DYEMANSION
TECHNOLOGY & PORTFOLIO

HOME OF A COLORFUL FUTURE.
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ABOUT DYE MANSION

Starting in 2015 with the first industrial coloring solution for powder bed fusion parts, we extended our portfolio with advanced part cleaning and surfacing solutions for a wider range of 3D-printing technologies in the field of plastics.

Today, our Print-to-Product workflow combines industry-leading hardware with the widest range of color options on the market. Our Industry 4.0 ready systems can be integrated seamlessly into your production. The ability to provide a flexible solution for both small batches and high volumes makes us a trusted partner for your future factories. Through close collaboration with our customers across all industries, our technology and expertise continuously grows with the market.

Reduced cost per part, unmatched quality, and high sustainability are core values that drive each and every innovation we develop. In addition to these principles, finding the right finish for every application is what drives us.

WE TURN 3D-PRINTED RAW PARTS INTO HIGH VALUE PRODUCTS

DyeMansion is the global leader in Additive Manufacturing finishing systems that turn 3D-printed raw parts into high-value products. From perfect fit eyewear to personalized car interiors, our technology makes 3D-printed products become a part of our everyday life.
OUR VISION

3D-PRINTED PRODUCTS BECOME PART OF OUR EVERYDAY LIFE

We will live in a world with superior products which are tailored to the consumer needs and are manufactured and delivered in a sustainable way.

To achieve this vision DyeMansion serves customers with world class technologies for every 3D-printed end-use application.
COMPLETING THE AM VALUE CHAIN

DyeMansion delivers the finishing touch

Additive Manufacturing has the potential to challenge conventional manufacturing technologies & revolutionize the future.

That's where DyeMansion comes into place.

THE MOST DIVERSE POST-PROCESSING PORTFOLIO

Focus on Powder Bed Fusion technologies

Compatible with:

SLS

MJJ & HSS

On request

FDM / FFF

SLA & DLP & CDLP / CLIP

Compatible with:

stratasys

Ultimaker

3D SYSTEMS

Visiontec

formlabs

Carbon
THE DYEMANSION
PRINT-TO-PRODUCT WORKFLOW
A manufacturing ready end-to-end solution

Delivers high-quality parts
Automated, scalable & flexible
Certified solutions for various industries
Works geometry independent
Ensures a reproducible process
Works with various materials & industrial technologies
Reduces cost per part
Is manufacturing ready

INDUSTRY 4.0 READINESS

CLEANING
PolyShot Cleaning PSC

SURFACING
PolyShot Surfacing PSS
OR
VaporFuse Surfacing VFS

COLORING
DeepDye Coloring DDS

What’s your desired finish?
PolyShot & DeepDye
Semi-gloss, scratch resistant, soft haptics aesthetic finish for hard plastics such as PA11 or PA12 and applications like eyewear or prosthetics.

VaporFuse & DeepDye
Sealed, washable, injection-molding like functional finish for both flexible and hard plastics such as PA11, PA12 or TPU and applications like pipes or insoles.
DYEMANSION POWERSHOT C

The industry standard for easy and efficient part cleaning

**TECHNICAL DATA**

<table>
<thead>
<tr>
<th>PERFORMANCE</th>
<th>Mid sized build job (e.g. 3/4 of EOS P396 or full HP Jet Fusion 4200/5200)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIMENSIONS (L x W x H)</td>
<td>1700mm x 1310mm x 2030mm</td>
</tr>
<tr>
<td>WEIGHT</td>
<td>System 490kg</td>
</tr>
<tr>
<td>POWER SUPPLY</td>
<td>1kW</td>
</tr>
<tr>
<td>COMPRESSED AIR CONSUMPTION</td>
<td>Minimum: 1,4m³/min at 2.2bar</td>
</tr>
</tbody>
</table>

**NEW**

PolyShot Cleaning (PSC)
Proprietary cleaning process with plastic blasting media

**NEW**

Cycle time: 3-10 minutes

Automated depowdering boosts your production capacity

With our proprietary PolyShot Cleaning (PSC) a mid-sized build job can be cleaned in only ten minutes or less. The time you need for part cleaning and the personnel in your production can be significantly reduced. This boosts your effectiveness and efficiency. By investing in automated part cleaning with the Powershot C, up to four manual blasting systems can be easily replaced. PolyShot Cleaning is compatible with all common powder-bed technologies and delivers residue-free parts for brilliant colors.

Gentle part treatment thanks to smart hardware features

The blasting cabinet of our Powershot C is equipped with a rotary basket and is manufactured from stainless steel. Different blasting nozzles and an ionization unit ensure reproducible results. Couple this with a basket with a soft and replaceable lining protecting the parts from damage during the process. Two simultaneously working blasting nozzles are positioned perpendicular to the rotating basket and the contained parts. The cyclone cleans the blasting media constantly. This configuration guarantees an efficient powder removal.

Advanced operator convenience with enhanced ergonomics and process control

Experience a new level of process control with a touchscreen and integrated control-panel. The Powershot C is being operated through a user-friendly interface and pre-installed programs can be started. Individual programs can be configured and saved easily, enabling a fast adaption to your application. With a user-centric design everything can be easily accessed and operated safely. Continuous monitoring allows an efficient and reproducible process.

"The Powershot C system allows us to reduce processing times in blasting by up to 80%. The surface finish it provides is also much more consistent than parts blasted by hand."

Frederick Wray,
Senior Product Engineer
POWERSHOT PERFORMANCE SERIES

Next level blasting systems purpose-built for the factory of the future & high-volume production with Additive Manufacturing

Boost your production performance: maximum efficiency with the smallest workspace

Ready to shape the factory of the future - now

Setting the stage for automation in Additive Manufacturing

Save up to 60% WORKSPACE

Save up to 70% BLASTING MEDIA

VISIT our website to learn more about the technical data and availability
The most efficient surfacing technology to achieve end-use parts

Our proprietary PolyShot Surfacing (PSS) is non-abrasive and works perfectly for hard plastics like PA12 or PA11 across all geometries. Shooting beads accelerated with compressed air equalizes the peaks and lows of the surface, achieving a more homogenous part quality. With a cycle time of only 10 minutes and a capacity of a mid-sized build job per run, the Powershot S works very cost-effectively. Unlike time-consuming abrasive methods like tumbling, PolyShot Surfacing increases your productivity and part quality significantly.

Semi-gloss surfaces with ideal properties: The foundation for superior coloring results

We believe PolyShot Surfacing to be the main basis for maximizing coloring results. The Powershot S delivers unique semi-gloss looks and pleasant haptics for almost every 3D-printed end-use product. Being heavily used since 2016 in various industries, it set totally new quality standards due to enabling the results of improved scratch resistance and homogenous finishes. This is particularly important for further processing steps, like our DeepDye Coloring.

Advanced operator convenience with enhanced ergonomics and process control

Experience a new level of process control with a touchscreen and integrated control-panel. The Powershot S is being operated through a user-friendly interface and pre-installed programs can be started. Individual programs can be configured and saved easily, enabling a fast adaption to your application. With a user-centric design everything can be easily accessed and operated safely. Continuous monitoring allows an efficient and reproducible process.

"With PolyShot Surfacing our earrings lose their roughness and get a unique, matt-glossy and high-quality look as well as the pleasant wearing comfort."

Marie Boltenstern, CEO & Head of Design

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TECHNICAL DATA

PERFORMANCE
Capacity per run
Mid sized build job (e.g. 3/4 of EOS P396 or full HP Jet Fusion 4200/5200)

DIMENSIONS (L x W x H)
System
1700mm x 1310mm x 2030mm
66.9inch x 51.6inch x 79.9inch

WEIGHT
System
480kg | 1058lb

POWER SUPPLY
1kW

COMPRESSED AIR CONSUMPTION
Minimum: 1.8m³/min at 5bar
Maximum: 2.5m³/min at 7bar
Green technology fulfilling industrial health & safety standards

Our eco-friendly VaporFuse Eco Fluid solvent is non CMR and approved for the processing of plastics with food contact according to regulation (EU) 10/2011. The solvent is circulated continuously in a closed loop and automatically recovered by the system. This enables a sustainable contact-free process without chemical waste. Operating the Powerfuse S does not require protective clothing against chemical hazards.

Improvements beyond aesthetics: sealed, strong & airtight parts

VaporFuse Surfacing (VFS) delivers sealed and washable parts with injection molding like surfaces. The surface roughness is reduced to a minimum. The entire process chamber is flooded with vapor while undergoing vacuum. This ensures a reproducible processing of complex geometries and internal surfaces. VFS works for all common plastics and particularly for flexible polymers such as TPU, for which mechanical techniques are not suitable.

Ready for the factory of the future

The Powerfuse S is Industry 4.0 ready. The system offers fully automatic loading, connectivity and batch tracking features. Validated and specially developed programs for all common materials are available and ready to use. In addition, all process parameters can be adapted individually for other materials. This ensures flexibility and a seamless integration with existing production processes such as the DyeMansion Print-to-Product workflow.
A TRULY GREEN SOLUTION

The Powerfuse S embodies the principle of economic sustainability

- Eco-friendly solvent approved for food packing by the EU & can be found in many cosmetic products
- Solvent runs in closed loop
- Integrated recovery of the solvent ensures no waste

VAPORFUSE SURFACING PUT TO THE TEST

VaporFuse Surfacing not only provides applications with an aesthetic appearance. It also significantly improves some part properties, which enables completely new applications:

- SEALED SURFACES – INSIDE & OUTSIDE
- IMPROVED AIRTIGHTNESS
- REDUCED FRICTION
- IMPROVED STABILITY
- BACTERIA INHIBITION
- MORE PRODUCTIVE SPRAY PAINTING
- WASHABLE SURFACES

SELECTED FOR “GREEN DEAL” CALL BY EUROPEAN INNOVATION COUNCIL TO FULFILL EUROPEAN CLIMATE GOALS

Making Europe climate-neutral by 2050 is the big aim of the European Union. We support this mission and are chosen for the “Green Deal” call with the Powerfuse S. Herefore we aim to roll-out our green vapor polishing technology globally, uniting economic sustainability and digital manufacturing.

Watch our test series to learn more & get all the details.
DYEMANSION DM60

The leading coloring solution for industrial Additive Manufacturing

PERFORMANCE
Capacity per run
Mid sized build job (e.g. EOS P396 or HP Jet Fusion 4200/5200)

DIMENSIONS (L x W x H)
System
950mm x 600mm x 945mm
37.4inch x 23.7inch x 37.0inch

WEIGHT
System
330kg | 662lb

HEATING POWER
6kW

COMPRESSED AIR CONSUMPTION
< 1.5 m³ per run, dry and oil-free compressed air

Limitless color choices: From standardized data base to tailor-made recipes

Our innovative DeepDye Coloring (DDC) technology offers unlimited color choices. As a DM60 user you benefit from the largest color database. In addition to over 170 RAL and standardized colors, which are ready-to-use without additional development costs and waiting times, our color matching also offers the possibility of creating individual tones for you – from corporate colors to seasonal trend colors and individual skin tones. The fully automatic cleaning program of the DM60 allows a flexible use and a fast color change.

Exact color formulas for a reproducible and traceable process globally available

For a long time, dyeing 3D-printed plastics was a manual, uncontrollable process. We take care of this process and offer a global supply of exact color recipes down to the microgram. This enables an industrial process that could not be easier for the user and can be reproduced any time. The power lies in our color cartridges, which we manufacture depending on base material, finish and desired color. Based on the volume of your parts, we deliver cartridges in four different sizes. These are equipped with an RFID chip that transfers all process parameters QM ready to the DM60.

ISO certified colors for end-use applications across all industries

The demands for 3D-printed products are constantly increasing. Our ISO-certified colors make us a trusted technology partner for biocompatible eyewear or medical orthoses as well as for light- and heat-resistant automotive interiors. With our extended ColorsX line, we are responding to industry specific requirements and are always looking forward to new input for the further development of our DeepDye Coloring (DDC) technology.

"We knew that our products would only become marketable when it became possible to apply colors which appeal to our customers. With the DM60 coloring system and their color development, DyeMansion presented us with a real solution to that."

Sven Götti, CEO

DeepDye Coloring (DDC)
Cycle time: 150 minutes

Before
White raw material

After
Grey raw material

FIND YOUR FINISH
See next page
FIND YOUR **FINISH**

Aesthetic overview

**White base material**

**Grey base material**

**FINISH: POLYSHOT + DEEPDYE**

**FINISH: VAPORFUSE + DEEPDYE**
DyeMansion DM60 add-on solutions

**DYEMANSION DM60 RESERVOIR**
The DM60 add-on solution for high-volume black coloring

**PERFORMANCE**
Capacity per run: Up to five DM Black dyeing cycles with one DM Black L-R cartridge

**DIMENSIONS (L x W x H)**
System: 385mm x 350mm x 1640mm
15.2inch x 13.7inch x 64.6inch

**WEIGHT**
System: 92kg | 202.8lb

**DYEMANSION ROS**
For constant water quality & process stability

**PERFORMANCE**
Capacity per run: Supplies two DM60 with demineralized water
Integrated storage tank: 450l | 118.9gal

**DIMENSIONS (L x W x H)**
System: 1100mm x 700mm x 1767mm
43.3inch x 27.6inch x 69.9inch

**WEIGHT**
System: 270kg | 595lb

**POWER SUPPLY**
In operation: 0.95kW
Standby: <5W

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Reuse of process water

Water demineralization process with the DyeMansion ROS

Acceptable water input values

Water output values after the reverse osmosis

Costs -37%
Lead-time -30%

DM60 add-on solutions
OUR COLORS BRING PRODUCTS TO LIFE

From standardized data base to tailor-made recipes

Discover the greatest color database for 3D-printed parts on the market. Using DyeMansion technology, you are able to color your parts reproducible in almost any color of choice and turn them into high-value, colorful products.

DyeMansion Standard Colors

**WHITE RAW MATERIAL**
Developed for EOS PA 2200
As basics, we offer 17 standard colors.

**GREY RAW MATERIAL**
Developed for HP 3D HR PA 12
The only vibrant 17 standard colors for grey MJF parts.

Colors of Choice
Tailor-made corporate & custom colors with no limit, developed individually with our inhouse Color Matching.

Colors
Our extended color lines are the answer to the specific needs of different industries.

**AUTOMOTIVE COLORS:**
Improved light and heat resistance for car interior parts.

**NEON COLORS:**
Vivid neon colors for stunning lifestyle applications.

Color Systems
170 RAL colors are available, Pantone TPG and other systems on request.

Didn't find the right color? Try Color Matching!
See page 30

Visit our website for the full COLOR DATA BASE.
COLORS OF CHOICE
COLOR MATCHING

With our color matching you can design 3D-printed parts in your corporate color or any color of choice you like. From replicating the exact color of an injection molded part to the development of special color shades that match skin tones – there are no limitations.

What we need to know for a successful color matching:
1. What’s your color wish?
2. How can you share a reference of your color?
3. What’s your printing technology, material & surface treatment?

CERTIFIED SOLUTIONS FOR HIGH-END MANUFACTURING

Our technologies & processes meet the requirements of the most diverse industries. From quality management to the certification of our colors and processes, we are committed to providing reliable solutions for high-end manufacturing.

Biocompatibility
- Cytotoxicity according to ISO Guidelines 10993-1, ISO 10993-5 & ISO 10993-12
- Skin Irritation according to ISO 10993-1, ISO/TC 194 WG 8 in reference to ISO 10993-10 & ISO 10993-12

Food Safety

Colors
- COLOR FASTNESS
  - Rubbing according ISO 105-X12
  - Washing according ISO 105-C06
  - Bleaching according ISO 105-N01
  - Perspiration according ISO 105-E04

Light & Heat Resistance
- according ISO 105-B06

Statements
- Animal Origin Free Statement (AOF)
- REACH Statement
- RoHS Statement (Restriction of Hazardous Substances)

Quality Management
- Certified according to ISO 9001:2015

Scratch Resistance
- according to PV 3952 (2019-03)

For more information, visit our WEBSITE.
Watch our VIDEO Color matching explained.

For more details and further information regarding material and technology please contact HELLO@DYEMANSION.COM.
ON-DEMAND FINISHING

For smaller orders and single pieces, we will step in for you and offer our finishing solutions as a service. If you need a larger volume of production, we will be happy to connect you with our production network of qualified service providers.

Send your parts
Choose your finish
Choose your color
Get your parts

On-Demand Finishing available:
GER Munich
USA Austin, TX
TRAINING & CONSULTING

Knowledge transfer to transform your business with Additive Manufacturing

Our technical consultants help you exploiting the full potential of AM with know-how and expertise across all industries.

Initial Services
- Print-to-Product consulting with every DM60
- Onsite or remote training & best practice solutions
- Workshops at our mansion or external events

Specialized Services
- Application consulting
- Specialized project support and development
- Material, printing and process support

TECHNICAL SUPPORT

Minimal downtimes & maximum performance

To provide service excellence on all levels, we constantly develop our service offering. Our experienced service technicians support you globally and during the whole product lifetime. Onsite or remotely, we are always there for you.

Onsite Support
- Installation
- Technical enablement
- Troubleshooting
- Repair
- Maintenance
- Spare part management

Remote Support
- Installation
- Troubleshooting
DyeMansion enables AM applications

**CONSUMER**

“Our products only became marketable when it became possible to apply the colors that appealed to the consumers.”

Sven Götti
CEO, Götti Switzerland

**MEDICAL**

“The Cytotoxicity and Skin Irritation certificates of the DyeMansion colors are helping us a lot to get our exomotion hand one CE-certified.”

Dominik Hepp
CEO & Co-Founder, HKK Bionics

**INDUSTRIAL**

“With the DyeMansion Print-to-Product workflow we can finally produce competitive applications in series. The reproducible and flexible process allows us to make changes to design and functions of our applications quickly.”

Konstantin Brunnbauer
VP Production, ProGlove

**AUTOMOTIVE**

“With DyeMansion’s expertise we were able to develop a specific and reproducible Daimler Buses color shape for interior parts.”

Daniel Kluth
Category Buyer 3D-printing, Daimler Buses

**SERVICE PROVIDERS / CONTRACT MANUFACTURERS**

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DYEMANSION PARTNER PLATFORM

Our production partners help you to find the right finish for your applications.

- United Kingdom
  - 3DPRINTUK
  - additive

- Belgium
  - materialise

- Finland
  - TO FORM TECH

- Denmark
  - Damvig

- Sweden
  - appema
  - PROTOTAL

- Germany
  - FKM
  - PROTOTAL GTP

- Poland
  - materialise

- Austria
  - 1zu1

- Italy
  - HSL

- Switzerland
  - pro/arts
  - EXAPARTS

- Spain
  - MUSA

- Canada
  - SENTINEL
  - solaxis

- USA
  - JABIL
  - 3DLOGICS

- South Africa
  - akhoniTec

- China
  - Mopane3D

- Singapore
  - JABIL

FULL OVERVIEW

Use this QR code to get more information and an overview of all our production partners.
DYEMANSION PARTNER PLATFORM

Our Sales Partners help you expand your current offer with high-end post-processing equipment.

- Switzerland
- United Kingdom
- Germany
- Austria
- Sweden
- Netherlands
- Poland
- France
- Czech Republic
- Spain & Portugal
- 3DKREOS
- 3DMaquinser
- China
- Korea
- Canada
- USA
- South Africa
- Australia
- Singapore
- Germany (Techsoft, Druckermesse, solidpro)
- Austria (PUL GROUP, landrè)
- Poland (CentrumDruku, 3Dees)
- Switzerland (RAPID 3D, MasterGraphics, ImageNet, CADIMQUEST, CIMQUEST)

Use this QR code to get more information and an overview of all our sales partners.
BECOME OUR PARTNER

Alliances are the basis to transform the manufacturing industry together! Join the largest industrial post-processing platform for Additive Manufacturing worldwide and become our partner.

TRYMANSION

Start with a free benchmark

Not familiar with DyeMansion technology yet? Try our finishing options and colors on your own parts and participate in TryMansion. We are offering live benchmarks in our facilities as well as the processing of your samples through our On-Demand Finishing. Together with your finished parts, you will get a benchmark detailed report.

SPEAK WITH US

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