

Review TCT- Asia Mai 2024

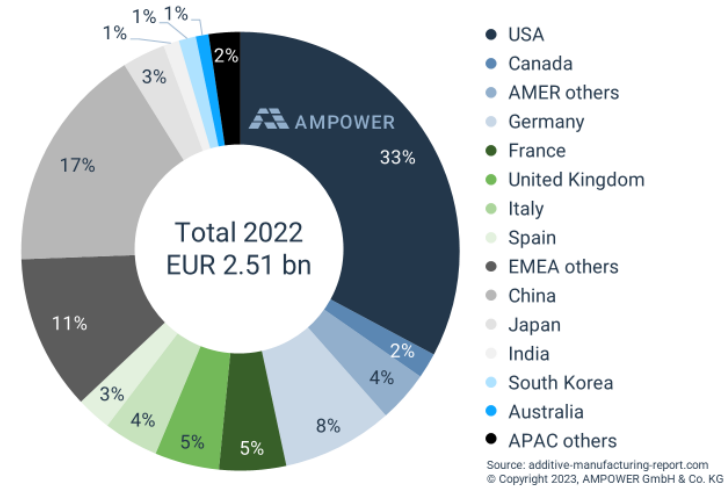
Growing competition (also) in
the Western markets



The USA dominates the global AM market

- US strongest market with China second and Germany third.
- Polymer market still dominated by US firms and Germany has a strong metal supply chain.
- Chinese market closing more and more for western suppliers.
- Chinese machine quality increased and is putting pressure on western machine makers, especially in Europe.

Regional distribution of metal and polymer system sales revenue 2022



3 days Show,
370 Exhibitors,
26.000 Visitors



亚洲3D打印、增材制造展览 TCT ASIA 2024

展位图 FLOOR PLAN

Hall 8.1



Hall 7.1



推荐展商
Recommendations

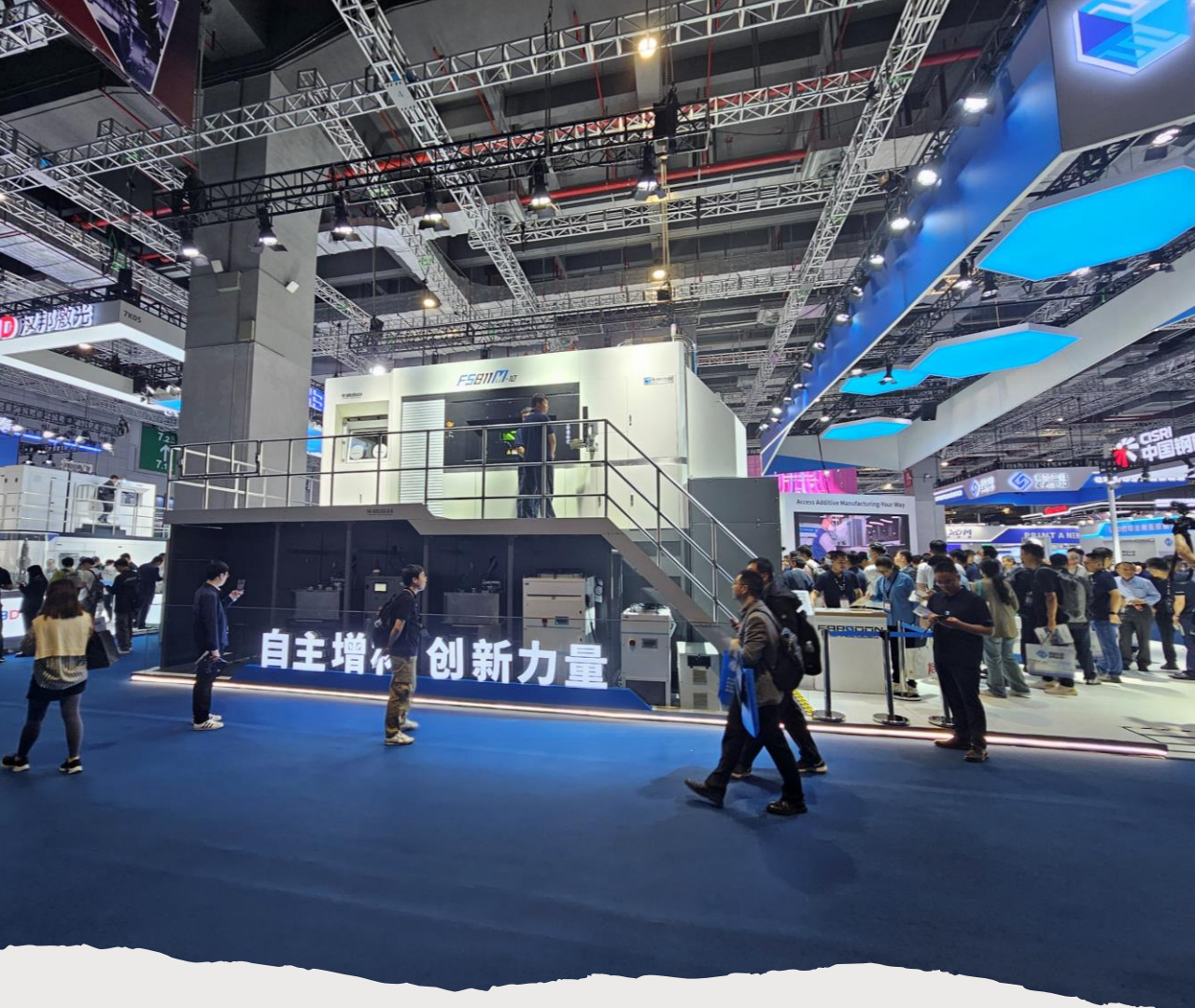
- 3D-TECH
- phrozen
- PANOSPACE
- CreastBot

展商名录 (按展位号排序) EXHIBITOR LIST

展位号	展商名称	展位号	展商名称	展位号	展商名称	展位号	展商名称
8.101	3D-TECH	8.101	3D-TECH	8.101	3D-TECH	8.101	3D-TECH
8.102	phrozen	8.102	phrozen	8.102	phrozen	8.102	phrozen
8.103	PANOSPACE	8.103	PANOSPACE	8.103	PANOSPACE	8.103	PANOSPACE
8.104	CreastBot	8.104	CreastBot	8.104	CreastBot	8.104	CreastBot
8.105	3D-TECH	8.105	3D-TECH	8.105	3D-TECH	8.105	3D-TECH
8.106	phrozen	8.106	phrozen	8.106	phrozen	8.106	phrozen
8.107	PANOSPACE	8.107	PANOSPACE	8.107	PANOSPACE	8.107	PANOSPACE
8.108	CreastBot	8.108	CreastBot	8.108	CreastBot	8.108	CreastBot
8.109	3D-TECH	8.109	3D-TECH	8.109	3D-TECH	8.109	3D-TECH
8.110	phrozen	8.110	phrozen	8.110	phrozen	8.110	phrozen
8.111	PANOSPACE	8.111	PANOSPACE	8.111	PANOSPACE	8.111	PANOSPACE
8.112	CreastBot	8.112	CreastBot	8.112	CreastBot	8.112	CreastBot
8.113	3D-TECH	8.113	3D-TECH	8.113	3D-TECH	8.113	3D-TECH
8.114	phrozen	8.114	phrozen	8.114	phrozen	8.114	phrozen
8.115	PANOSPACE	8.115	PANOSPACE	8.115	PANOSPACE	8.115	PANOSPACE
8.116	CreastBot	8.116	CreastBot	8.116	CreastBot	8.116	CreastBot
8.117	3D-TECH	8.117	3D-TECH	8.117	3D-TECH	8.117	3D-TECH
8.118	phrozen	8.118	phrozen	8.118	phrozen	8.118	phrozen
8.119	PANOSPACE	8.119	PANOSPACE	8.119	PANOSPACE	8.119	PANOSPACE
8.120	CreastBot	8.120	CreastBot	8.120	CreastBot	8.120	CreastBot

01.10.2024

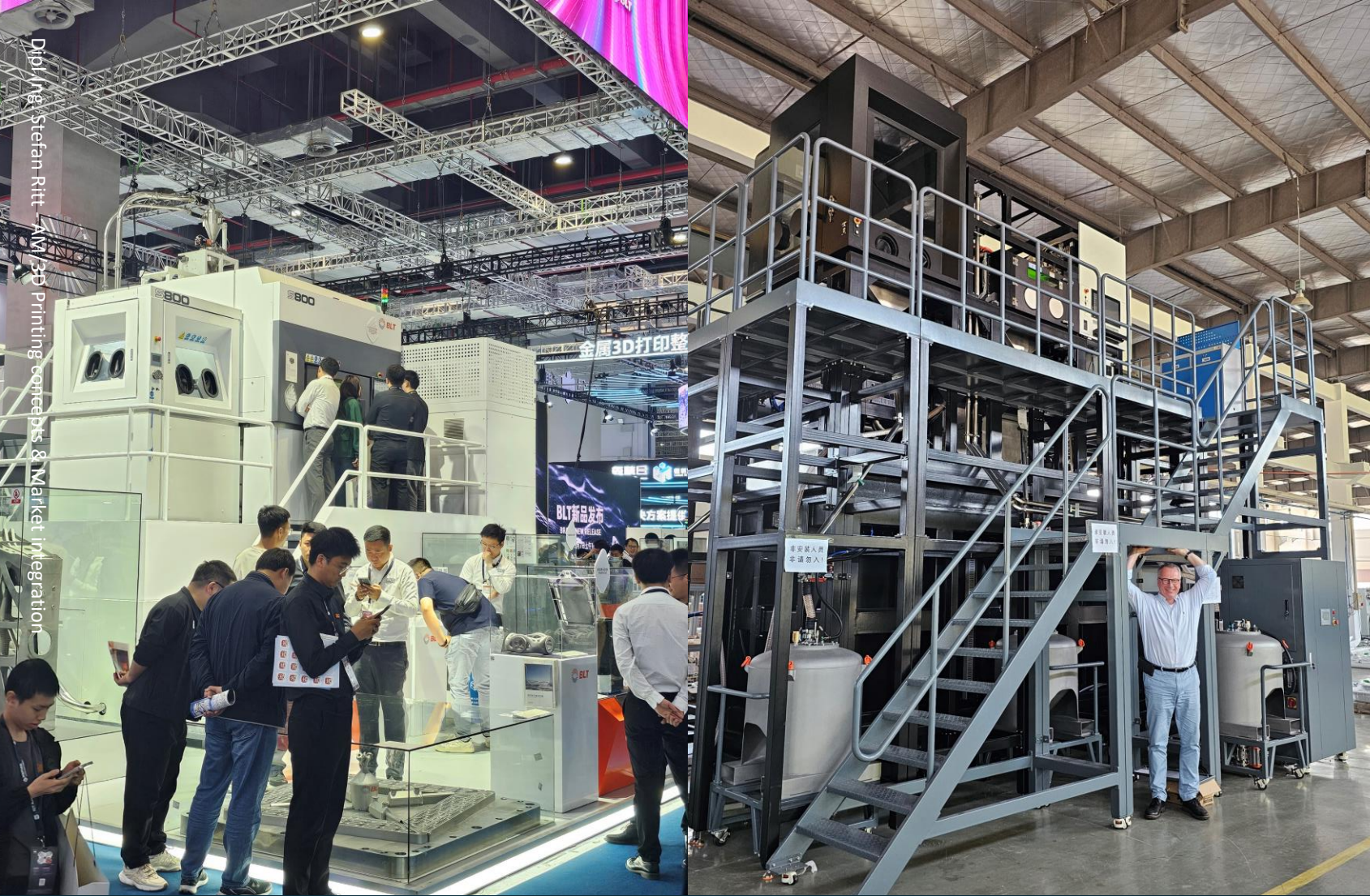
Dipl.Ing. Stefan Ritt - AM/3D Printing concepts & Market integration



Clear Focus on big PBF(SLM) Metal machines

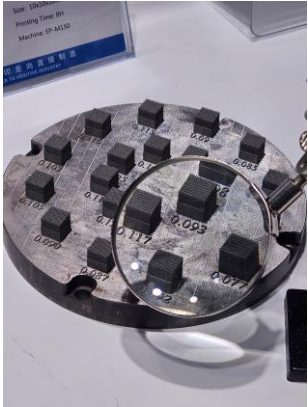
01.10.2024

Dipl.Ing. Stefan Ritt - AM/3D Printing concepts & Market integration



AmPro SP 1200 und BLT S 800

Examples of build part quality



Wolfram ca. 50x50mm!



Ti64 Implants

CHINA- behind the „COVID-CURTAIN“

BLT-Xian



Farsoon-Changsa



E-Plus 3D-Hangzhou



Shining 3D - Hangzhou



AmPro innovations-
Suzhou+Melbourne



Active Cooperation with the West (sorry for the German press releases)

Themen > Dienstleistungen > Metall > LPBF - Laser Powder Bed Fusion

Toolcraft FS422M-4: Additive Fertigung mit Vierfachlaser

Toolcraft kooperiert mit Farsoon bei Laser-Pulverbettenschmelzsystemen (L-PBF) und produziert mit einer Farsoon FS422M-4 Serienteile. Die beiden Unternehmen haben eine Entwicklungspartnerschaft zur Optimierung der Hard- und Software des Farsoon FS422M-4-Systems und zur Qualitätssicherung bei der Produktion von Metallteilen begonnen.

10.05.2023 · Toolcraft · Teilen: · · Zur Merkliste

Die FS422M-4 von Farsoon arbeitet mit vier Laser-Scanningsystemen für ein Maximum an Produktivität.
(Bild: Toolcraft AG)

Aerospace-Industrie treibt Entwicklung von Metall-AM an

Im Jahr 2023 plant China fast siebzig Raumfahrtstarts, von denen mehr als sechzig von der China Association for Science and Technology (CAST) geplant sind. Die chinesische Luft- und Raumfahrtindustrie treibt somit die Entwicklung des 3D-Metalldrucks voran, wobei Metall-AM-Teile von der Validierungsphase zur Serienproduktion übergehen. Einer der Profiteure ist das Unternehmen **BLT**, das derzeit mit einem Marktwert von etwa 2,53 Milliarden US-Dollar laut eigenen Angaben weltweit führend unter den börsennotierten AM-Unternehmen ist. Zu den Kunden von BLT gehören u.a. Airbus, Audi, AECC, COMAC und HUAWEI.
12.06.2024

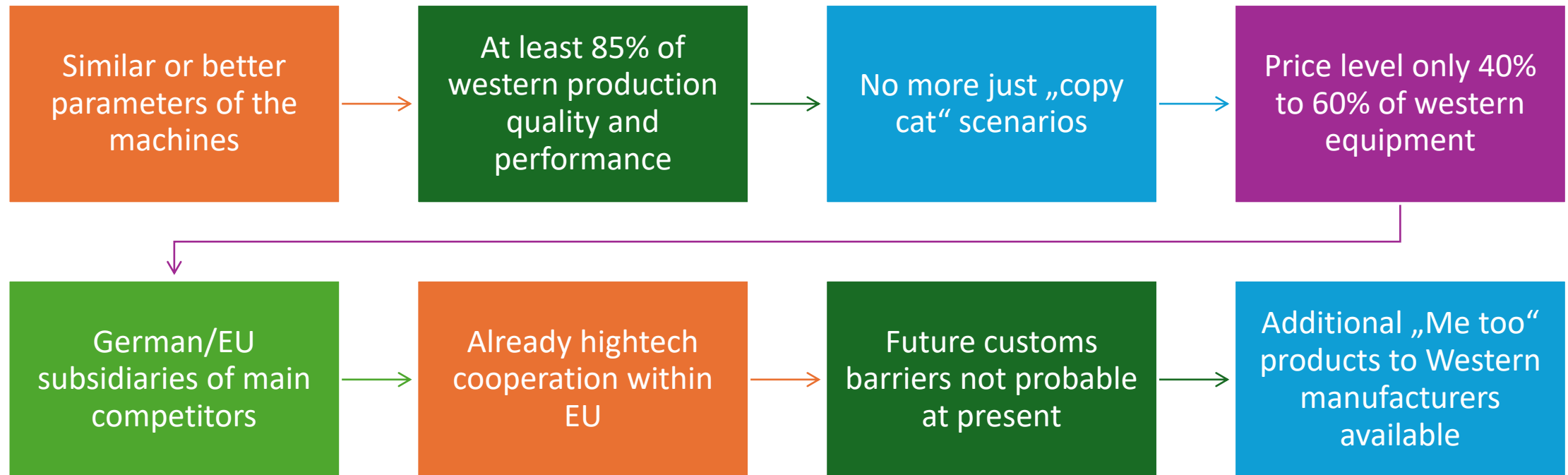
Dipl.Ing. Stefan Ritt - AM/3D Printing
concepts & Market integration

No.	Company	WEB	Founded	Location	German office	US-office	EU installations	Aerospace certified	No. of models	Model	Build volume X mm	Build volume Y mm	Build volume Z mm	Lasers max. W	Footprint mm	Weight Kg	Price estimate € Formnext 2024
1	E-Plus-3D	eplus3d.com	2014	Hangzhou	Ludwigsburg	Houston	Yes	No	15	EP-M400	400	400	450	4 x 1000	3825x1650x2780	5000	650.000 Exhibitor
2	BLT	xa-blt.com	2011	Xian	Frankfurt	no, sales reps	Yes	Yes	12	BLT-S400	400	300	400	6 x 500	3900x1200x2200	3200	750.000 Exhibitor
3	Farsoon	farsoon.com	2009	Hunan	Stuttgart	Austin	Yes	Yes	11	FS350M	433	358	400	4 x 500	3260x1850x2300	3300	500.000 Exhibitor
4	AmPro	amprogroup.com.au	2015	Suzhou+Melbourne	no	no, sales reps	no	Yes	7	SP401	400	400	500	4 x 500	4450x5200x4050	2500	600.000 Exhibitor
5	HE3DP	hb3dp.com	2007	Shanghai+Guangdong	Munich	no, sales reps	no	no	8	HBD 350	325	325	400	4 x 500	?	?	400.000 Exhibitor
6	Avimetal	avimetalam.com	2015	Beijing	no	no, sales reps	no	no	6	MT400M	400	325	400	6 x 500	3100x1400x2200	3200	?
7	ADDIREEN 3D	gongdalaser.com	2008	Shenzen	no	no	no	no	2	XH-M350G	350	350	500	1 x 1000	3050x1750x2850	?	?
8	UnionTech	uniontech3d.com	2003	Shanghai	Frankfurt	Houston	no	no	2	Mues430	430	340	400	3 x 500	2950x1350x2200	2200	?
9	Raycham	raycham.com	2013	Nanjing	no	no	no	no	5	RS320D	320	320	420	2 x 500	?	?	?
10	XDM	xdm3d.com	2017	Suzhou	no	no	Yes	no	7	XDM 300	300	300	400	2 x 500	1990x1897x2343	2300	300.000
11	Resilience	rongzhi.info	2013	Suzhou	no	no	no	no	10	R420M2H	420	330	450	2 x 500	2650x1450x2670	2800	?
12	Kings 3D	kings3dprinter.com	2007	Shenzen	no	no	no	no	9	M450 dual	425	425	450	2 x 500	2800x1100x2300	?	350.000
13	LIM-LASER	lim-laser.com	2019	Tianjin	no	no	Yes	no	7	LIM-X400	400	450	550	4 x 1000	4900x1500x3150	4000	500.000
14	Haitian	haitian.com	?	Ningbo	no	no	no	no	4	C400M	400	400	430	4 x 500	2800x1300x2190	3000	?
15	Tianhong Laser	tianhonglaser.com	2001	Suzhou	no	no	no	no	5	TH-M400	406	406	450	4 x 500	3440x1270x2500	4200	?
16	DEDIBOT	dedibot.com	?	Hangzhou	no	no	no	no	3	DLM-500P	500	500	350	4 x 500	2270x2290x2320	4000	?

The 16 main competitors from approx. 60 companies available for standard midsize build platforms!

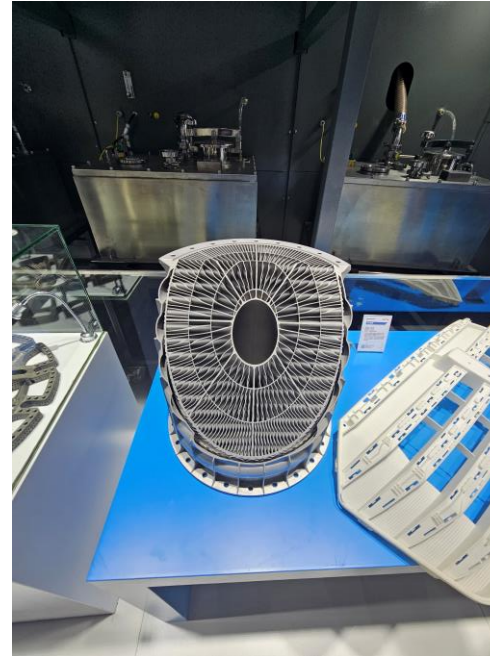
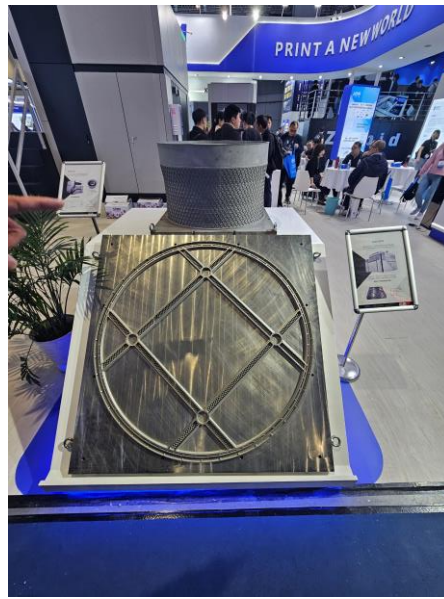


Opportunities and Threats for the market



Large scale PBF-SLM machines available

Country	Manufact.	Model	X	Y	Z	Lasers
China	E-Plus 3D	EP-M2050	2050mm	2050mm	1100/2000mm	64 x 700W
China	BLT	BLT-S 1500	1500mm	1500mm	1200mm	26 x 500W
China	Farsoon	FS811M	840mm	840mm	960mm	12 x 500W
China-AUS	Ampro innov.	SP1200	1200mm	600mm	1500mm	12 x 500W
China	HBD	1000Pro	660mm	660mm	1250mm	8 x 1000W
GER-US	SLM	NXG XII 600	600mm	600mm	600mm(1500)	12 x 1000W
GER-US	AMCM	M4K	450mm	450mm	1000mm	4 x 1000W
GER-US	Colibrium add.	X-Line 2000 R	800mm	400mm	500mm	2 x 1000W



Recent podcast and publication about China

- <https://emag-xtechnik.unipush.de/em/38899e-592700/index.php#1>



- <https://3dprint.com/309787/3d-pod-episode-203-tct-asia-and-3d-printing-in-china-with-stefan-ritt/>



Stefan Ritt

+4916091171960(mobile)
stefanritt@yahoo.com



Background

<https://www.linkedin.com/in/stefan-ritt/>



Stefan Ritt comes from Lübeck in the North of Germany. After his time in the German army he got a master's degree in physics engineering from the Technical University of Lübeck.

His professional career has always taken him into companies with a focus on international markets and increasingly into leading management functions.

After technical development of devices and head of quality assurance for a manufacturer of professional beverage and vending machines, Mr. Ritt has worked in the EU-wide product management of an electronics manufacturer.

For SLM Solutions Group AG he did build up international sales and marketing for more than 20 years and also did participate in the very successful IPO in 2014.

He then did found the European sales and service office for an Australian company. 3D printing and additive manufacturing were and are therefore his focus of knowledge and work for 30 years in now more than 60 countries.

He is head of the international committee of the world's largest user association for 3D printing, the USA-based AMUG, a member of the EPMA-AM Board for Powder Metallurgy in Paris, and actively promoted technical standardization in this field.

In this function he has also acted as DIN's contact person for aerospace standardization in China for several years.

In addition to regular guest lectures on Supply Chain Management at the TH-Lübeck in the international department of Economics and mentoring start-ups in an accelerator, Stefan Ritt got involved at an early stage in the German Aerospace Industry association (BDLI).

Likewise, Mr. Ritt already founded four start-ups of his own.



Expertise

- Growth Strategy and Transformation
- Organizational Transformation
- Educational transformation
- Strategic Implementation
- Additive-Digital Manufacturing
- Digital Transformation
- Business Case Creation / Roadmap Design
- Precision Manufacturing



Relevant Publications

Additive Manufacturing:

<https://www.european-business.com/portraits/slm-solutions-group-ag/true-child-of-digitization>

<https://fip.utwente.nl/article/sixth-issue/sixth-issue-fehrmann/>


Contributions to Wohler's report

Assistance with AM-Power report

Developed Roadmap to AM in Australia

Organizations

- AMUG-USA, chair of international committee
- EPMA, Board member AM-board
- German-Emirati center, special product advisor
- Addimap.com, brand ambassador
- Technical university Lübeck, lecturer
- EU-commission, technical 3D printing advisor
- Gateway49.com, startup mentor
- Cannobe.com, founder

A close-up, low-angle shot of a 3D printed lattice structure. The structure consists of many small, interconnected, diamond-shaped or rectangular cells, creating a complex, porous mesh. The lighting is soft and directional, highlighting the texture and depth of the printed material. The background is blurred, showing more of the same structure extending into the distance.

Thank you for
Listening!