
mim plus
PRECISION
IN METAL
NET-SHAPE PRODUCTION WITH TOUGH MATERIALS

OBE FAMILY HOLDING

1904

Start as a **tooling company for jewellery**

1970

Invention of the **spring hinge** for eyewear industry

1996

Introduction of **Metal Injection Molding (MIM)**

2019

Spin-off MIMplus Technologies GmbH & CO. KG

2021

Introduction of sinter based **Additive Manufacturing**

2023

High-performance **MIM magnets** (complex shape and field)

2 Companies
OBE and MIMplus

4 Production sites
Germany, Italy, China, Vietnam

550 Employees
world-wide

50 MIO € Turnover
in 2024

25.000 m² production floor
world-wide

KEY FACTS MIMPLUS

DESIGN FREEDOM. TOUGH MATERIALS. CO-ENGINEERING.

Branches
Medical Engineering, Aerospace, Automotive, Electronics, Robotics, Luxury, Industry

Core Technologies
Metal Injection Molding
Sinter-based Additive Manufacturing

Research and Development
with well equipped lab (10% of Turnover) and Engineering Support

In-house tool shop
From prototypes to mass production tools

Plus Services
Post Processing & Assembly

ISO 13485:2016

IATF 16949

EN 9100 Start 2025

ISO 14001:2015

ISO 9001:2015

EMAS 1221/2009

MIM & AM

THE CORE PROCESSES

1 RAW MATERIAL
metal powder, binder

2 SHAPING
AM / MIM

3 DEBINDING
solvent, catalytic

4 SINTERING
sintering furnace

5 METAL PART
net-shape, complex

KEY FACTS

Shaping by conventional injection molding machines

Net shape – Efficient mass production technology

Ideal for lightweight design

Typical part sizes:
< 2 - 80 mm

1 - 32 cavities
per tool

MATERIALS

Low-alloyed steels for heat treatment	Permanent magnetic and other functional materials
Tool steels	Magnetocaloric alloys
Stainless steels	Soft magnetic materials
Titanium	Other alloys

MIM: METAL INJECTION MOLDING

EXAMPLE

01 Consolidation

02 Elimination of laser welding

03 Great freedom of shaping

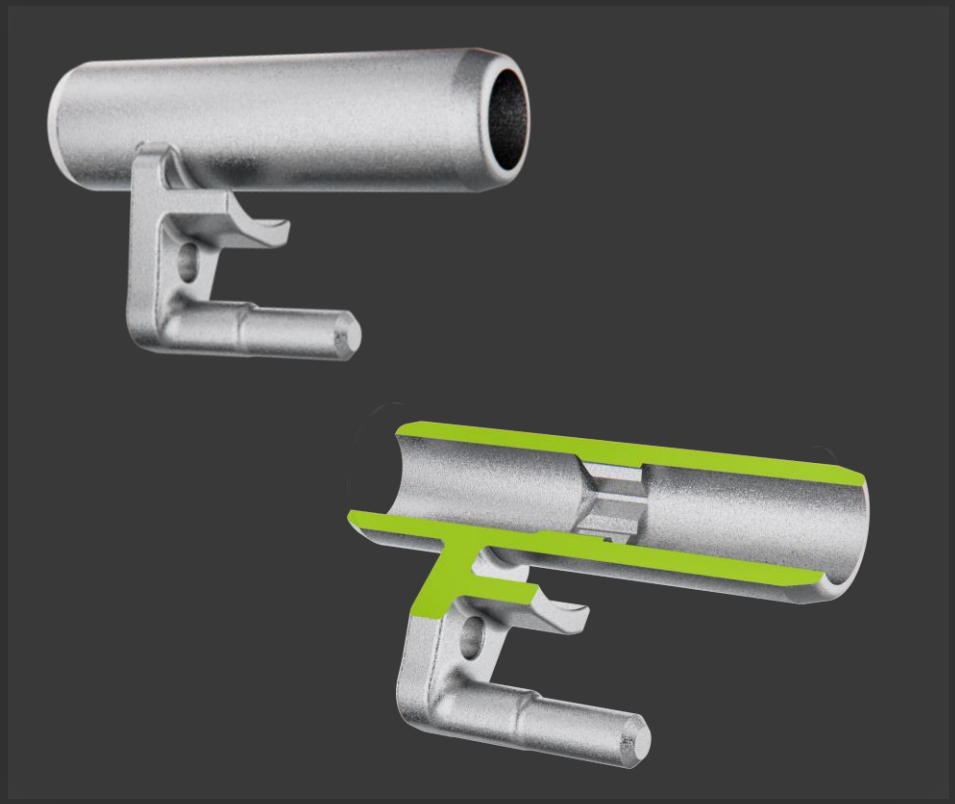
04 Integration of functionality

05 Stainless steel

06 Coating

MIM: METAL INJECTION MOLDING

DRIVING LEVER



01 Complex Shapes

02 High Quantity

03 Cannot be manufactured as a milled part

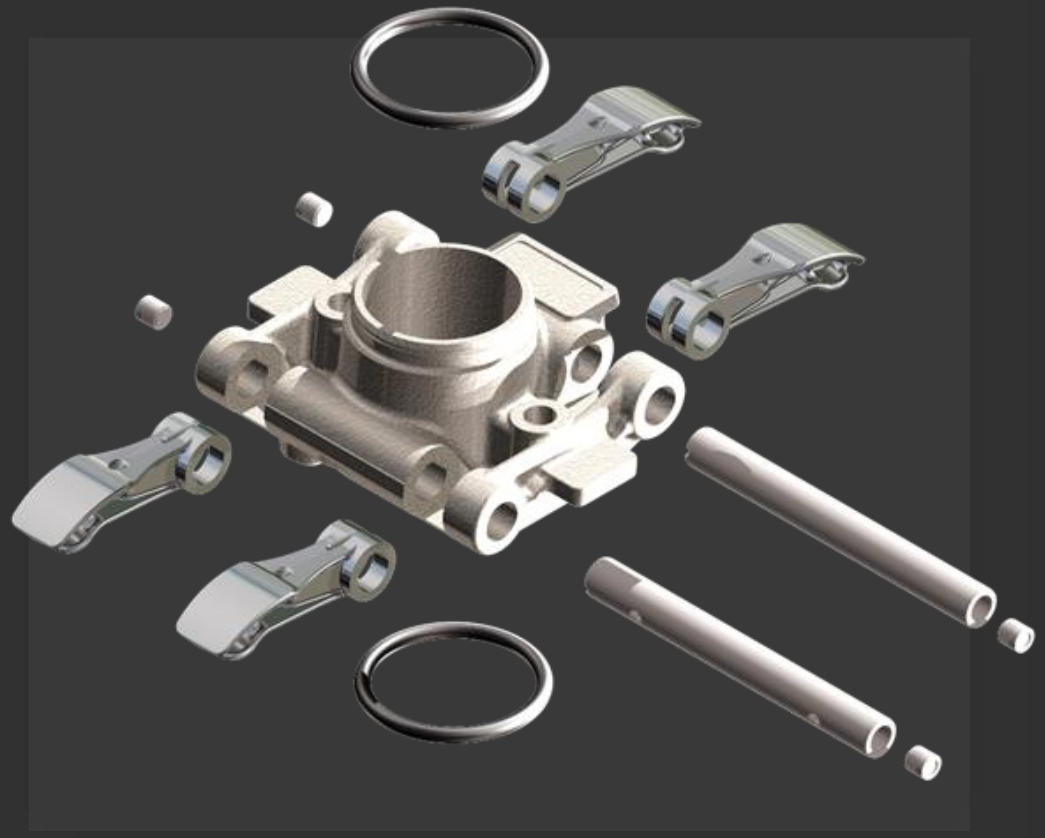
04 High roundness tolerances

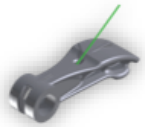
05 Fully automated 100% calibration and testing machine

06 Sintering support

MIM: METAL INJECTION MOLDING

MIM IN AUTOMOTIVE VALVE TRAIN





01 4 Metal Injection Molding parts

02 8 turned parts

03 1 die casting part

04 >30 working steps

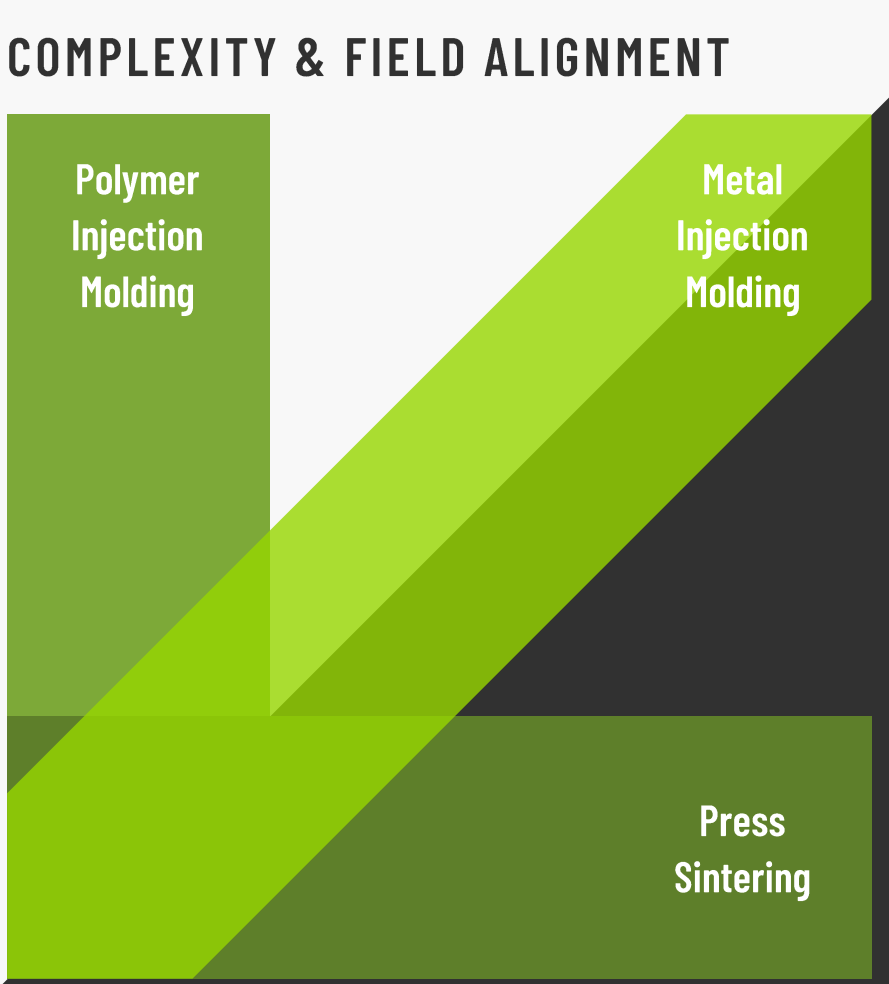
05 9 suppliers including extended workbench

06 10 manufacturing technologies

MIM MAGNETS

UNIQUE DESIGN FREEDOM

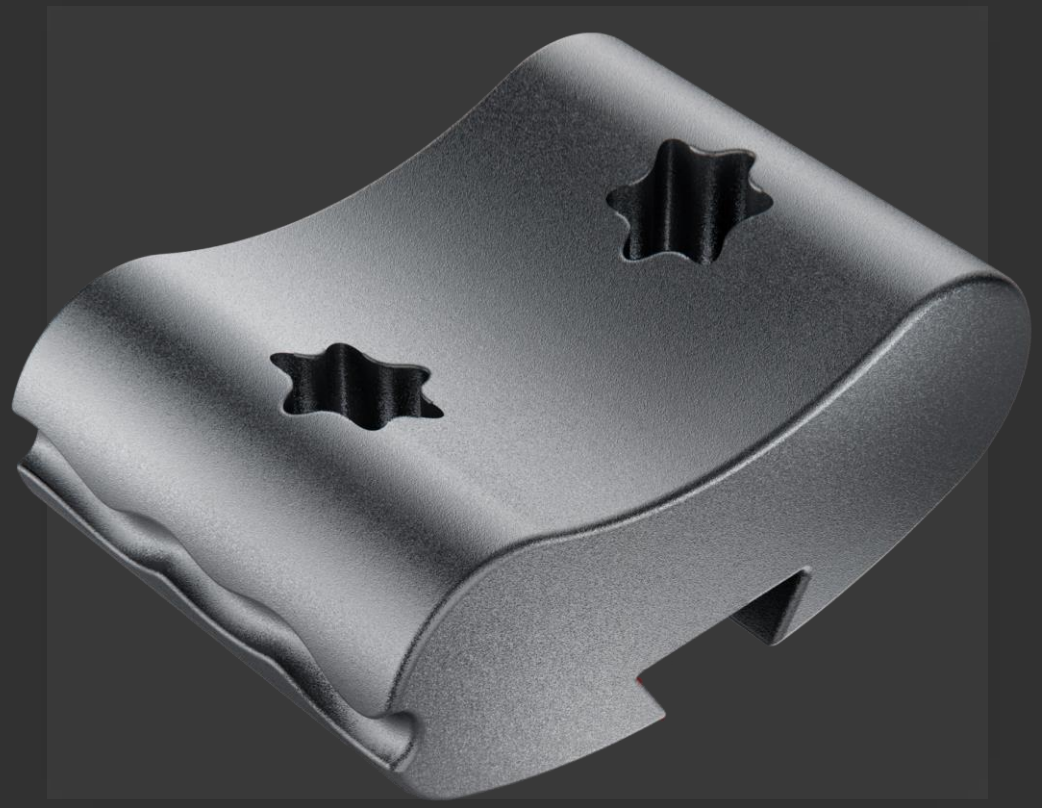
- **Sintered NdFeB magnets** with highest shape complexity
- Currently available magnet grades **up to N45SH**
- **Complex** magnetization fields
- **No post processing** (yield >93%)
- MIMplus globally only capable supplier of **MIM NdFeB magnets** at industrial stage
- Closed Loop Magnets **Recycling** Process at MIMplus



WINNER OF VR – INNOVATION DER AWARD 2025

MIM MAGNETS

EXAMPLE



01 Large design freedom

02 Application-specific fields

03 Highest power density

04 Miniaturization

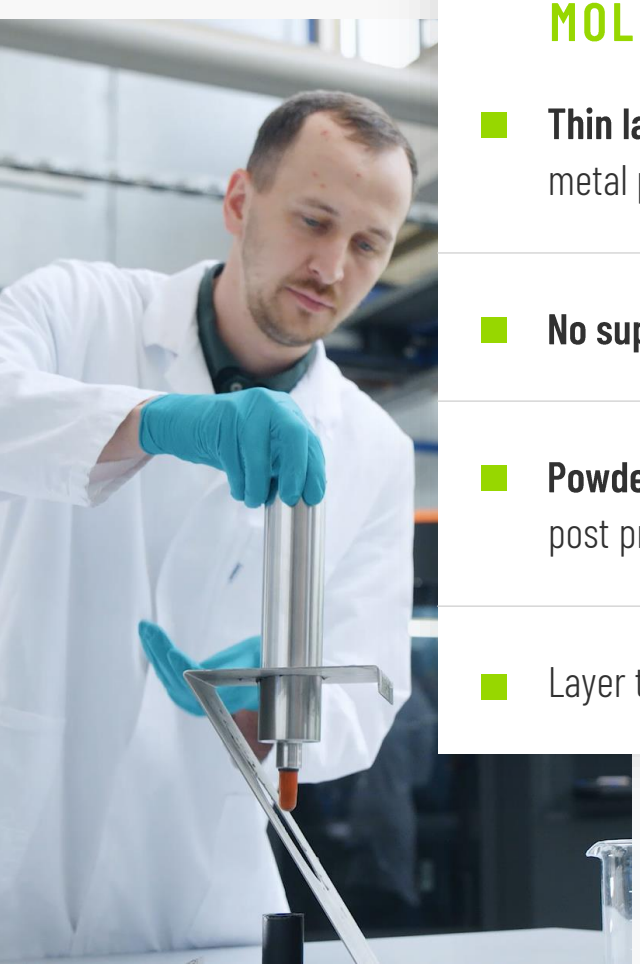
05 Cooling structures

06 Mounting or bonding structures

ADDITIVE MANUFACTURING: MOLDJET & CMF

INDUSTRIALIZED PROCESSES

FOR HIGH VOLUMES AND MAXIMUM COMPETITIVENESS



MOLDJET

- **Thin layer of molds** is printed, then a metal paste is placed in the printed mold
- **No support structures** necessary
- **Powder free process** and **Hands-free** post process
- Layer thickness from **40 to 200µm**

COLD METAL FUSION

- **Thin layer of feedstock** in which the binder is melted by a laser
- **No support structures** necessary
- Layer thickness **of 100µm**

Tritone
Industrial Additive Manufacturing

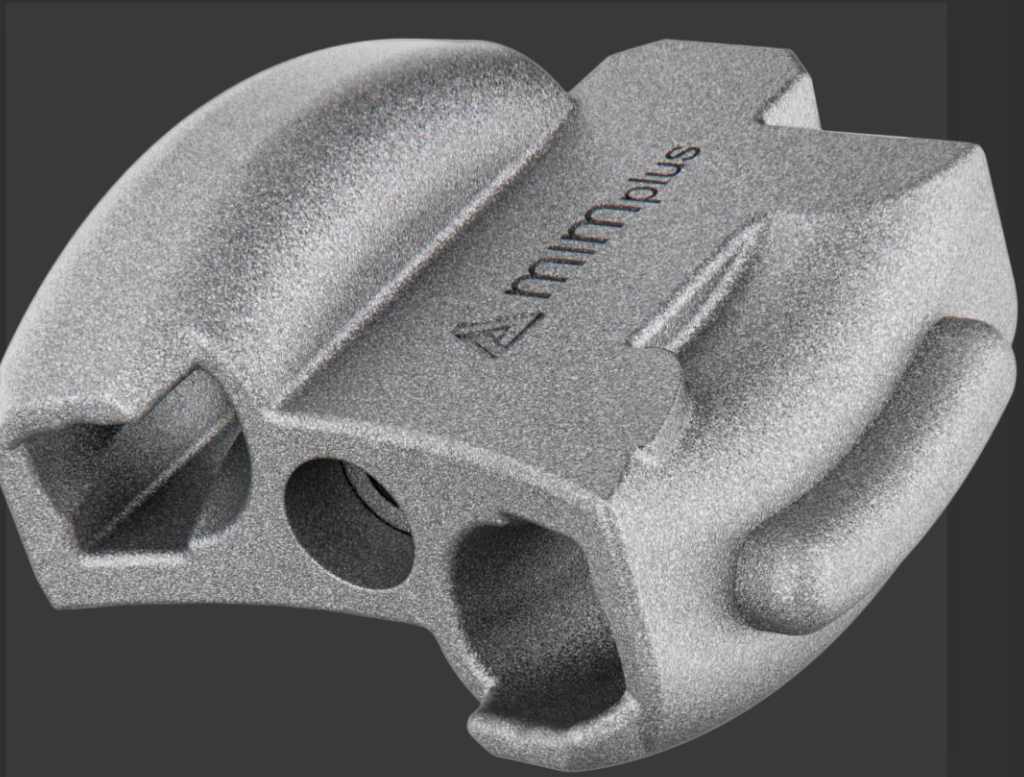
headmade materials®

MATERIALS

- **Low-alloyed steels for heat treatment**
- **Stainless steels**
- **Tool steels**
- **Titanium**
- **Copper**
- **Other alloys**

ADDITIVE MANUFACTURING

EXAMPLE



01 Integration of functionalities

02 Titanium

03 Blasting and Tumbling

04 Ultrasonic Bath Washing

05 Laser Marking

06 100% Testing

PLUS SERVICES

@OBE GROUP

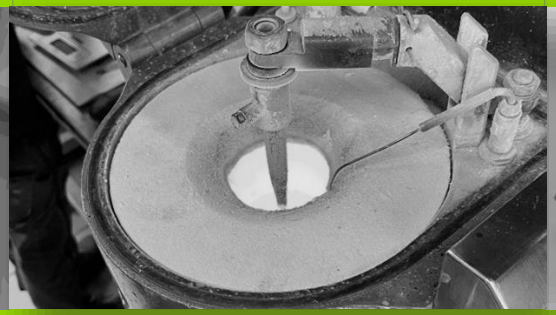
CNC MILLING

TUMBLING AND POLISHING

ASSEMBLY, LASER WELDING, AUTOMATION

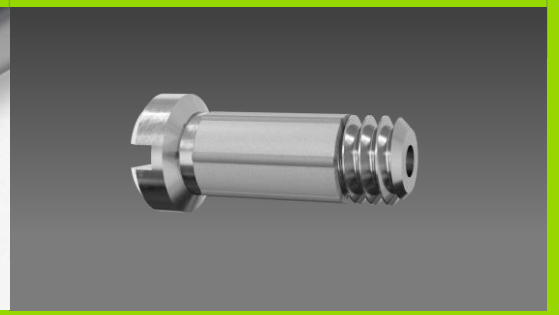
ELECTROPLATING

TURNING



INVESTMENT CASTING (0MM)

PROFILE



SCREWS

SOURCING & CONTRACT MANAGEMENT

SURFACE GRINDING

PVD AND DLC COATING

HOT ISOSTATIC PRESSING - HIP

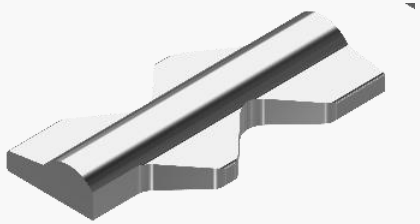
HEAT TREATMENT

PROFILE EXAMPLES

GUIDE RAIL - 1.4435
L 68 X W 3.8 X H 2.3

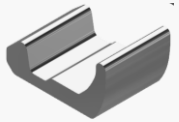
MOUNTING STRIP - 1.4301
L 6.5 X W 2.5 X H 0.8

CLAMPING PLATE - 1.4441
L 5.0 X W 4.0 X H 1.0



PIVOT SEGMENT - 1.3505
L 27.7 X W 13.5 X H 4.0

CONTACT - TITANIUM GR. 2
L 2.0 X W 2.0 X H 1.0

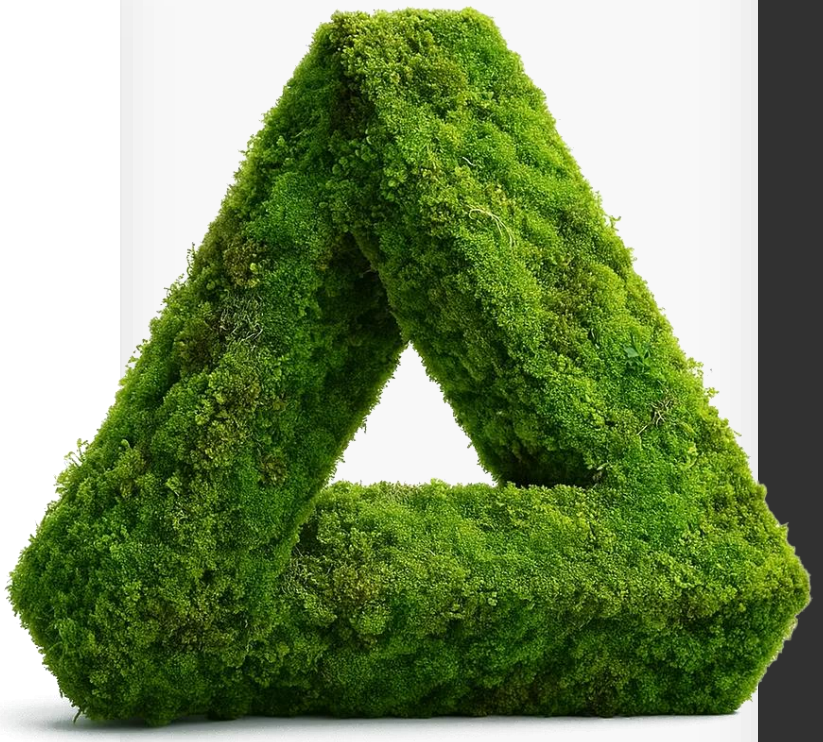


HOOK - 1.4435
L 2.6 X W 4.0 X H 1.8

RESPONSIBILITY AT EVERY STEP

SUSTAINABILITY

- Environmental management system **since 1996**
- Implementation of a **heat-recovery system** in 2023
- New **photovoltaic system** 2025
- **German facility** since 2024 in Scope 1 und 2 CO^2 **emission-free**
- **CO^2 neutral until 2040**
- MIM and AM production technologies with **high material utilization** and which allow the **recycling of production scrap**
- MIM magnets at **50-80% of global warming potential** compared to conventional magnets



ISO 14001 CERTIFIED

EMAS
GEPRÜFTES UMWELTMANAGEMENT
DE-180-00078

PM™
A recognized green technology

PRECISION IN METAL

THANK YOU!

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