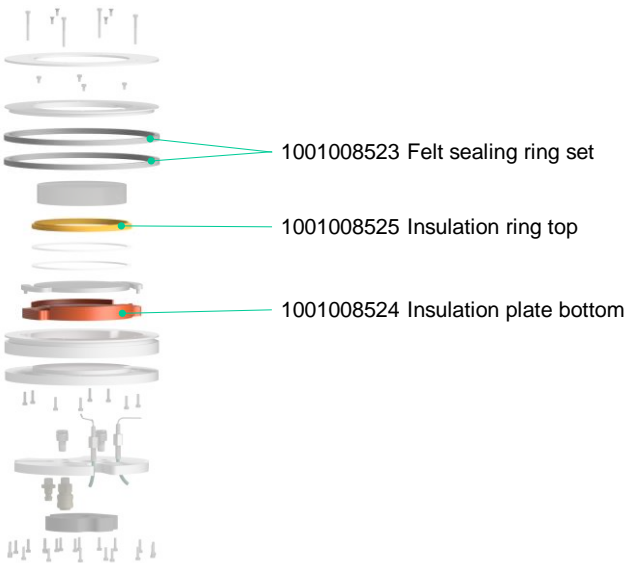
4.5 HEATING COMPONENTS


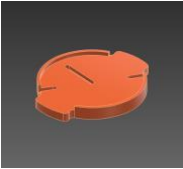
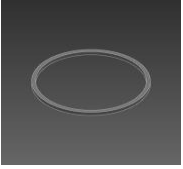
RESISTIVE 500°C PREHEATING



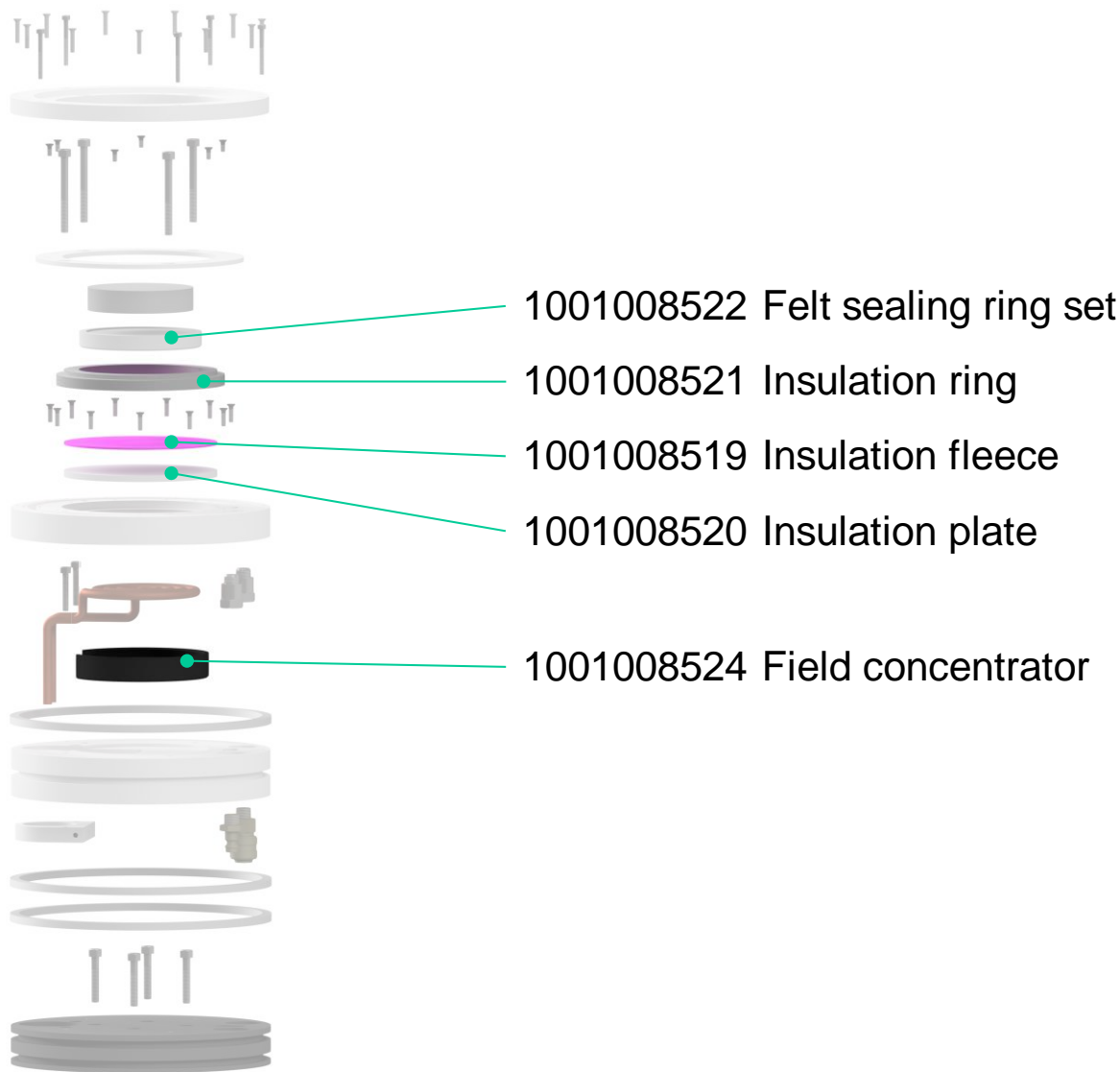
Article No.	Component	Price
1001008516	Insulation plate	\$ 167.-
<div>Low temperature insulation plate</div> <div><ul style="list-style-type: none">Diameter: 167 mmMax. temperature: 1000° CSystem: AconityMIDI & AconityLAB</div>		
1001008517	Sealing ring set (3x)	\$ 114.-
<div><ul style="list-style-type: none">Material: Carbon fiber fleeceDiameter: 171 mmMaximum temperature: 500 ° CSystem: AconityMIDI & AconityLAB</div>		


RESISTIVE 800°C PREHEATING



Article No.	Component	Price
1001008525	Insulation ring top	\$ 196.-
	Top ring for mid-temperature isolation <ul style="list-style-type: none">Diameter: 100 mmMax. temperature: 1000 ° CSystem: AconityMINI, AconityMIDI & AconityLAB	
1001008524	Insulation plate bottom	\$ 342.-
	Bottom plate for mid-temperature isolation <ul style="list-style-type: none">Diameter: 100 mmMax. temperature: 1000 ° CSystem: AconityMINI, AconityMIDI & AconityLAB	
1001008523	Felt sealing ring set (10x)	\$ 104.-
	Sealing felt ring for mid temperature preheating <ul style="list-style-type: none">Diameter: 100 mmMaximum temperature: 1260 ° CSystem: AconityMINI, AconityMIDI & AconityLAB	

INDUCTIVE 1200°C PREHEATING



Article No.	Component	Price
1001008522	Fixation for substrate plate	\$ 1,092.-
	Induction heating plate <ul style="list-style-type: none">Material: MolybdenumSubstrate plate mount: D = 71 mm	

1001008519 High-temperature insulation fleece (10x)

\$ 228.-

High temperature insulation

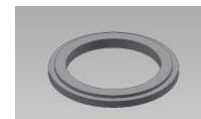
- insulation for induction coil
- Maximum temperature: 1260 °C

1001008521 High-temperature isolation ring (5x)

\$ 145.-

High temperature sealing

- Sealing for induction coil
- Maximum temperature: 1400 °C

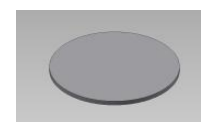


1001008520 High-temperature isolation plate (5x)

\$ 138.-

High temperature sealing

- Sealing for induction coil
- Maximum temperature: 1400 °C



1001008502 High temperature resistant glue 200 ml

\$ 144.-

High temperature resistant glue to fixate the substrate plate for high temp. preheating

1001009185 Field concentrator

\$ 846.-

The inductor plate serves as a field concentrator for induction heating and is located below the induction coil.



1001009819 Induction coil

\$ 1,895.-

Material



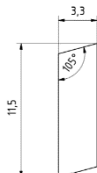
- Coil: copper
- Guiding: POM



5 CONSUMABLES ACONITY *MINI*

5.1 POWDER DEPOSITION


The amount of spare parts needed for powder deposition depends on the applied material and on the quality of applied process parameters. A brush is more forgiving regarding warpage during build-up, but least resistant. Contrarily, a metal blade is highly resistant but least forgiving in terms of process interruptions due to warpage. The lifetime of a brush may vary heavily depending on usage. It is suggested to have one brush for each material.

Article No.	Component	Price
1001008456	Antistatic brush	\$ 94.-
	<ul style="list-style-type: none"> Body: stainless steel V2A Fiber: Carbon fiber mat Total length: 150 mm Body height: 10.00 mm Fiber height: 1.70 mm System: Aconity <i>MINI</i> 	
1001008448	Flexible rubber lip	\$ 27.-
	<ul style="list-style-type: none"> Material: Silicone Length: 150 mm Free height: 3.5 mm System: Aconity <i>MINI</i> 	
1001008453	Metal blade	\$ 168.-
	<ul style="list-style-type: none"> Material: Stainless steel Lengths: 150 mm Height: 11.5 mm System: Aconity <i>MINI</i> 	

5.2 SUBSTRATE PLATES

For manufacturing of LBM components, it is recommended to choose the alloy of substrate plate alike to the powder material to ensure similar melting temperature and thermal conductivity. This helps reduce internal stress and leads to a better bond between substrate plate and component. Substrate plates can be ordered for all our systems and heating options. Each substrate plate can be machined after usage and reused up to 20 times. We are happy to offer you our service in wire EDM your additive manufacturing parts from the substrate and finish your plate for reuse.

STANDARD D140

Article No.	Component	Price
1001008822	Stainless steel	\$ 168.-
	<ul style="list-style-type: none"> Material: Stainless steel (1.4404) Diameter: 140 mm Thickness: 15 mm System: Aconity MINI 	
1001008823	Aluminum	\$ 156.-
	<ul style="list-style-type: none"> Material: Aluminum (AlMg4,5Mn) Diameter: 140 mm Thickness: 15 mm System: Aconity MINI 	
1001008824	Titanium	\$ 336.-
	<ul style="list-style-type: none"> Material: Titanium (TiAl6V4) Diameter: 140 mm Thickness: 15 mm System: Aconity MINI 	
1001008840	Inconel	On Request
	<ul style="list-style-type: none"> Material: Inconel 718 Diameter: 140 mm Thickness: 15 mm System: Aconity MINI 	

BUILD PLATE REDUCTION D55

Article No.	Component	Price
1001008828	Stainless steel	\$ 142.-
	<ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	
1001008827	Aluminum	\$ 124.-
	<ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	
1001008834	Titanium	\$ 145.-
	<ul style="list-style-type: none">Material: Titanium (TiAL6V4)Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	
1001008841	Inconel	On Request
	<ul style="list-style-type: none">Material: Inconel 718Diameter: 55 mmThickness: 10 mmSystem: AconityMINI, AconityMIDI & AconityLAB	

RESISTIVE 500°C PREHEATING D140

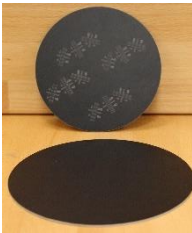
Article No.	Component	Price
1001008825	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 140 mmThickness: 15 mmSystem: Aconity<i>MINI</i>	\$ 216.-
1001008826	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 140 mmThickness: 15 mmSystem: Aconity<i>MINI</i>	\$ 156.-
1001008830	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 140 mmThickness: 15 mmSystem: Aconity<i>MINI</i>	\$ 354.-
1001008863	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 140 mmThickness: 15 mmSystem: Aconity<i>MINI</i>	On Request

RESISTIVE 800°C PREHEATING D100

Article No.	Component	Price
1001008825	Stainless steel <ul style="list-style-type: none">Material: Stainless steel (1.4404)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 108.-
1001008826	Aluminum <ul style="list-style-type: none">Material: Aluminum (AlMg4,5Mn)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 84.-
1001008830	Titanium <ul style="list-style-type: none">Material: Titanium (TiAl6V4)Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	\$ 375
1001008863	Inconel <ul style="list-style-type: none">Material: Inconel 718Diameter: 100 mmThickness: 20 mmSystem: AconityMINI, AconityMIDI & AconityLAB	On Request

5.3 TEST PLATES

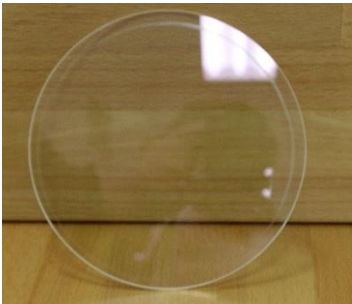
Black anodized plates are recommended for focus level calibration and for the execution of test burn-ins. On this black anodization, burn-ins are highly visible, and anomalies can be easily identified. These can be purchased from us, fitted to the geometry of the build platform.

Article No.	Component	Price
1001008466	Anodized Plate	\$ 17.-
<ul style="list-style-type: none">Material: black anodized aluminumDiameter: 138 mmThickness: 2 mmSystem: Aconity<i>MINI</i>		

5.4 OPTICAL COMPONENTS

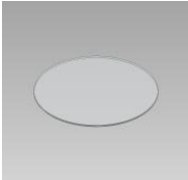
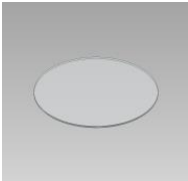
If maintained properly, inlet glasses should not be subject to wear. However, in combination with the preheating module extensive thermal load is applied to the glasses which may cause failure in case of absent air cooling. In addition, sediments of powder and smoke can accumulate on the inlet glass, which can cause burn-ins. In case of burn-ins, cracks or other damages, the inlet glass should be changed.

For laser powers larger than 500 W, use of fused silica glasses is recommended to minimize thermal shifts caused by thermal gradients induced by laser radiation.



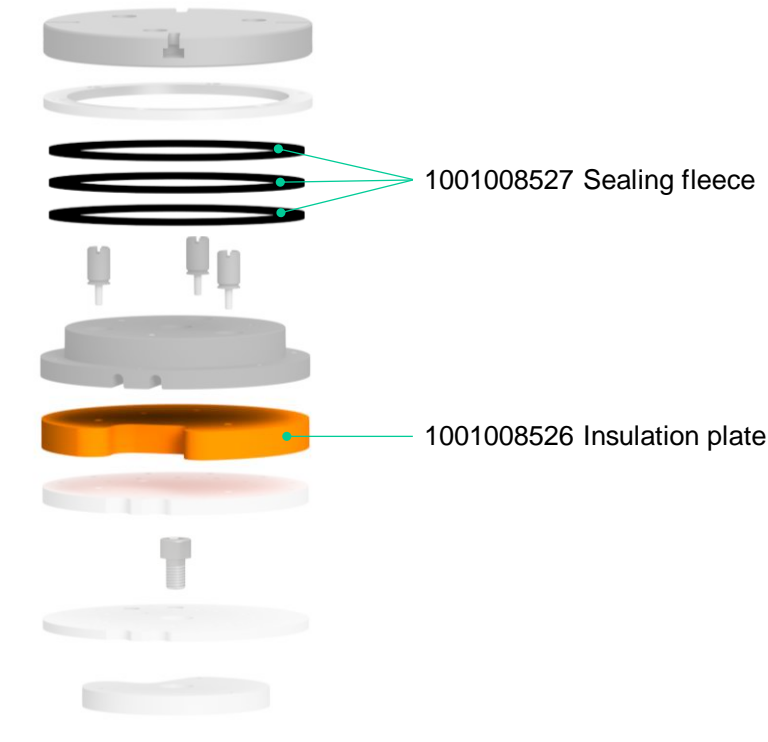
Article No.	Component	Price
1001008471	Inlet glass low power	\$ 135.-
For laser power less than 500 W.		
<ul style="list-style-type: none">Material: Borofloat®Diameter: 174 mmThickness: 4 mmAnti-Reflective Coating: 1070 nmSystem: Aconity<i>MINI</i>		
1001008472	Inlet glass high power	\$ 684.-
For Laser power greater than 500 W.		
<ul style="list-style-type: none">Material: Fused silicaDiameter: 174 mmThickness: 4 mmAnti-Reflective Coating: 1070 nmSystem: Aconity<i>MINI</i>		



Vacuum D130

Article No.	Component	Price
1001010164	Inlet glass low power vacuum	\$ 126.-
	For laser power less than 500 W <ul style="list-style-type: none">Material: Borofloat®Diameter: 130 mmThickness: 5 mmAnti-Reflective Coating: 1070 nmSystem: AconityMINI, AconityMIDI or AconityLAB	
1001010165	Inlet glass high power vacuum	\$ 638.-
	For Laser power greater than 500 W <ul style="list-style-type: none">Material: Fused silicaDiameter: 130 mmThickness: 5 mmAnti-Reflective Coating: 1070 nmSystem: AconityMINI, AconityMIDI or AconityLAB	

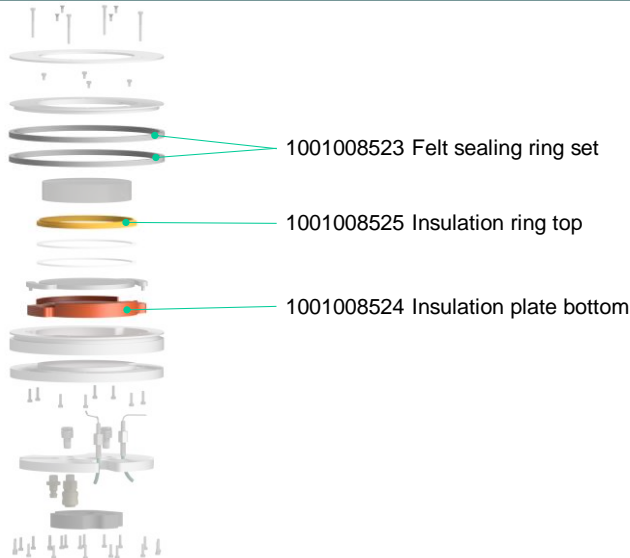
5.5 HEATING COMPONENTS


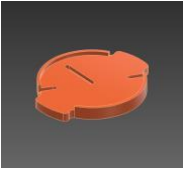

RESISTIVE 500°C PREHEATING



Article No.	Component	Price
1001008526	Insulation plate	\$ 138.-
	Low temperature insulation plate <ul style="list-style-type: none">Diameter: 140 mmMax. temperature: 1000 ° CSystem: Aconity<i>MINI</i>	
1001008527	Sealing fleece (3x)	\$ 92.-
	<ul style="list-style-type: none">Material: Carbon fiber fleeceDiameter: 142 mmMaximum temperature: 500 ° CSystem: Aconity<i>MINI</i>	

RESISTIVE 800°C PREHEATING



Article No.	Component	Price
1001008525	Insulation ring top	\$ 196.-
Top ring for mid-temperature insulation <ul style="list-style-type: none">Diameter: 100 mmMax. temperature: 1000 °CSystem: AconityMINI, AconityMIDI & AconityLAB		
1001008524	Insulation plate bottom	\$ 342.-
Bottom plate for mid-temperature insulation <ul style="list-style-type: none">Diameter: 100 mmMax. temperature: 1000 °CSystem: AconityMINI, AconityMIDI & AconityLAB		
1001008523	Mid temp. sealing fleece (3x)	\$ 104.-
<ul style="list-style-type: none">Diameter: 100 mmMaximum temperature: 1260 ° CSystem: AconityMINI, AconityMIDI & AconityLAB		

6

PERIPHERAL EQUIPMENT

For laboratory purposes, a basic analysis sieve together with the smaller vacuum options for wet scrubbers and dry vacuum cleaners are sufficient. If a higher powder throughput is planned by means of a production surrounding, the appropriate big sieving station along with the larger vacuum cleaners are recommended.

In Figure 1 the requirements for the laser beam melting (LBM) laboratory process are illustrated.







Figure 1: Requirements for the LBM laboratory & setup

6.1 MATERIAL PREPARATION

After every applied layer, excess powder is removed by the powder deposition unit and collected in an overflow container. To save you money and time, we offer different solutions for post process powder preparation so excess powder can be reused later.

To do so, the powder is placed in a vibratory sieve shaker and run through an analysis mesh to ensure the powder material's homogeneity.

Article No.	Component	Price
1001008407	Basic Sieve Station	\$ 4300.-
	<p>Vibratory Sieve Shaker</p> <ul style="list-style-type: none"> ▪ Diameter sieve platform Ø = 200 mm ▪ Sieving time ca. 3 – 20 min. per load ▪ Max. load weight 2 kg ▪ Quick and easy disassembly without tools ▪ All relevant parts are completely removable and cleanable ▪ Analysis sieve mesh size range 32 µm – 20 mm <p>Included accessories</p> <ul style="list-style-type: none"> ▪ Clamping lid Ø = 200 mm ▪ Stainless steel dry sieve pan Ø = 200 mm x 50 mm ▪ Analysis sieve mesh size 63 µm Ø = 200 mm x 50 mm <p>Technical Specs</p> <ul style="list-style-type: none"> ▪ Voltage: 100-240 V ▪ Noise level: 65 dB ▪ Power consumption: 50 W 	 <p>Source: fritsch.de</p>
1001008410	Analysis sieve mesh size 32 µm	\$ 305.-
	<p>Add-On for Basic Sieve Station (1001008407)</p> <ul style="list-style-type: none"> ▪ Analysis sieve mesh size 32 µm ▪ Ø = 200 mm ▪ Height: 50 mm 	 <p>Source: fritsch.de</p>
1001008419	Analysis sieve mesh size 63 µm	\$ 148.-

	<div>Add-On for Basic Sieve Station (1001008407)<ul style="list-style-type: none">▪ Analysis sieve mesh size 63 µm▪ Ø = 200 mm▪ Height: 50 mm</div>	<div> <small>Source: fritsch.de</small></div>
1001008420	Analysis sieve mesh size 90 µm	\$ 148.-
	<div>Add-On for Basic Sieve Station (1001008407)<ul style="list-style-type: none">▪ Analysis sieve mesh size 90 µm▪ Ø = 200 mm▪ Height: 50 mm</div>	<div> <small>Source: fritsch.de</small></div>
1001008421	Analysis sieve mesh size 112 µm	\$ 148.-
	<div>Add-On for Basic Sieve Station (1001008407)<ul style="list-style-type: none">▪ Analysis sieve mesh size 112 µm▪ Ø = 200 mm▪ Height: 50 mm</div>	<div> <small>Source: fritsch.de</small></div>
1001008423	Clamping lid Plexiglas	\$ 386.-
	<div>Add-On for Basic Sieve Station (1001008407)<ul style="list-style-type: none">▪ Window material: Plexiglas▪ Ø = 200 mm</div>	<div> <small>Source: fritsch.de</small></div>
1001008422	Sieve pan	\$ 107.-
	<div>Add-On for Basic Sieve Station (1001008407)<ul style="list-style-type: none">▪ For dry sieving with test sieves 200 mm diameter▪ Ø = 200 mm▪ Height: 50 mm</div>	<div> <small>Source: fritsch.de</small></div>
1001008424	Big Sieve Station	\$ 85,540.-

Vibratory Sieve Shaker

- Diameter sieve platform Ø = 400 mm
- Ultrasonic generator for better throughput rates
- ATEX-zones 20, 21 and 22

Included accessories

- Clamping lid Ø = 400 mm
- Analysis sieve mesh size 90 µm Ø = 400 mm
- Analysis sieve mesh size 63 µm Ø = 400 mm

Technical informal

- Voltage: 400 V (3Ph + N + PE)
- Noise level: 65 dB
- Power consumption: 1.5 kW



1001007826	Aconity <i>SIEVE</i>	\$ 26,845.-
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Ultrasonic Sieve station

- Total sieve area 200 x 535 mm
- Adjustable flow of material
- Ultrasonic generator with frequency modulation for high throughput rates with low noise generation
- Easy changing of sieve screens
- Easy cleaning of components for fast material changes

Accessories:

- One sieve screen with 25 / 63 / 90 µm mesh size
- All powder connections with KF40 butterfly valves

Technical Specs:

- Voltage 230V (1Ph+N+PE)
- Noise level: < 60 dB
- Powder throughput for aluminum powder: 100 kg/h (25-63µm) with 90 µm Mesh



1001009757	Aconity <i>SIEVE</i> Mounting Frame for Powder Containers	\$ 1,530.-
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Add-On for Aconity*SIEVE* Basis Module (1001007826)

- Frame for mounting Aconity3D 25L and 3.6L Powder Containers (3.6L: additional adaptor required)
- Installed on AconitySIEVE Basic Version without reconstruction

1001009763	Aconity <i>SIEVE</i> Mounting Adaptor for 4L Container	\$ 420.-
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Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Adaptor required for placement of 4L Powder Container in Mounting Frame
- Spring mechanism for fall and rotation protection



1001007827 Aconity SIEVE - Inertization module

\$ 13,730.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Touchscreen controlled PLC for variable sieving cycles (amplitude / time)
- Inertization with argon 4.6 / nitrogen for sieving of reactive materials such as Titanium or Magnesium
- Adjustable residual oxygen content of min. 500 ppm
- Inert gas consumption of < 5 l/min during process

1001009592 Powder Container 25L

€ 1,275.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Capacity: 25 l
- Metal housing
- KF40-Flange with Butterfly Valve
- 4 Connectors for Inertization or vacuum drying



1001009599 Wheelboard for 25L Powder Container, Steel

\$ 205.-

Add-On for Powder Container 25L (1001009592)



1001008440 Powder Container 4L

\$ 336.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Capacity: 4 l
- Metal housing
- KF40-Flange (Butterfly Valve optional)



1001009767 Butterfly Valve for KF40 Flange

\$ 235.-

Add-On for Powder Container 3.6L (1001009758)

- Gas- and powder tight sealing of container



1001009759 Aconity SIEVE Tubing Inlet

\$ 84.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Flexible Tubing for connecting AconitySIEVE and powder container (inlet side, length 70 mm)

1001009761 AconitySIEVE Tubing Outlet 25L \$ 93.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Flexible Tubing for connecting AconitySIEVE and 25L powder container (outlet side, length 210 mm)
- KF40 flange on both ends

1001009760 AconitySIEVE Tubing Outlet 3.6L \$ 95.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Flexible Tubing for connecting AconitySIEVE and 3.6L powder container (outlet side, length 290 mm)
- KF40 flange on both ends

1001009762 AconitySIEVE Tubing Outlet Oversize 3.6L \$ 102.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Flexible Tubing for connecting AconitySIEVE oversize outlet and 3.6L powder container (length 580 mm)
- KF40 flange on both ends

1001009220 AconitySIEVE - Sieve 25 µm \$ 870.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Analysis sieve mesh size 25 µm

1001009221 AconitySIEVE - Sieve 38 µm \$ 736.-

Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Analysis sieve mesh size 38 µm

1001009222 AconitySIEVE - Sieve 63 µm \$ 624.-



Add-On for Aconity **SIEVE** Basis Module (1001007826)

- Analysis sieve mesh size 63 µm


1001009223 AconitySIEVE - Sieve 90 µm \$ 598.-

Add-On for Aconity SIEVE Basis Module (1001007826)		
▪ Analysis sieve mesh size 90 µm		
1001009224	Aconity SIEVE - Sieve 100 µm	\$ 598.-
Add-On for Aconity SIEVE Basis Module (1001007826)		
▪ Analysis sieve mesh size 100 µm		
1001009225	Aconity SIEVE - Sieve 125 µm	\$ 566.-
Add-On for Aconity SIEVE Basis Module (1001007826)		
▪ Analysis sieve mesh size 125 µm		




ACCESSORIES

Article No.	Component	Price
1001008332	Rubber gloves	\$ 14.-
Chemical resistant gloves according to EN 374		
<ul style="list-style-type: none">Material: nitrile, silicon freeSize 8Color: blue100 gloves per box		
		
1001008425	Rubber gloves	\$ 14.-
Chemical resistant gloves according to EN 374		
<ul style="list-style-type: none">Material: nitrile, silicon freeSize 9Color: blue100 gloves per box		
		

SHOVELS

Article No.	Component	Price
1001008427	Powder shovel set Shovel set for powder handling <ul style="list-style-type: none">Material: AluminumColor: Silver Including: <ul style="list-style-type: none">1x Powder Shovel 300 ml1x Powder Shovel 210 ml1x Powder Shovel 48 ml1x Powder Shovel 37 ml	\$ 30.-  <small>Source: westmark.de</small>
1001002847	Powder shovel 300 ml Shovel for powder handling <ul style="list-style-type: none">Material: AluminumVolume: 300 mlSize: 21 x 2.5 x 2.5 cm	\$ 14.-  <small>Source: westmark.de</small>
1001008432	Powder shovel 210 ml Shovel for powder handling <ul style="list-style-type: none">Material: AluminumVolume: 210 mlSize: 21 x 2.5 x 2.5 cm	\$ 10.-  <small>Source: westmark.de</small>
1001008429	Powder shovel 48 ml Shovel for powder handling <ul style="list-style-type: none">Material: AluminumVolume: 48 mlSize: 14.5 x 5.3 x 3.8 cm	\$ 6.-  <small>Source: westmark.de</small>
1001008428	Powder shovel 37 ml Shovel for powder handling <ul style="list-style-type: none">Material: AluminumVolume: 37 mlSize: 13 x 4.8 x 3.8 cm	\$ 6.-  <small>Source: westmark.de</small>

BUCKETS

Article No.	Component	Price
1001008367	Sealable bucket for powder storage small	\$ 6.-
<div><div>Tinplate bucket with hazardous goods approval</div><div><ul style="list-style-type: none">Material: TinVolume: 6 lOpening diameter: 195 mmHeight: 243 mmLock- and sealableApproved for dangerous goods according to UN RID/ADR</div><div><p>Source: nicklaus-weissblechprodukte.de</p></div></div>		
1001008368	Sealable bucket for powder storage medium	\$ 8.-
<div><div>Tinplate bucket with hazardous goods approval</div><div><ul style="list-style-type: none">Material: TinVolume: 10 lOpening diameter: 230 mmHeight: 291 mmLock- and sealableApproved for dangerous goods according to UN RID/ADR</div><div><p>Source: nicklaus-weissblechprodukte.de</p></div></div>		
1001008369	Sealable bucket for powder storage large	\$ 10.-
<div><div>Tinplate bucket with hazardous goods approval</div><div><ul style="list-style-type: none">Material: TinVolume: 30 lLock- and sealableApproved for dangerous goods according to UN RID/ADR</div><div><p>Source: nicklaus-weissblechprodukte.de</p></div></div>		

6.2 CHILLERS



For cooling of the optional preheating and laser sources above 400 W output power, as well as optical components, a cooling aggregate is necessary. We offer a powerful cooling unit, especially selected for each machine's heat output.

Article No.	Component	Price
1001005688	7 kW chiller	\$ 9,025.-
Air – Water Chiller <ul style="list-style-type: none"> 80 L water capacity 7 kW cooling capacity Voltage: <ul style="list-style-type: none"> 400 V / 3 Ph / 50 Hz 460 V / 3 Ph / 60 Hz Noise level: 70 dB Power consumption: 6,5 kW For AconityLAB, AconityMIDI, AconityMINI 		
1001008071	14 kW chiller	\$ 12,500.-
Air – Water Chiller <ul style="list-style-type: none"> 81 L water capacity 14 kW cooling capacity Voltage: <ul style="list-style-type: none"> 400 V / 3 Ph / 50 Hz 460 V / 3 Ph / 60 Hz Noise level: 70 dB Power consumption: 14 kW For AconityONE 		
1001004997	Water Treatment Kit	\$ 305.-

For 50-100l cooling water system volume.

6.3 FILTRATION

Welding fumes must be filtered from the recirculation of the inert gas atmosphere. To ensure this, a cyclone filter is built into our recirculation system. Flue gases are cleaned via a three-stage filter system. In addition, coarser particles such as welding spatters are intercepted by the cyclone and separated from the recirculation. Multiple cyclone filters can be used for different powder materials.

Article No.	Component	Price
1001010166	Cyclone filter unit - base	\$ 1,955.-
	<div>Cyclone filter unit<ul style="list-style-type: none">2 way filtration unitCoarse grain separationConsisting of:<ul style="list-style-type: none">Cyclone filter housingCoarse filter, filter class M</div>	
1001004983	Fine filter unit	\$ 1125.-
	<div>Add-On for Cyclone filter unit (1001010166) Consisting of:<ul style="list-style-type: none">Fine filter housingFine filter, filter class H13KF50 adapters</div>	
1001004984	Pressure sensor system	\$ 986.-
	<div>Add-On for Cyclone filter unit (1001010166) Pressure sensor set for cyclone monitoring Consisting of:<ul style="list-style-type: none">Two pressure sensorsT-piece pipe</div>	
1001008439	Container 0.4 l	\$ 216.-

Powder container for the overflow of Aconity equipment

- Capacity: 0.4 l
- Metal housing
- For Aconity**LAB**, Aconity**MIDI**, Aconity**MINI**



1001004985 Pipe elbow 90° KF40

\$ 58.-

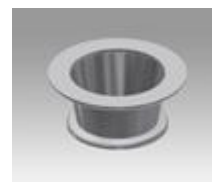
Add-On for Cyclone filter unit (1001010166)



1001004988 KF-Reducer, 50/40

\$ 54.-

Add-On for Cyclone filter unit (1001010166)



1001009767 Butterfly Valve 40

\$ 234.-

Add-On for Cyclone filter unit (1001010166)

- Butterfly Valve for gas and powder tight sealing of powder containers
- KF40 Flange on both sides



1001010561 Butterfly Valve 50

\$ 265.-

Add-On for Cyclone filter unit (1001010166)

- Butterfly Valve for gas and powder tight sealing of powder containers
- KF50 Flange on both sides



1001004987 KF-clamping ring 40

\$ 11.95

Add-On for Cyclone filter unit (1001010166)



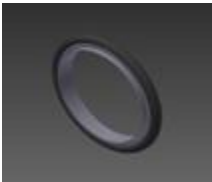
1001004986	KF-clamping ring 50	\$ 14.50
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Add-On for Cyclone filter unit (1001010166)



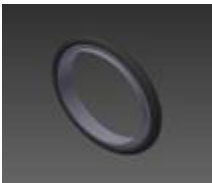
1001004989	KF-centering ring 40	\$ 9.95
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Add-On for Cyclone filter unit (1001010166)



1001004990	KF-centering ring 50	\$ 11.95
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Add-On for Cyclone filter unit (1001010166)



1001003609Flexible tubing small 50\$ 528.-

- Add-On for Cyclone filter unit (1001008435)
- Flexible PVC tubing for the fume extraction
- PVC tubes with KF50 flange connectors
 - Length cutting according to the system
 - For Aconity**LAB**, Aconity**MIDI**, Aconity**MINI**

1001009932Flexible tubing small 40\$ 505.-

- Add-On for Cyclone filter unit (1001008435)
- Flexible PVC tubing for the fume extraction
- PVC tubes with KF40 flange connectors
 - Length cutting according to the system
 - For Aconity**LAB**, Aconity**MIDI**, Aconity**MINI**

1001007604Flexible tubing large\$ 576.-





- Add-On for Cyclone filter unit (1001008435)
- Flexible PVC tubing for the fume extraction
- PVC tubes with KF50 flange connectors
 - Length cutting according to the system
 - For Aconity**ONE**

1001004991Flexible tubing custom lengthOn request

- Add-On for Cyclone filter unit (1001008435)
- Flexible PVC tubing for the fume extraction
- PVC tubes with KF50/40 flange connectors
 - Length cutting according to your wish
 - For Aconity**ONE**




6.4 POWDER HOPPERS

For flexible material changes and collection of excess powder material during the process we offer powder hoppers. However, to ensure maximum flexibility, standard DN40 flanges are used, facilitating the use of third party equipment.

Article No.	Component	Price
1001008439	Powder hopper / overflow small	\$ 216.-
	Powder container for the overflow of Aconity equipment <ul style="list-style-type: none"> Capacity: 0.4 l Metal housing For AconityLAB, AconityMIDI, AconityMINI 	
1001008440	Powder hopper / overflow middle	\$ 336.-
	Powder container for the overflow of Aconity equipment <ul style="list-style-type: none"> Capacity: 4.0 l Metal housing For AconityLAB, AconityMIDI, AconityMINI 	
1001008441	Powder hopper / overflow large	On Request
	Powder container for the overflow of Aconity equipment <ul style="list-style-type: none"> Capacity: 15 l Metal housing For AconityONE 	
1001008442	Powder reservoir AconityLAB	\$ 386.-
	Powder reservoir above the powder feed unit <ul style="list-style-type: none"> Material: Steel Capacity: 4.5 l 	

6.5 POST-PROCESSING





LBM built parts need to be cleaned from powder residue after finishing the build process. We offer different solutions for this, depending on your need and the size of your production. All scrubbers and cleaners distributed by us follow modern safety standards for hazardous waste disposal and accident prevention and offer a robust long-term solution for your post-processing needs.

Article No.	Component	Price
1001003276	Wet Scrubber small <ul style="list-style-type: none">7 l capacityPower consumption: 1100 WVoltage: 230 VSheet steel housingStainless steel containerNoise level: 60 dB	\$ 8,920.- <div> Source: ruwac.de</div>
1001008457	Industrial Dry Vacuum Cleaner ATEX <ul style="list-style-type: none">45 l capacity2.2 kW400V, 50 HzATEX-Zone 22, Group II, Category 3DDust Category HFlexibility via modular construction	\$ 7,575.- <div> Source: delfine.de</div>
1001008458	Industrial Dry Vacuum Cleaner <ul style="list-style-type: none">80 l capacityAnti-static systemAutomatic filter cleaning systemSuction pipe, metal 1 x 1 mElectronic level monitoringElectronically conductive vacuum hose	\$ 2,845.- <div> Source: kärcher.de</div>



6.6 DATA PREPARATION SOFTWARE

To utilize additive manufacturing for conventionally designed components, the CAD model has to be adapted to the requirements of 3D printing. To minimize tedious work, we offer powerful software solutions that autonomously prepare support structures, slice your parts and generate hatch fillings.

MATERIALISE


Article No.	Component	Price
1001008338	Materialise Magics STL handling software <ul style="list-style-type: none">Import and handling of STL files	\$ 10,080.-  Materialise Magics
1001008337	Materialise Magics SG + Module Add-On for Materialise Magics (1001008338) Data preparation software <ul style="list-style-type: none">Preparation of support structures	\$ 9,840.-  Materialise Magics
1001008339	Materialise Magics ILT Build Processor Add-On for Materialise Magics (1001008338) Data preparation software <ul style="list-style-type: none">Parameter variationExport to machine file	\$ 10,800.-  Materialise Magics
1001007766	Materialise Software Bundle Data preparation and STL handling software Bundle <ul style="list-style-type: none">Parameter variationExport to machine filePreparation of support structuresImport and handling of STL files Including: <ul style="list-style-type: none">Materialise MagicsMaterialise Magics ILT Build ProcessorMaterialise Magics SG + Module	\$ 30,000.-  Materialise Magics

AUTODESK

Article No.	Component	Price
1001008335	Netfabb Premium	\$ 5,360.- p.a.
	Data preparation software <ul style="list-style-type: none">Preparation of support structuresParameter variation	
1001008336	Netfabb Ultimate	\$ 16,750.- p.a.
	Data preparation software <ul style="list-style-type: none">Preparation of support structuresParameter variationTool path generationAccess to Topology optimizationAccess to PAN Process simulation	

6.7 OCCUPATIONAL SAFETY

All our machines are classified as laser class 1 with laser proof enclosure and class 4 without the enclosure. We highly recommend to always wear the proper safety equipment when working with lasers. All occupational safety equipment can directly be purchased through us, including personal safety (gloves, glasses, etc.) as well as environmental safety equipment (laser protection wall). If you are unsure what kind of protection is necessary, you can find additional information in your machine manual or contact us directly.



Article No.	Component	Price
1001009186	Laser protection goggles 1070nm	\$ 660.-
	<ul style="list-style-type: none"> Material: mineral glass with dielectric layer Filter thickness: 3.69 mm DIN EN 207 certified: 1025-1100 D LB8 + IR LB9 + M LB9Y PF CE Includes google case, cleaning cloth and spray, user manual Do not use to directly observe laser radiation 	 <p>Source: Protect Laserschutz GmbH</p>
1001009187	Laser protection wall	\$ 5,820.-
	<ul style="list-style-type: none"> Laser safety curtain with high certified protection levels for 180 – 11000 nm wavelength over the complete relevant spectral range Stable aluminum frame with foldable sides consisting of 5 velcro connected curtain elements for high modularity Overall size of connected elements 4200x2500 mm EN12254 and EN60825-4 certified 	
1001009189	Protection helmet & ventilation belt	\$ 1,850.-

- Protection against: EN 12941: mechanical and chemical dangers
- Respiratory protection system without limit on wearing time
- Blower unit with comfort belt that can be decontaminated
- Airflow indicator and calibration unit



Source: hoffmann-group.com

6.8 TOOLS AND AUXILIARY MEANS

Article No.	Component	Price
1001008024	Paper dispenser	\$ 235.-
<p>Paper roll holder / dispenser including a holder for garbage bags</p> <ul style="list-style-type: none">Material: MetalSuitable for rolls with a core of 71-73 mm diameterIncluding on roll of paper		 <p>Source: hoffman-group.com</p>
1001009190	Grease gun	\$ 115.-
<p>High quality grease gun with one hand pistol grip</p> <ul style="list-style-type: none">Light and robust aluminum casting headErgonomic no-slip pistol grip for more safetyMax. working pressure 10000 PSI/690 barCompatible with all commercially available cartridges (400 ml, 400 ml lube-shuttle, 500 ml pure cartridge)		 <p>Source: contortion.de</p>

7 SERVICE OPTIONS

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To ensure the highest possible uptime of your machine, our service is available for you and can carry out machine maintenance on short notice. Please feel free to contact us.

Article No.	Component	Price
1001002625	Separate Machine Maintenance	On Request
<p>Calculation according to expenditure in accordance with the listed hourly rates plus travelling expenditure Basis 40 h/week: Mo. – Fr. 8:30 – 17:30</p> <ul style="list-style-type: none"> Hourly rate engineer \$ 156.- Hourly rate technician \$ 138.- Travelling hour engineer \$ 138.- Travelling hour technician \$ 114.- Expenses for travelling by car per km \$ 0.85 Further transportation according to expenditure <p>Surcharges for overtime:</p> <ul style="list-style-type: none"> 1st – 2nd hour: 25 %, 3rd hour onwards: 50 % Saturdays: 50 % Sundays & holidays: 90 % 		
1001009193	Beam measurement	\$ 1,440.- + travel costs
<p>When you order this service, we will measure the caustics of your laser beam on site. We will also perform a power measurement and recalibrate your system based on this data.</p>		

7.1 SERVICEPACKS

To provide even more security for your technical and financial planning, we now offer Aconity**SERVICE**. To this end, we have put together service packages for your system, which are designed to secure your system in terms of service and maximize uptimes due to breakdowns by means of preventive parts replacement and maintenance measures.

We are pleased to be able to continue to accompany you throughout the entire life cycle of your Aconity3D system and are at your disposal with our Aconity**SERVICE**.

Your advantages with us:

- Highly qualified experts in the field of additive manufacturing and laser beam melting (LBM) processes
- Flexible and agile service tailored to your needs
- Cost reduction by optimized processes and bundled services

BASIC	SILVER	GOLD	PLATINUM
Technical Support			
Knowledge Base + Ticketsystem		+ Software Hotline	+ 2 Service Contacts
Operator & Application-Training			
Two Days	Two Days + One Day	Two + Two Days	
Not Included	Aconity Machine Test		
	Once/Year	Twice/Year	Customer-Specific Interval
Not Included	Spare Parts		
	15% Discount		30% Discount
Not Included	Self-Service-Kit		
	1 Kit (3000 h Runtime)	2 Kits (6000 h Runtime)	3 Kits (9000 h Runtime)
Not Included		Software Update	
Not Included			Modernization
One Year Warranty (min. 1 Year Runtime)		Two Year Warranty (min. 2 Years Runtime)	

Picture 1: Service concept Aconity3D GmbH

Article No.	Component	Price
	Aconity SERVICE BASIC	Included
	Scope of the package: <ul style="list-style-type: none">▪ Assembly▪ Operator & application training of two days▪ Technical support with knowledge database and ticket system▪ 1-year warranty▪ 1-year minimum term	
1001007066	Aconity SERVICE SILVER	\$ 16,200.- p.a.
	Scope of the package: <ul style="list-style-type: none">▪ Assembly▪ Operator & application training of two days + one day▪ Technical support with knowledge database and ticket system▪ 1x Equipment inspection▪ Spare parts at special conditions▪ 1x Software Update▪ 1x Self-service kit▪ 1-year warranty▪ 1-year minimum term	
1001007067	Aconity SERVICE GOLD	\$ 41,400.- p.a.

Scope of the package:

- Assembly
- Operator & application training of 2x two days per year
- Technical support with knowledge database and ticket system
- 2x Equipment inspection per year
- Spare parts at special conditions
- 1x Software Update
- 2x Self-service kit
- 2-year warranty
- 2-year minimum term

1001007068

Aconity**SERVICE** PLATINUM

\$ 59,400.- p.a.

Scope of the package:

- Assembly
- Operator & application training of 2x two days per year
- Technical support with knowledge database and ticket system
- Two direct support contacts
- Equipment inspection in customer-specific intervals
- 30% off spare parts
- 1x Software update
- 3x Self-service kits
- 2-year warranty
- 2-year minimum term

7.2 TRAININGS & CONSULTING

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Besides in-house trainings at your place and hands on workshops in our facilities, we offer a holistic approach of consulting. Beginning with the identification of your individual business model we support you with analysis of life cycle costs and redesign of AM parts for maximum technology utilization. If you want to step in even further, we will help integrate customized AM Systems in your present process chain, keeping your production up to date.



For training purposes, we offer a basic 2-day workshop, as well as a more elaborated 4-day workshop, covering the whole range from raw material, cost structure, design guidelines, data preparation, machine preparation to quality assurance.

Adapting our comprehensive training content, we do also provide tailored workshops towards specific customer needs. For registration and planning of the training please contact us.

Consulting contact: + 49 02407 552 92 11 / consulting@aconity3d.com

Article No.	Component	Price
	Strategic consulting for industrial application	\$ 1,440.- per day + travel costs
	Highly adaptable consulting tailored to your customer needs. Topics include: <ul style="list-style-type: none"> ▪ Incorporating the AM process into your specific production line ▪ Identification of customer specific business models ▪ Part screening for AM production ▪ Life-cycle and cost structure analysis ▪ Establishment of AM process chain 	
	Consulting for production-oriented design for AM	\$ 1,440.- per day + travel costs

Highly adaptable consulting tailored to your customer needs.
Topics include:

- Design reviews
- Process analysis
- Case study

2-Day Basic Workshop	\$ 1,800.- per person
<p>State of the Art Additive Manufacturing</p> <ul style="list-style-type: none">▪ Overview and in-depth view of AM technologies▪ Capabilities & limitations of AM <p>Materials for AM</p> <ul style="list-style-type: none">▪ In-depth view of metals and their AM applications▪ In-depth view of polymers and their characteristics <p>Insight into current research projects</p> <ul style="list-style-type: none">▪ Guided tour Aconity3D <p>AM design rules</p> <ul style="list-style-type: none">▪ Overview of software landscape / CAX tools▪ Topology optimization <p>In-depth view of process parameters</p> <ul style="list-style-type: none">▪ Correlation between design and process parameters <p>Redesign for AM</p> <ul style="list-style-type: none">▪ Overview of most important design rules <p>Hands-on Design Study</p> <ul style="list-style-type: none">▪ Applying design rules on exemplified AM parts	
4-Day Basic Workshop	\$ 3,600.- per person

2-Day Basic Workshop + Interaction of Design and Costs

- Understanding main cost drivers for AM

Hands-on Data Preparation

- STL Manipulation / Repair
- Lattice Structure
- Support Structures
- Creating Machine File

Post Processing / Quality Assurance

- Overview of post processing possibilities
- Hands-on training 3D scanning system

Long term view

- Vision for future trends and aspects in AM

Training summary

7.3 MATERIAL DEVELOPMENT

The powder material plays a very important role in the quality of 3D-printed components. To ensure your components will be of the highest quality, Aconity3D offers quality insurance of your powder material, including a quality report.

We are always researching new materials to improve the quality and application range of the AM process. If you are interested in using our expertise for your material needs, please feel free to contact us.



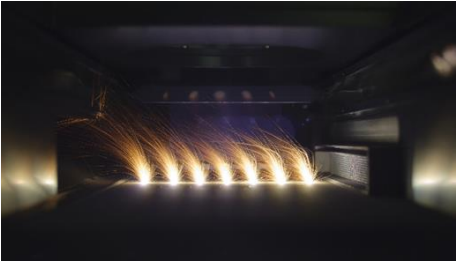
Consulting contact: + 49 02407 552 92 11 / consulting@aconity3d.com

Article No.	Component	Price
	Material Development	On Request
	<div>Take advantage of our long-term cooperations with powder suppliers<ul style="list-style-type: none">Procurement of custom powder materialsBenchmarking of powder samplesFeasibility studiesCooperative development of new powder materials<ul style="list-style-type: none">Feasibility studiesExtensive testingAdaptation of machine parameters</div>	

7.4 TESTING FACILITY

Aconity3D offers testing facilities, equipped with our highly modular machines. This allows the execution of demanding customer requests related to material and application.

In addition, you can rent machine time on-site to take your first steps in additive manufacturing and support a sustainable integration of the LBM process in your process chain.



Consulting contact: + 49 02407 552 92 11 / consulting@aconity3d.com

Article No.	Component	Price
	Aconity RENT	\$ 1,440.- per day
	Guided work on our laboratory systems <ul style="list-style-type: none">▪ Gain technological experience on-site▪ Convince yourself of the capabilities of our equipment	
	Aconity TESTING	On Request
	Make use of our know-how for: <ul style="list-style-type: none">▪ Extensive testing of your Materials▪ Process development towards your specific needs▪ Optimizing your designs by exploiting AM capabilities	

7.5 JOB SHOP

We at Aconity3D see ourselves as a complete system provider and offer contract manufacturing of 3D-printed metal parts in addition to our machines.

Make use of our expert know-how in additive manufacturing including process parameters and different materials. Our experienced engineers will support our customers in developing an AM-suitable component design and make sure the customers fully realize the potential of additive manufacturing for their production needs.

Below you can find some materials and build spaces available. Please contact us for further consultation concerning your individual manufacturing needs



Job Shop contact: + 49 02407 552 92 11 / consulting@aconity3d.com

Article No.	Component	Price
	Aconity JOBSHOP	On Request
	Manufacturing of components using LBM.	
	Build spaces:	
	<ul style="list-style-type: none">▪ Ø 395 mm x H 300 mm (without heating)▪ Ø 200 mm x H 300 mm (without heating)▪ Ø 170 mm x H 200 mm▪ Ø 50 mm x H 170 mm	
	Materials:	
	<ul style="list-style-type: none">▪ Aluminum (AlSi10Mg)▪ Stainless Steel (1.4404)▪ Titanium (TiAL6V4)▪ Other materials upon consultation.	
	Options:	
	<ul style="list-style-type: none">▪ High-Temperature Preheating (200 – 1200 °C)	
	Spot sizes:	
	<ul style="list-style-type: none">▪ 50 – 500 µm	