

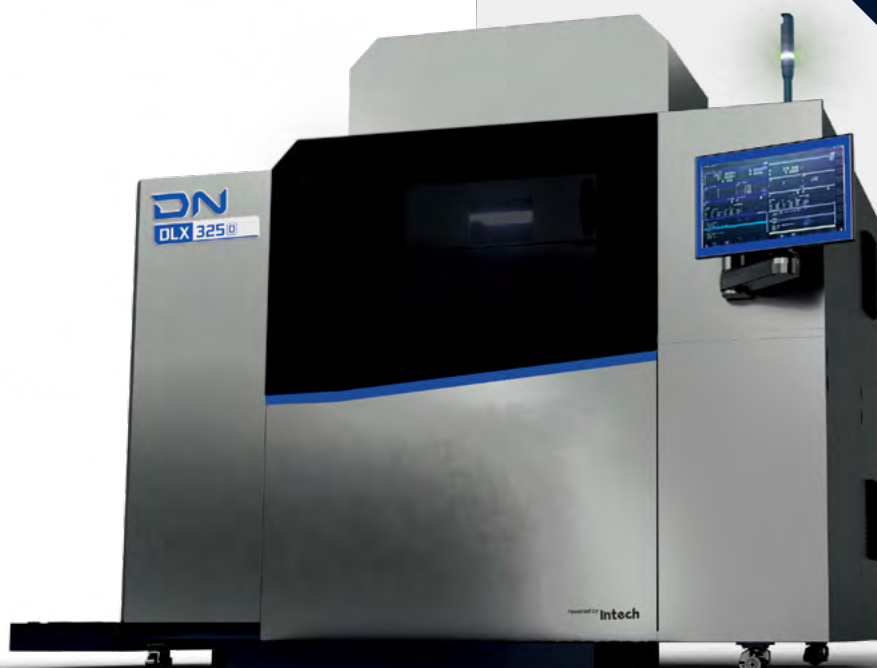
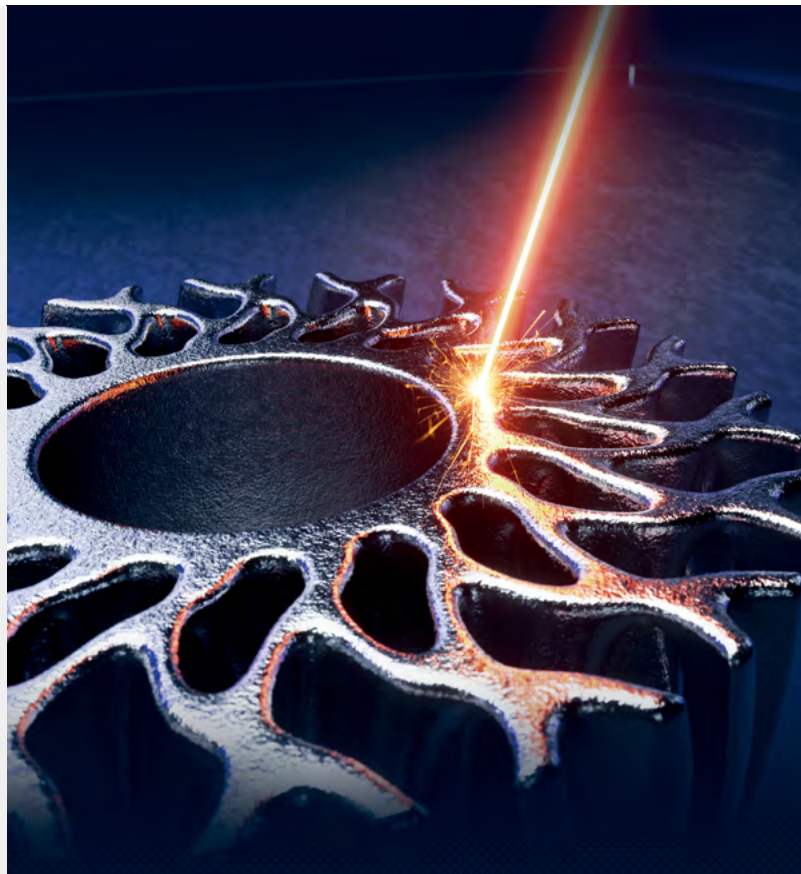
ADDITIVE MANUFACTURING SOLUTIONS

DLX

DLX 150

DLX 325

DLX 450



END TO END SOLUTION

1 SOLUTION

End to End solution from single source
through Machine + Automation
+ Post Processing.

2 SOFTWARE

End to end software portfolio with
6 consistent products for every step
of the process from a single source.

AMExplorer

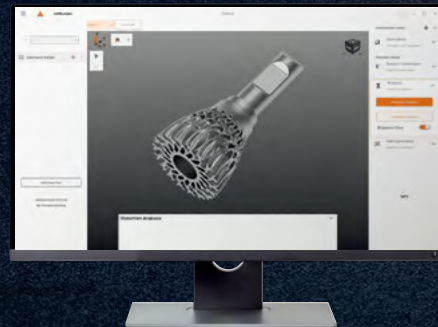
AMCosting

AMSimulation

AMBuilder

AMBuildSmart

AMOptoMet



SPEED

Transitioning towards
end to end single source
solution provider.

A dark blue world map is shown in the background. Several white dots are placed on the map, indicating global locations. A bright yellow laser line originates from the top left corner and extends diagonally across the page.

SCALE

Additive Technology
Centers (ASC) worldwide.

3

SERVICES

Enable R&D to identify/explore additive parts, redesign for additive manufacturing and support production ramp up.

4

SUPPORT

Additive Solution Centers (ASC) in all major regions as well as remote locations to support customers anywhere across the globe.

360°
OFFERING

You step into a new world of manufacturing and we support you every step of the way with a comprehensive 360° solution offering.

Wonjong Kim, CEO DN Solutions

“*The future
is hybrid.*”

Wonjong Kim, CEO DN Solutions

7 ADVANTAGES OF ADDITIVE TECHNOLOGY

1

PART CONSOLIDATION

Reduced assemblies
by part integration

2

DESIGN FREEDOM

Conformal cooling channels impossible
to manufacture subtractively

3

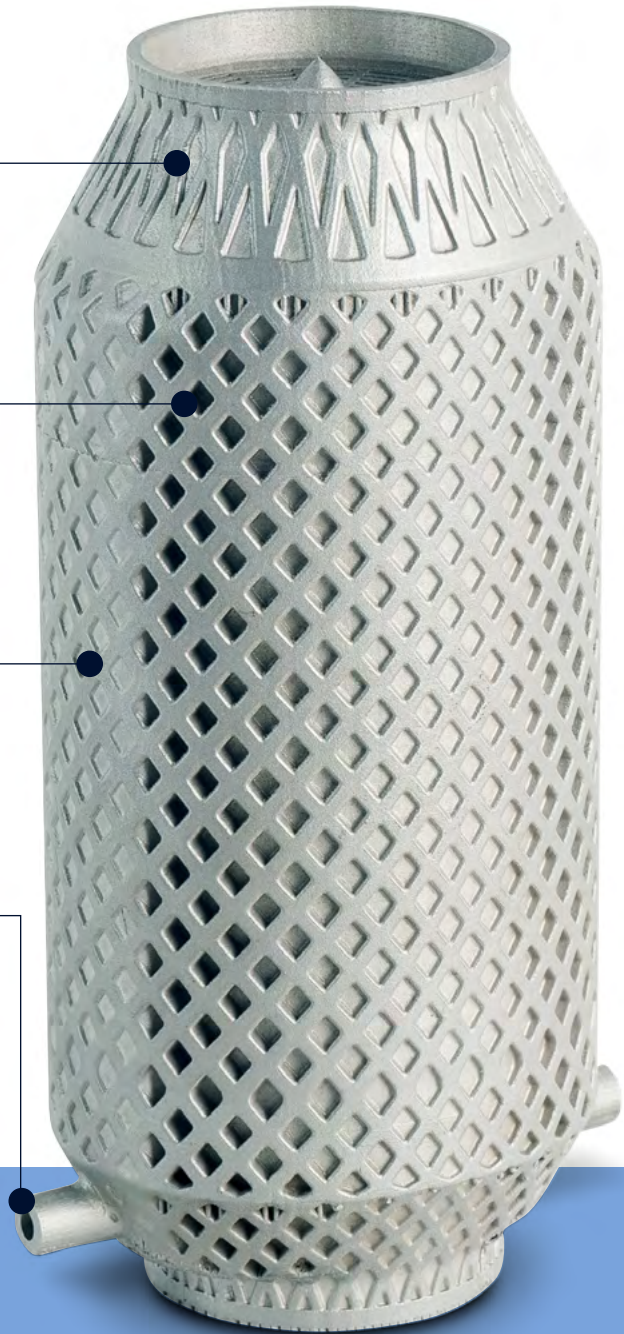
LIGHTWEIGHT DESIGN

Reduce tooling wear and
optimize use of material

4

FUNCTIONAL INTEGRATION

Lattice Structures



OVERALL BENEFITS OF ADDITIVE MANUFACTURING

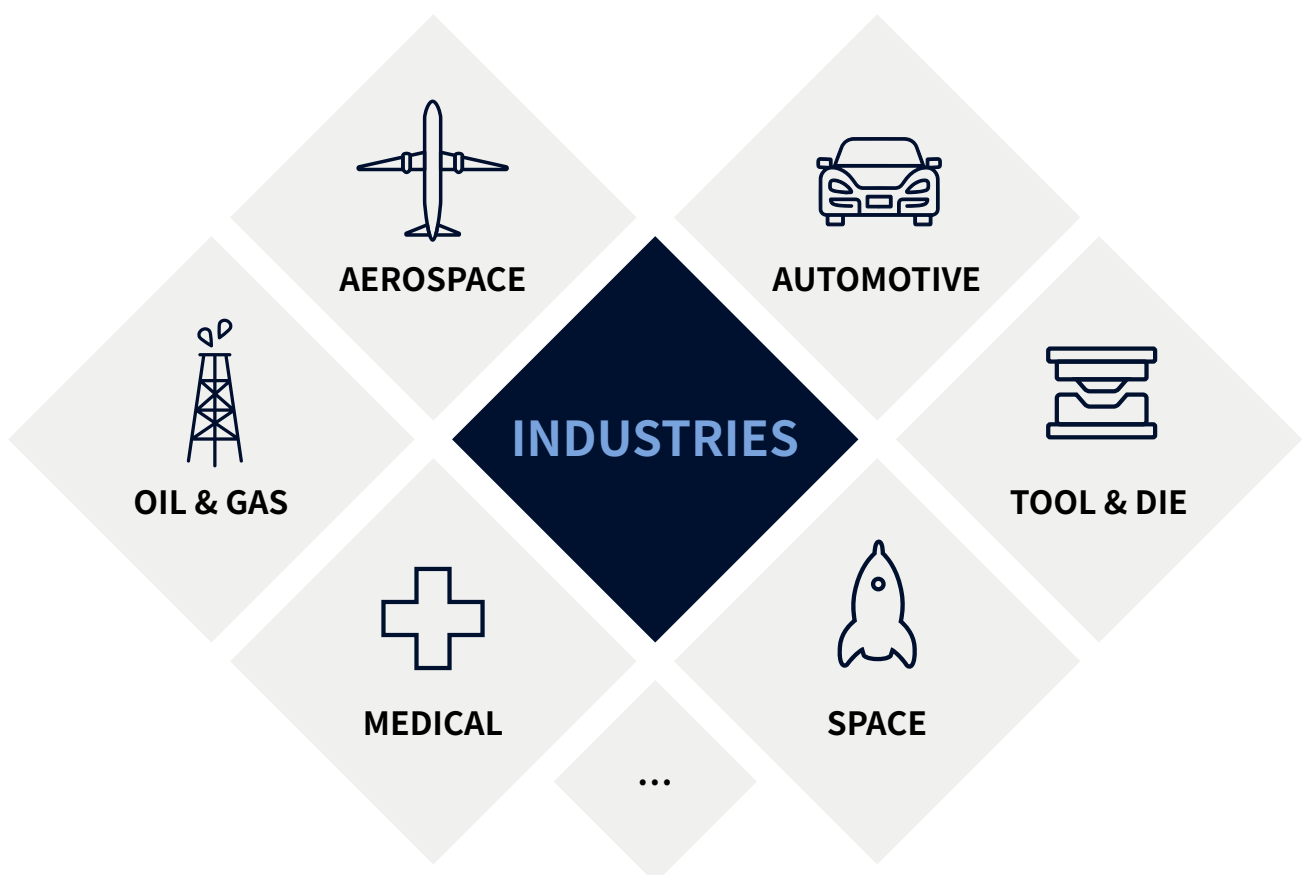
- 5. Reduced time to market:** Functional prototypes and fast iteration
- 6. Supply chain enhancement:** Reduced inventory and just-in-time production
- 7. Mass customization:** Multiple designs produced without tooling changeovers

- ◆ Aerospace Industry, Heat Exchanger
- ◆ Material: AlSi10Mg
- ◆ Size: 102 × 161 × 319 mm

KEY TECHNOLOGY FOR FUTURE INDUSTRIES

Additive Manufacturing is decisive for future industries as it enables unparalleled flexibility, speed, and customization in production and allows for complex geometries. This capability is transformative for sectors where lightweight design, mass customization and performance increase within limited space are key.

By reducing material waste and enabling localized production, Additive Manufacturing also supports the transformation to sustainable practices, positioning it as a **key technology for innovation** in a wide range of industries.



DN SOLUTIONS IS
**THE GAME CHANGER TO
PUSH THE BOUNDARIES OF
ADVANCED MANUFACTURING.**

17%
**PERFORMANCE
INCREASE**

- ◆ Automotive, Heat Sink
- ◆ Material: AlSi10Mg
- ◆ Size: $35 \times 35 \times 78$ mm



52%
LESS WEIGHT
76%
**LESS POWER
CONSUMPTION**

- ◆ Consumer Electronics,
UAV Rectifier Heat Sink
- ◆ Material: AlSi10Mg
- ◆ Size: $94 \times 54 \times 21$ mm



70%
**LESS PRO-
DUCTION TIME**
50%
COST CUT

- ◆ Automotive, Tyre Mould
- ◆ Material: SS316L
- ◆ Size: $172 \times 111 \times 113$ mm



16.5%
LESS WEIGHT
29%
**INCREASED COOLING
PERFORMANCE**

- ◆ Aviation, Heat Exchanger
- ◆ Material: AlSi10Mg
- ◆ Size: $\varnothing 120 \times 143$ mm

END TO END SOLUTION

ALL FROM A SINGLE SOURCE



END TO END SOLUTION

APPLICATION
R&D



ADDITIVE MANUFACTURING
PRODUCTION

6 SOFTWARE SOLUTIONS FOR A COMPLETE

AMExplorer

AMBuilder

AMCosting

ESTABLISH A ROBUST,
END TO END PROCESS TO MAXIMIZE
PRODUCTIVITY AND QUALITY.



► COMPLETE MACHINE RANGE
OFFERED BY DN SOLUTIONS

POST PROCESSING
PRODUCTION

FINISHED PART
QUALITY

AND CONSISTENT DIGITAL PROCESS CHAIN

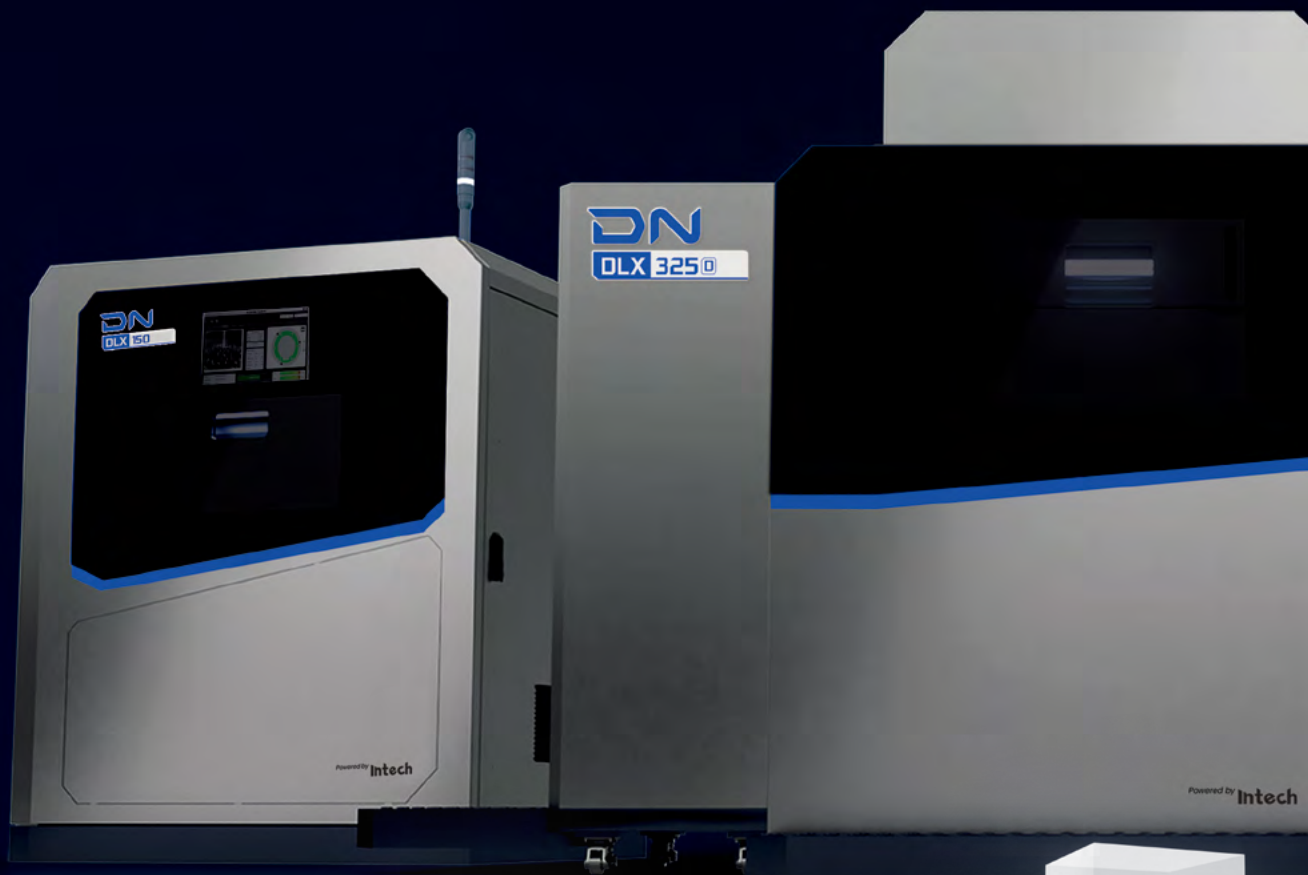
AMSimulation

AMBuildSmart

AMOptoMet

LIMITLESS POSSIBILITIES

3 DLX MODELS



Build Volume
ø150 ×
180 mm

Build Volume
325 ×
325 ×
400 mm

SMALL FORMAT FOR ACADEMIA

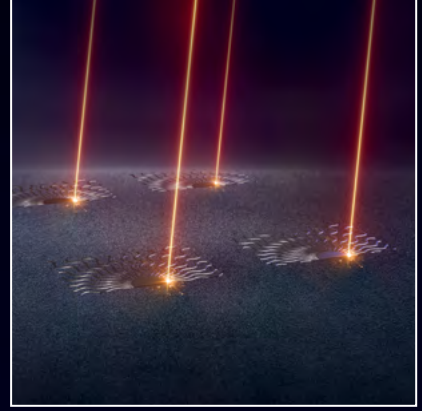
The perfect compact machine for

- ♦ R&D
- ♦ Universities
- ♦ Vocational schools

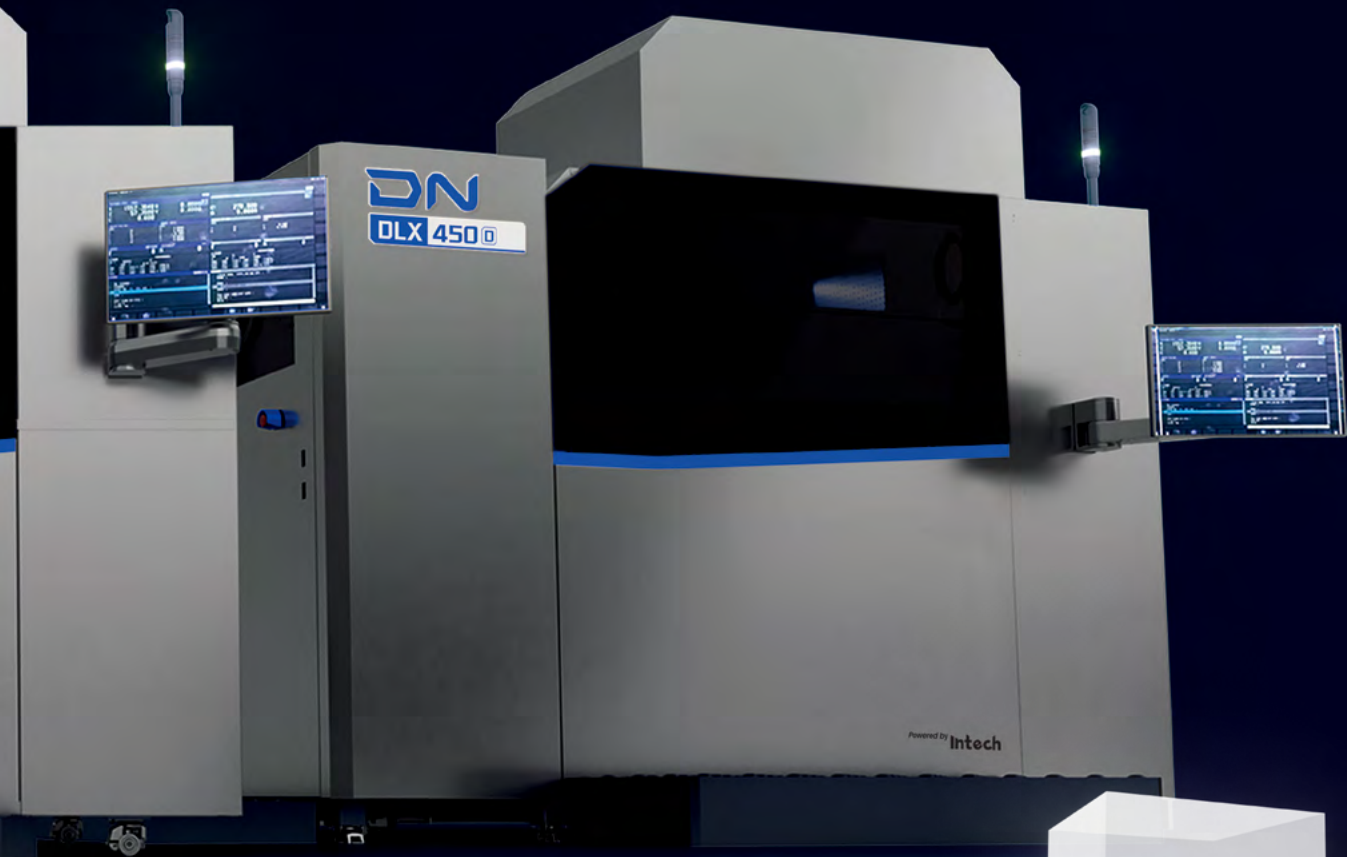


MONITORING SYSTEMS

Process monitoring
solutions for all 3 models



4 LASERS OPTION
for industrial models



Build Volume
450 ×
450 ×
450 mm

MID FORMAT INDUSTRIAL SOLUTIONS

LARGE FORMAT

Offering uninterrupted 24/7 series production
utilizing the segment's largest build volume and
sophisticated powder management enabling
mid to large size components.

DLX 325
16 SQM
FOOTPRINT



ADDITIVE FOR HIGH PERFORMANCE INDUSTRIES

DLX 325/450

Exceptional build size and maximum productivity with advanced laser optics combinations enables the printing of mid to large-sized complex parts at a faster rate to maximize the productivity of every build.


NO. OF LASERS
 1/2/4


LASER POWER
 500 W / 1000 W


LAYER THICKNESS
 30 – 90 μm

DIMENSIONS
 (L $\times$ W $\times$ H)
DLX 325*
 3.4 $\times$ 3.8 $\times$ 2.7 m
DLX 450
 4.6 $\times$ 4.1 $\times$ 2.8 m

* DLX 325 Lite with fixed build tank, DLX 325 Full with removable build tank: 4.5 $\times$ 3.8 $\times$ 2.7 m

DLX 450 **19 SQM** **FOOTPRINT**

INTEGRATED POWDER REMOVAL STATION

for safe, non-contact,
constant quality production

PERMANENT FILTER MODULE

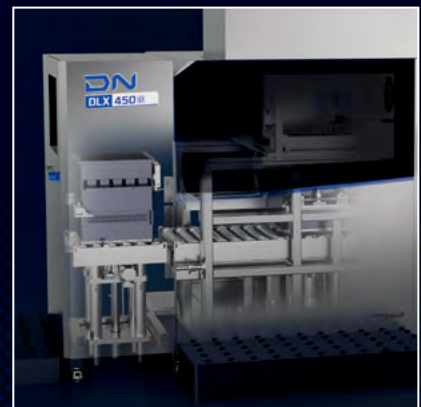
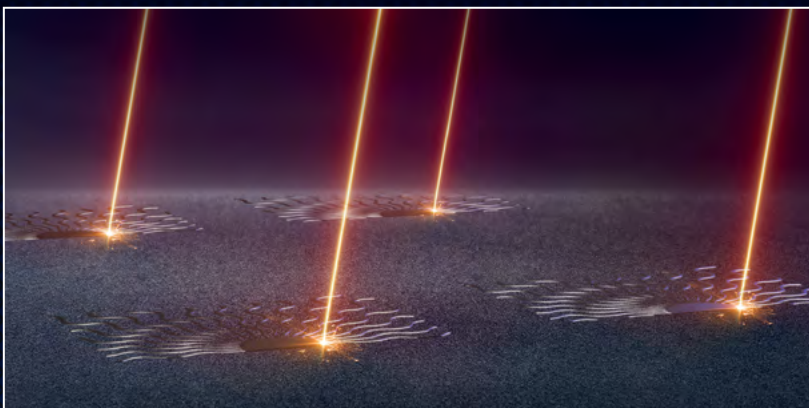
for uninterrupted printing and
minimized operational costs

Build Volume
450×
450×
450 mm

REMOVABLE BUILD CYLINDER*

for minimized job to
job time

UP TO 4 LASERS
and full field overlap for
highest productivities





CUSTOMIZABLE LASER

Spot diameter with 45 μm or 80 μm for unparalleled flexibility in education and research

AUTOMATIC FILTER CHANGEOVER

for uninterrupted printing process

ADDITIVE FOR ACADEMIA

DLX 150

Powerful yet compact, the DLX 150 allows for up to 1,000W laser power enabling part builds with a higher layer thickness, greater throughput and to work with a wider range of alloys. For fine feature detailing, the laser focus diameter can be configured to 45 μm .



BUILD VOLUME
Ø 150 × 180 mm



LASER POWER
500 W / 1000 W



LAYER THICKNESS
20 – 90 μm

DIMENSIONS
(L × W × H)

DLX 150
1.65 × 1.25 × 2.35 m

ONLY
2.11 SQM
FOOTPRINT



**MONITORING
SYSTEMS**
for in depth study
of the process for
R&D and Academia



6 CONSISTENT INTEGRATED SOFTWARE SOLUTIONS

DIGITAL END TO END PROCESS CHAIN

Consistent software is key for high quality productive Additive Manufacturing and it all starts with R&D.

1. RESEARCH & DEVELOPMENT

STEP 1

IDEATION
R&D

AMExplorer

Identify AM parts
within the customers
portfolio

STEP 2

PLANNING

AMCosting

Calculate the cost
per part quickly

STEP 3

PREPARATION

AMBuilder

Slice, hatch, support
and nest the part to
be printed

2. PRODUCTION

Quality is key.

EMPOWER YOUR PROCESS
WITH OUR **COMPREHENSIVE
SOFTWARE SUITE.**

DUCTION

3. QUALITY

STEP 4

OPTIMIZATION

AMBuildSmart

Boost efficiency
by minimizing
support structures

STEP 5

CHECK

AMSimulation

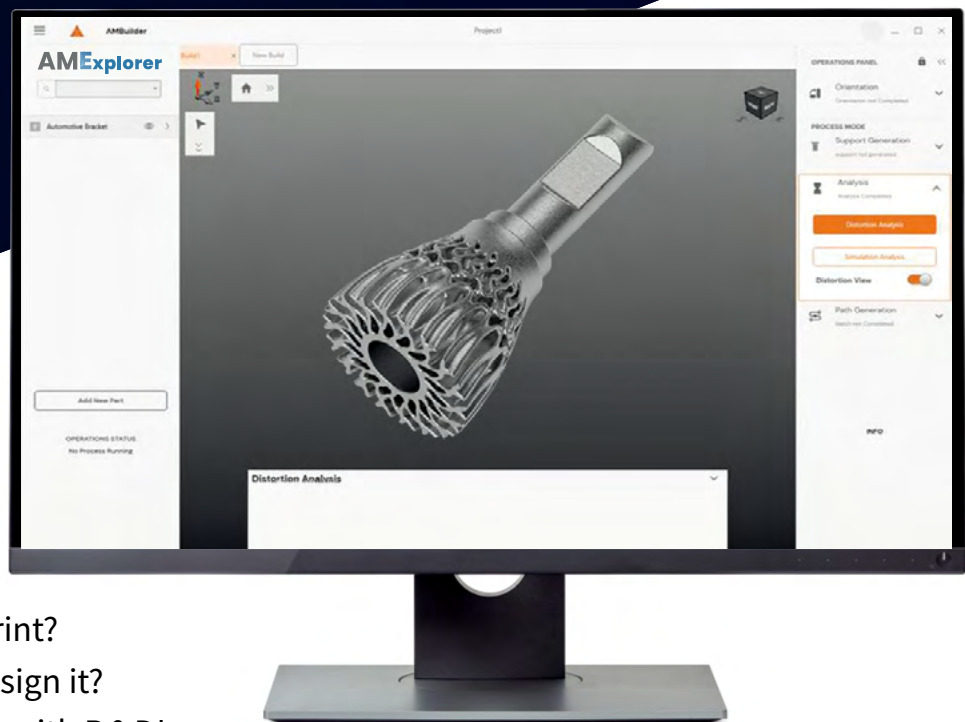
Predict and
avoid distortions

STEP 6

RAMP UP

AMOptoMet

Print new alloys and
increase productivity
for existing ones



1. What to print?
2. How to design it?
3. It all starts with R&D!

STEP 1 – IDEATION / R&D

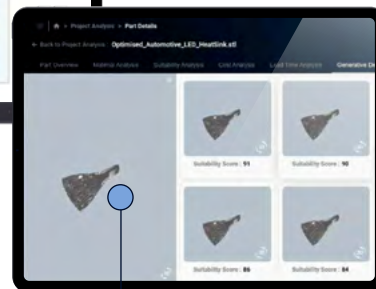
FIND THE RIGHT PART

AMExplorer



STL UPLOAD

Upload your .stl file and get the suitability score to 3D print the part.



SUITABILITY

The suitability chart indicates how suitable the part is for 3D printing.

GET STARTED

Automatic modification of part to improve.



1

Automatically find parts to print

2

Understand the part suitability for Additive

3

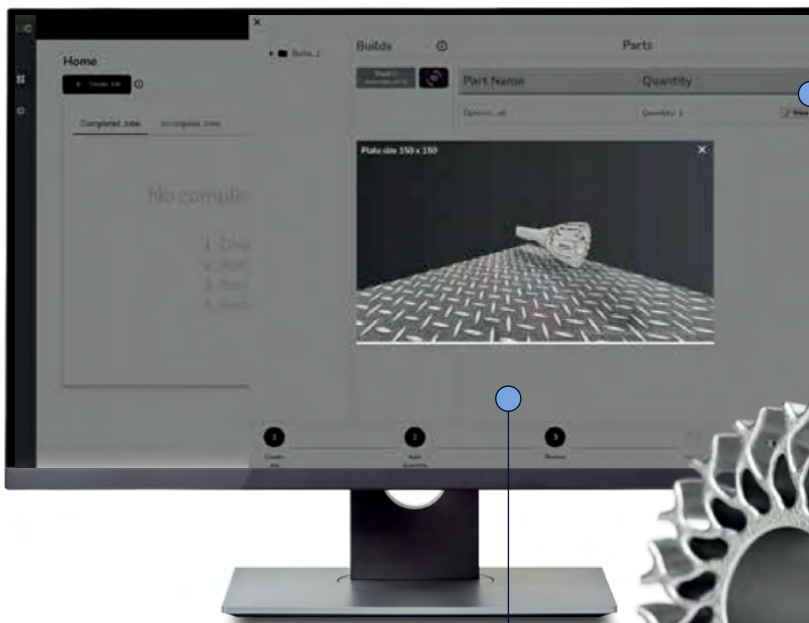
Automatically redesign the part for printing

“*It all starts with R&D ...*”

STEP 2 – PLANNING

GET ACCURATE COST

AMCosting



INSTANT COST TRANSPARENCY

Proceed from AMExplorer or upload multiple .stl files for a “nested print” cost.

AUTOMATED COST ESTIMATION

based on CAD files or 2D drawings.



1

Arrive at accurate metal 3D printed part cost

2

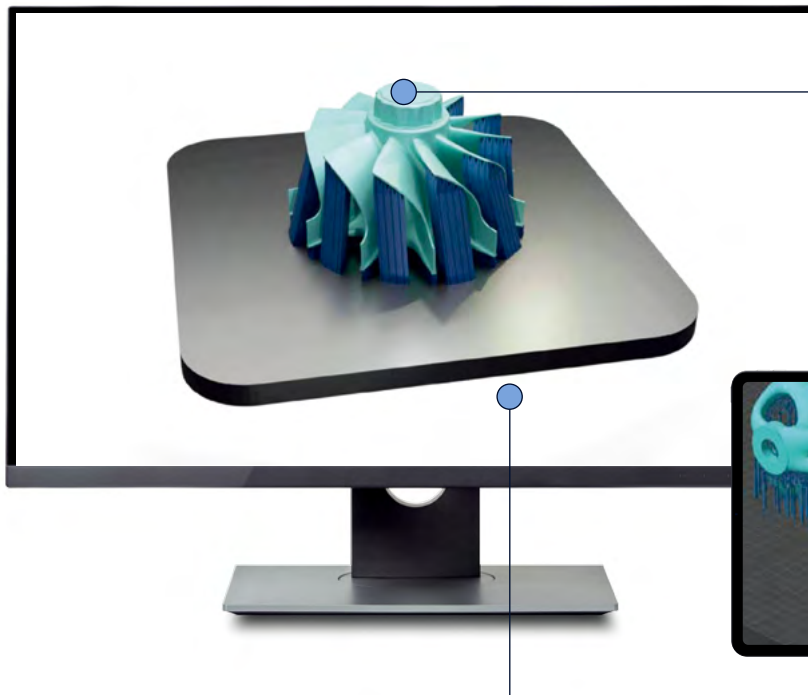
Reduce response times with an instant quote

3

Decide between contract printing and buying a 3D printer

STEP 3 – PREPARATION

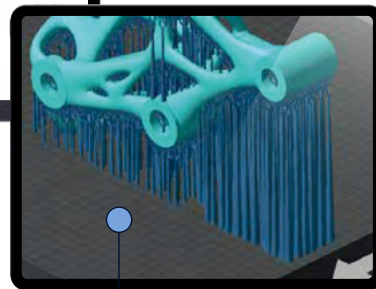
PREPARE ACCURATE DATA

AMBuilder**PATH GENERATION**

Optimizes tool path to reduce the build time exponentially.

FIRST-TIME-RIGHT

User-centric workflow to have a seamless experience in the end-to-end build preparation process.

**SUPPORT GENERATION**

Easily identify critical support areas and reduce data preparation time with semi-automatic support generation.

**1**

Fast tool
for smart
data
preparation

2

Create and
manipulate
supports
required

3

Fast and
robust slicer
and path
generator

“... moves to production ...”

STEP 4 – OPTIMIZATION

REDUCE BUILD TIME

AMBuildSmart



Manufacturing of a bracket on
a DLX 150; Material: SS316L,
Part Volume: 8.5 cm³

► AFTER



SAVINGS

52 %
LESS
SUPPORTS

4.3 cm³
vs. 9.1 cm³

27 %
LESS MATERIAL
CONSUMPTION

99.5 g
vs. 137 g

21 %
LESS TIME

392 min.
vs. 500 min.



1

Drastically
eliminate or
reduce support
structures

2

Build faster
and reduce
post processing
effort

3

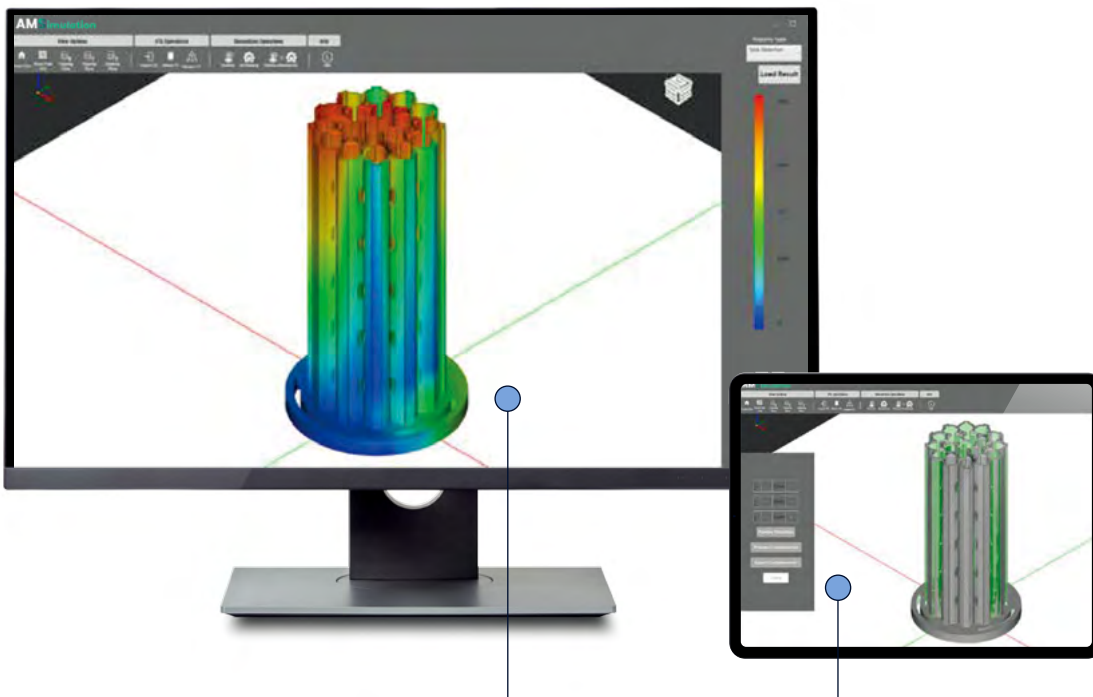
Print larger
diameters
for internal
channels

... and after
quality checking ...

STEP 5 – CHECK

CORRECT DISTORTIONS

AMSimulation



THERMAL DISTORTIONS

The part undergoes a change in volume when cooled down having a deviation from original geometry.

MECHANICAL DISTORTIONS

Predict location of distortion and correct before printing.



1

Simulate
thermal
distortions

2

Predict
mechanical
deformation
and stress

3

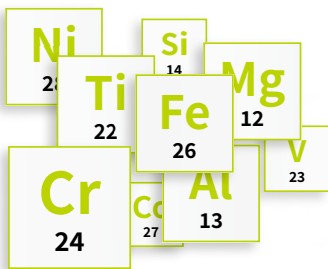
Print
first time
right

“... it scales up.

STEP 6 – RAMP UP

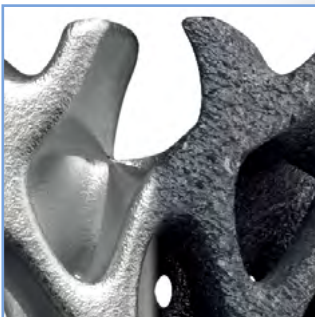
OPTIMIZE PARAMETERS

AM  ptoMet



WITH OPTOMET

Reduced post-processing by achieving better surface finish.



WITHOUT OPTOMET

Additional post process steps and time consuming process parameter development efforts.



1

Up to
50% increase
in build rate

2

Up to
35% reduction
of printing-
hours

3

Development
of new alloys in
< 50% of the
usual time

SERVICE WHENEVER YOU NEED IT

FULL STACK SERVICES FROM END TO END

Experience comprehensive support in Additive Manufacturing.

We provide tailored guidance on finding the right parts, optimizing the part design, process setup and performance enhancement, ensuring your production runs smoothly and efficiently.



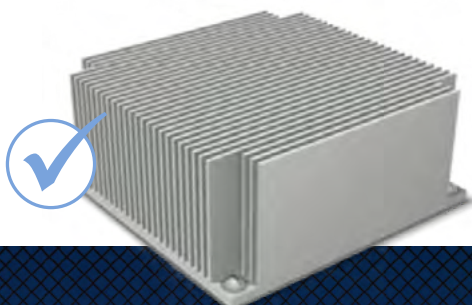
R & D

1. FIND THE RIGHT PART

Automated part identification and optimization

- ◆ Automatic identification of parts suitable for Additive Manufacturing based on your part catalogue
- ◆ Automatic basic redesign for Additive Manufacturing

AMExplorer

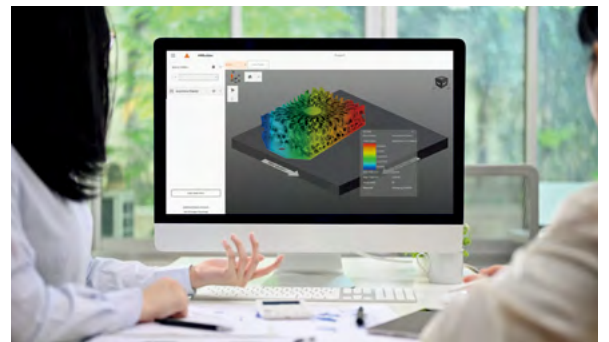


2. OPTIMIZE PART DESIGN

On site training for optimizing part design

- ◆ Train to prepare parts for additive production
- ◆ Minimize support structures to reduce post processing efforts
- ◆ Enhance the part quality by minimizing distortions through pre-simulating the printed result

AMBuilder **AMBuildSmart** **AMSimulation**



TRAINING

Empowering your additive journey with on site and virtual trainings for:

1. Part identification
2. Part redesign
3. Part production
4. Part validation



PRODUCTION

3. RAMP UP MANAGEMENT

On site set up and training for stable part production

- ◆ Produce part
- ◆ Verify quality
- ◆ Set up peripherals
- ◆ Ensure supply of consumables



ON SITE SERVICE

4. LOCAL SERVICE SUPPORT

In-house resources for software, hardware, and testing

- ◆ Industry-specific domain expertise
- ◆ Worldwide support of local operations
- ◆ Fast response times and local on site service intervention



BEST PRACTICE

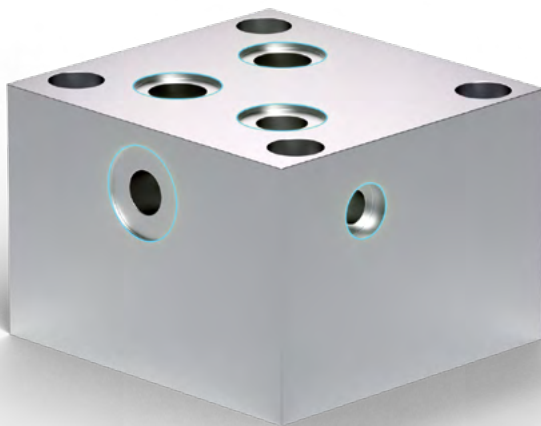
ADDITIVE REDESIGN

Additive Manufacturing requires a new approach in design.

We support companies with the introduction and enabling the use of Additive Manufacturing. We offer on site or virtual consulting on part identification and redesign for additive production.

OLD**TECHNOLOGY-DRIVEN**

Which material do I have to remove?

TRADITIONAL DESIGN**HYDRAULIC MANIFOLD**

- ◆ Size: 100 × 95 × 68 mm
- ◆ Material: Stainless Steel

OBJECTIVE

Reduce the weight of the hydraulic manifold and maintain the structural integrity for given loading conditions.

...

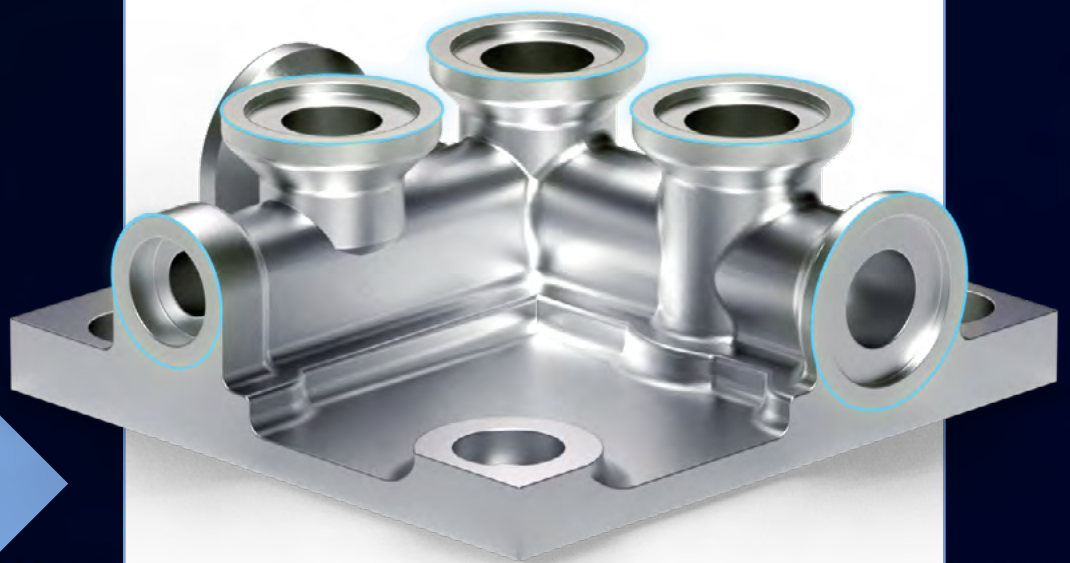
DEVELOPING
THE FULL POTENTIAL
OF ADDITIVE DESIGN
TOGETHER.

NEW

FUNCTIONAL-DRIVEN

Which material do I have to add?

ADDITIVE DESIGN



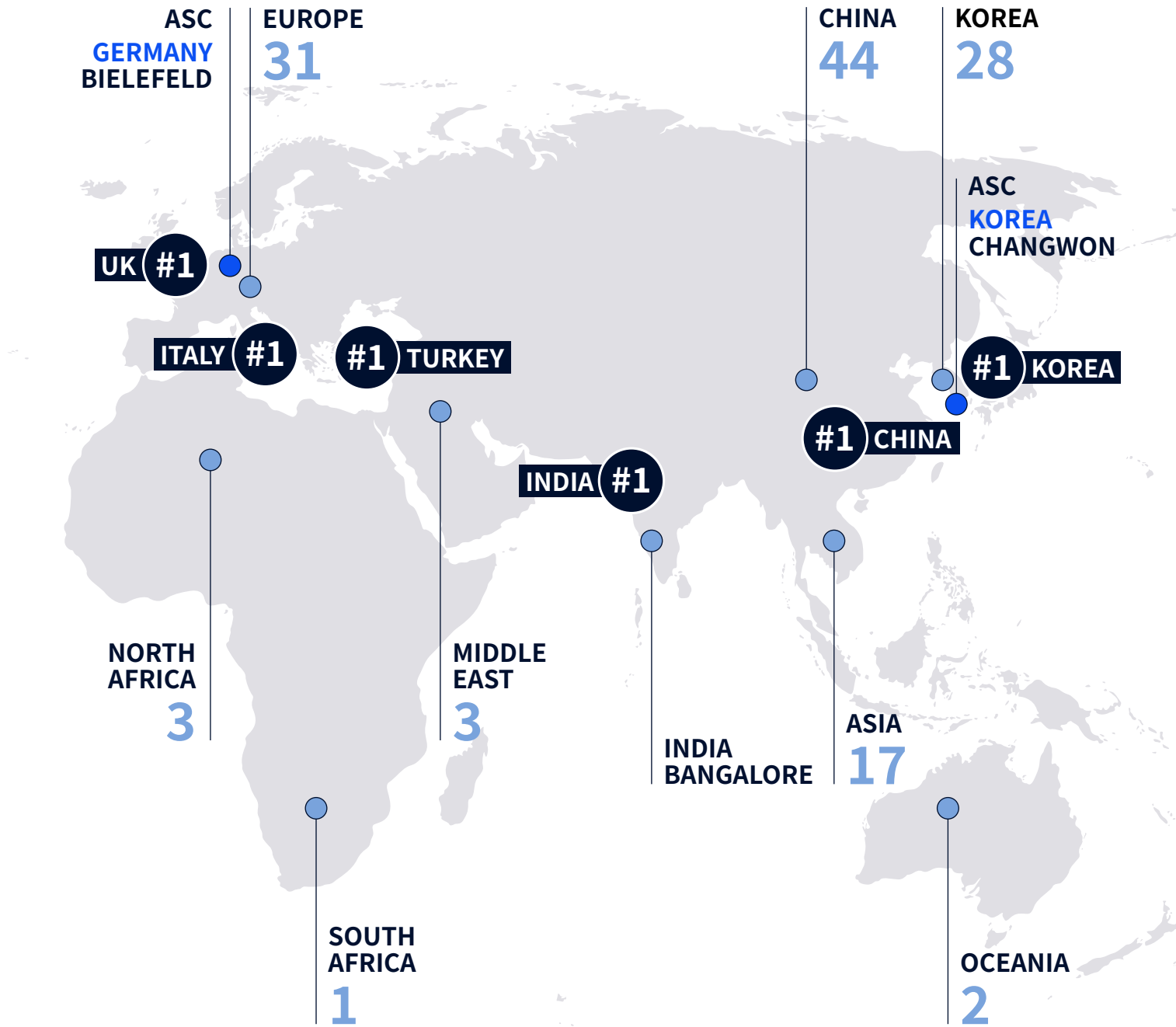
**1.
WEIGHT
REDUCTION**

**2.
FUNCTIONAL
OPTIMIZATION**

**3.
PERFOR-
MANCE
INCREASE**

BENEFITS

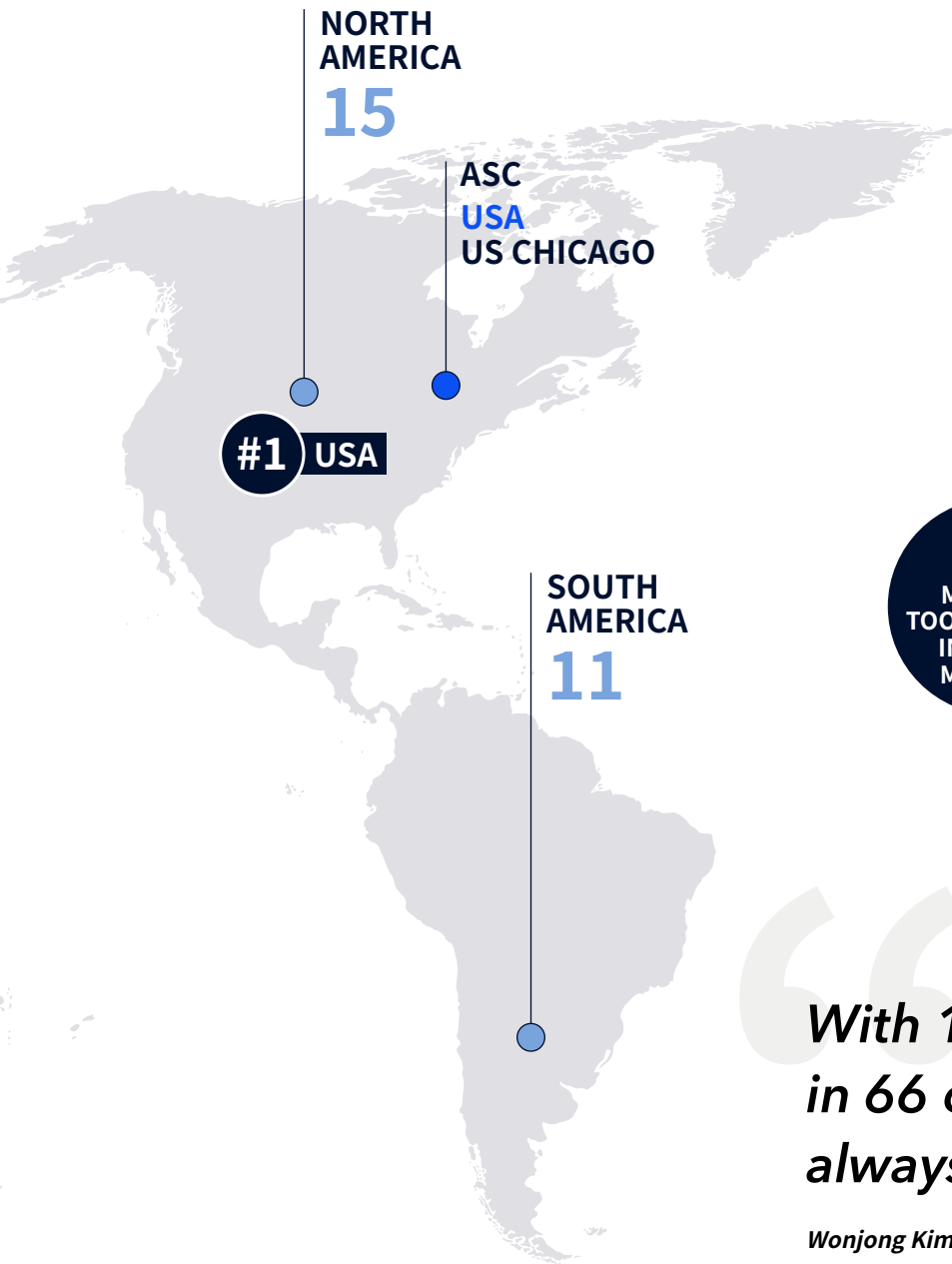
- ◆ Total deformation: 0.01 mm
- ◆ Equivalent stress: 328 mpa
- ◆ Factor of safety: 1.7
- ◆ Weight: 0.917 kg
- ◆ Weight reduction: 80 %



RELIABLE PARTNER

END TO END SUPPORT GLOBALLY

Our global network, spanning Korea, China, India, USA and Europe among others, is operated as an efficient integrated system in order to provide customers with high-quality products, technologies and services.



- Sales Offices
- Additive Solution Centers
- Market Leader

MARKET LEADER **DN**

With around 15,000 sold units in 2023 DN Solutions satisfies the needs of customers in diverse demanding industries and has been recognized for its high global market share.

#1
MACHINE
TOOL PARTNER
IN MAJOR
MARKETS

*With 141 sales offices
in 66 countries we are
always nearby.*

Wonjong Kim, CEO DN Solutions

AND
MORE TO
COME

3 ADDITIVE SOLUTION CENTERS (ASC) WITHIN 2025

1

Local application
development

2

Technology
and material
development

3

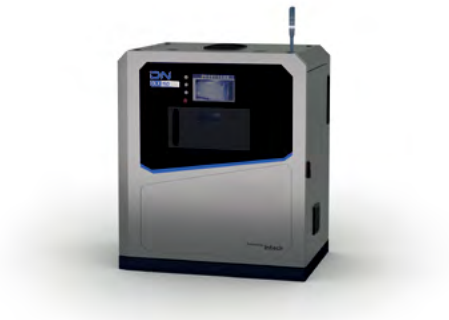
Customer
training

4

Local service
support

MACHINE SPECIFICATIONS

DLX 150



SPECIFICATIONS	DLX 150
Build Volume (Ø × H)	150 mm × 180 mm
Layer Thickness	20 – 90 µm
Build Rate	20 cm ³ /h and above
Precision Optics Laser	F-theta lens, High speed scanner
Laser Type	Yb – Fiber Laser
Laser Power	500 W / 700 W / 1000 W
Optical Configuration	2-axis
Scan Speed	max. 7 m/s
Focus Diameter	45 – 80 µm, factory set
Standard Accessories	Chiller, Wet Separator
Optional Accessories	◆ N2 Generator ◆ UPS ◆ Computer ◆ Shot Peening Machine ◆ Wire EDM
Software	◆ AMBuilder (integrated): Build Preparation Software ◆ AMOptoMet (optional): Parameter Optimization Software
Weight	1.6 ton (approx.)
Dimension (W/D/H)	1650 × 1250 × 2350 mm
Material	AlSi10Mg, CoCr28Mo6, IN718, IN625, Ti6Al4V, Ti6Al4V ELI, 17-4PH, SS316L, 18Ni300

MACHINE SPECIFICATIONS

DLX 325/450



SPECIFICATIONS	DLX 325	DLX 450
Build Volume (X/Y/Z)	325 × 325 × 400 mm	450 × 450 × 450 mm
Layer Thickness	30 – 90 µm	30 – 90 µm
Build Rate	20 cm ³ /h and above	20 cm ³ /h and above
Precision Optics Laser	High speed scanner, Dynamic focussing unit	High speed scanner, Dynamic focussing unit
Laser Type	Yb – Fiber Laser	Yb – Fiber Laser
No. of lasers	1/2/4	1/2/4
Laser Power	500 W / 1,000 W	500 W / 700 W / 1000 W
Laser Configuration (customizable as per request)	- Single: 1 × 500 W / 700 W / 1000 W - Dual: 2 × 500 W × 1000 W	- Single: 1 × 500 W / 700 W / 1000 W - Dual: 2 × 500 W / 1000 W - Quad: 4 × 500 W
Optical Configuration	3-axis	3-axis
Scan Speed	max. 7 m/s	max. 7 m/s
Focus Diameter	min. 80 µm	min. 80 µm
Standard Accessories	Wet Separator, Chiller, Forklift	Wet Separator, Chiller, Forklift
Optional Accessories	- Powder Sieving Unit - Long Life Filter - Part Removal Station - Build platform removal - Wire EDM - N2 Generator - Shot peening/ glass beading machine - Build reduction unit	- Powder Sieving Unit - Long Life Filter - Part Removal Station - Build platform removal - Wire EDM - N2 Generator - Shot peening/ glass beading machine - Build reduction unit
Software	- AMBuilder (integrated): Build Processing Software - AMOptoMet (optional): Parameter Optimization Software	- AMBuilder (integrated): Build Processing Software - AMOptoMet (optional): Parameter Optimization Software
Weight	4.5 ton (approx.)	5.5 ton (approx.)
Dimension (W/D/H)	Lite*: 3400 × 3800 × 2700 mm Full*: 4500 × 3800 × 2700 mm	4600 × 4100 × 2800 mm
Material	AlSi10Mg, CoCr28Mo6, IN718, IN625, Ti6Al4V	AlSi10Mg, CoCr28Mo6, IN718, IN625, Ti6Al4V

* DLX 325 Lite with fixed build tank, DLX 325 Full with removable build tank

**ARE YOU INTERESTED?
SEND YOUR SALES INQUIRY TO**
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