- Materialography & Hardness Testing
- Heat Treatment
- Elemental Analysis
- Milling & Sieving
- Particle Characterization

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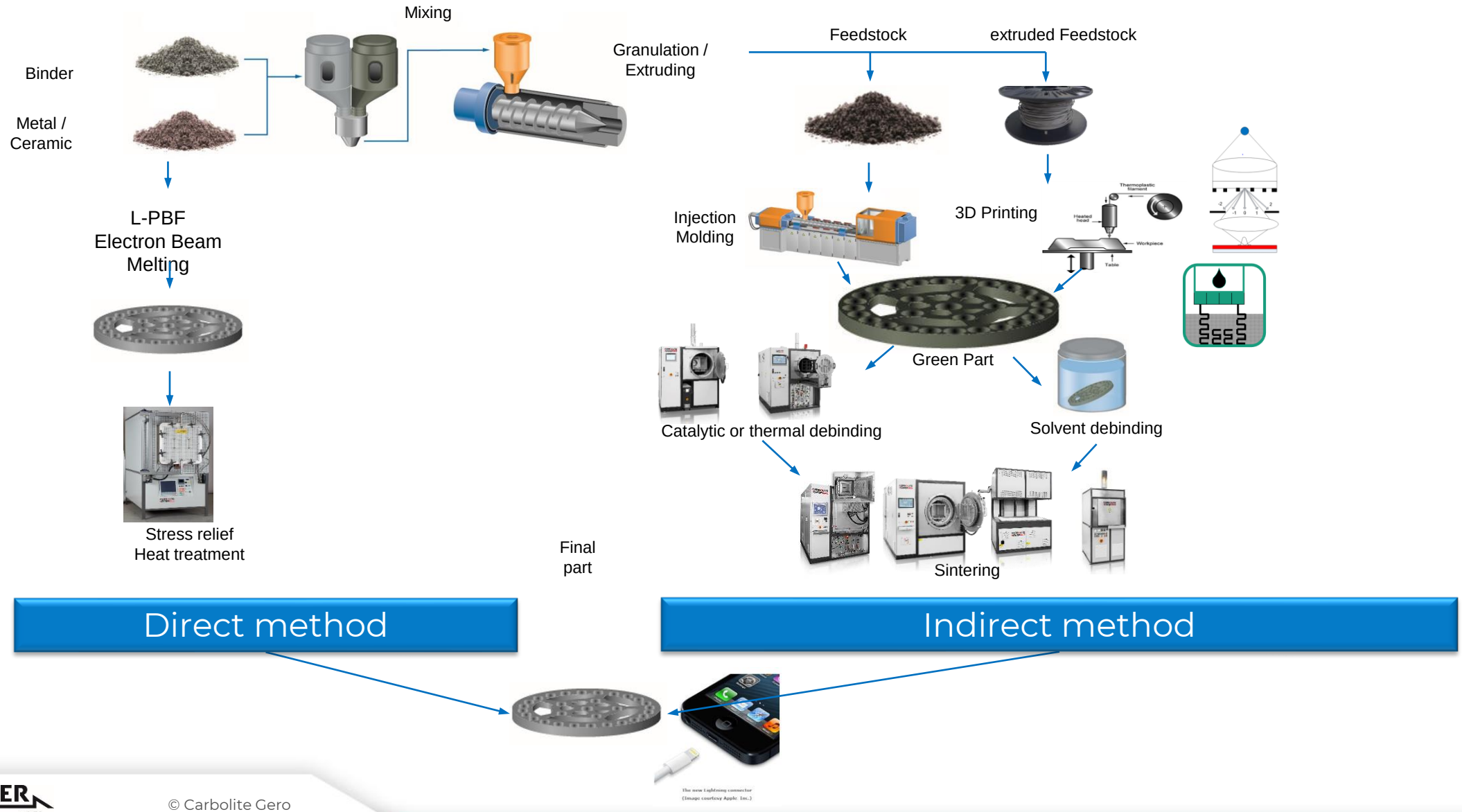
METAL INJECTION MOLDING



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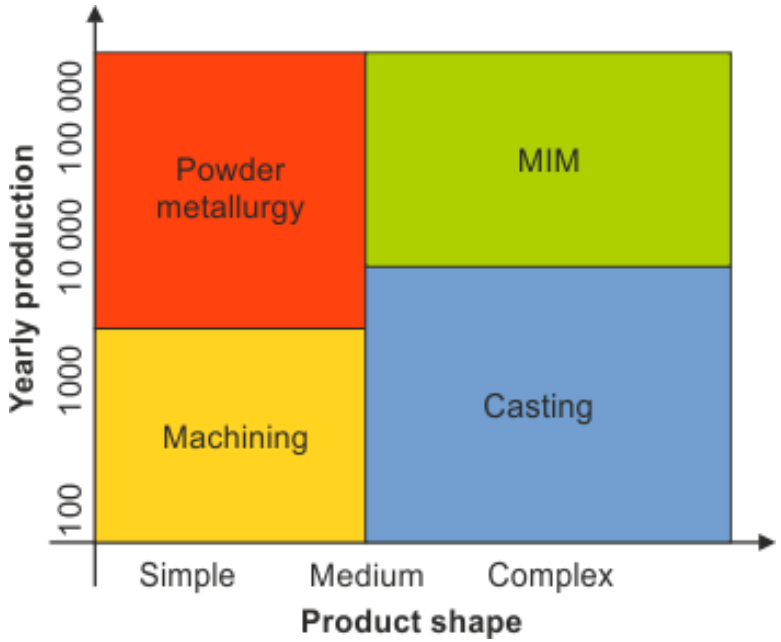
MIM CREATIVE METALLURGY, PRECISION SHAPING & MASS PRODUCTION

- Cost advantages
- Complex shapes
- Mass production
- Injection process like plastics, but perfomance of metals
- Excellent surfaces



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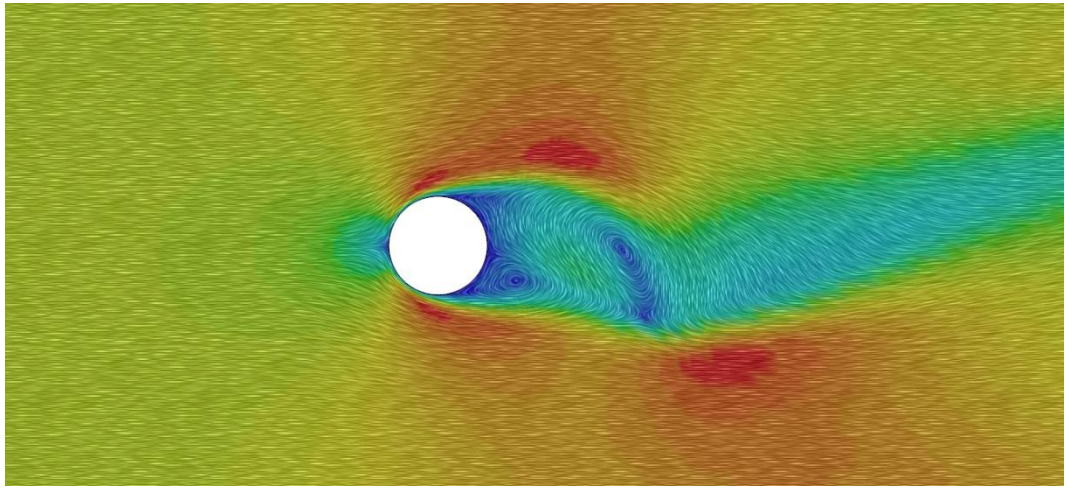
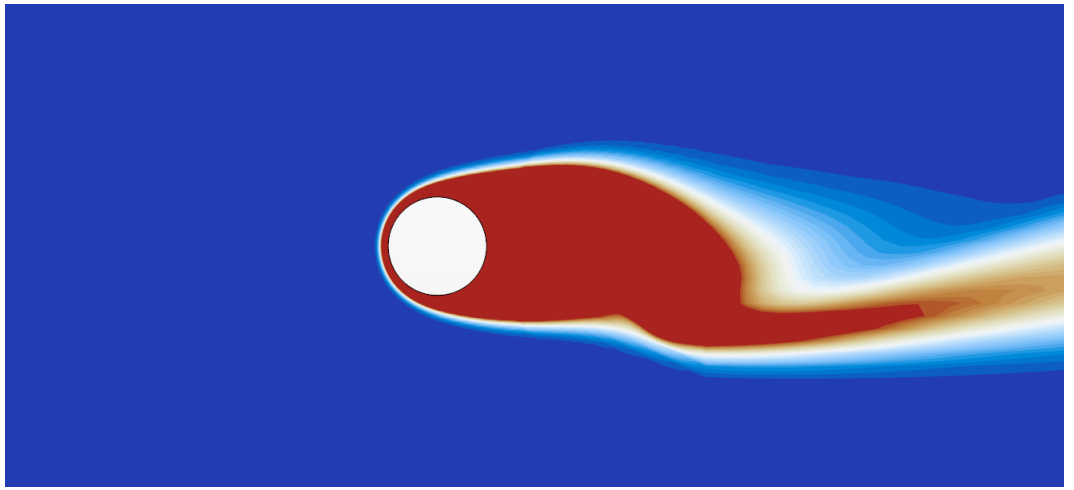
WE DEVELOPED A NEW GENERATION OF MIM FURNACES WITH 30% INCREASED THROUGHPUT

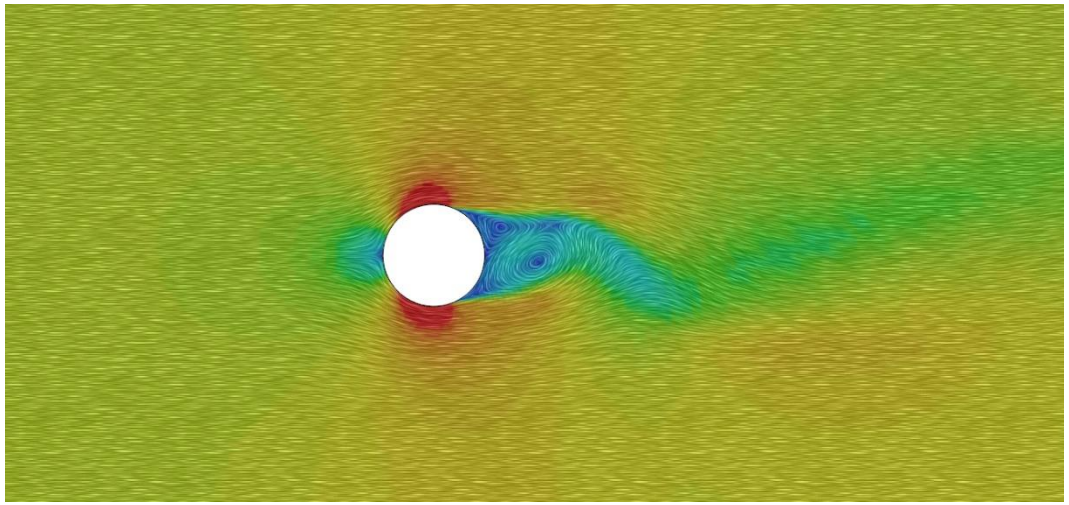
CARBOLITE GERO 30-3000°C

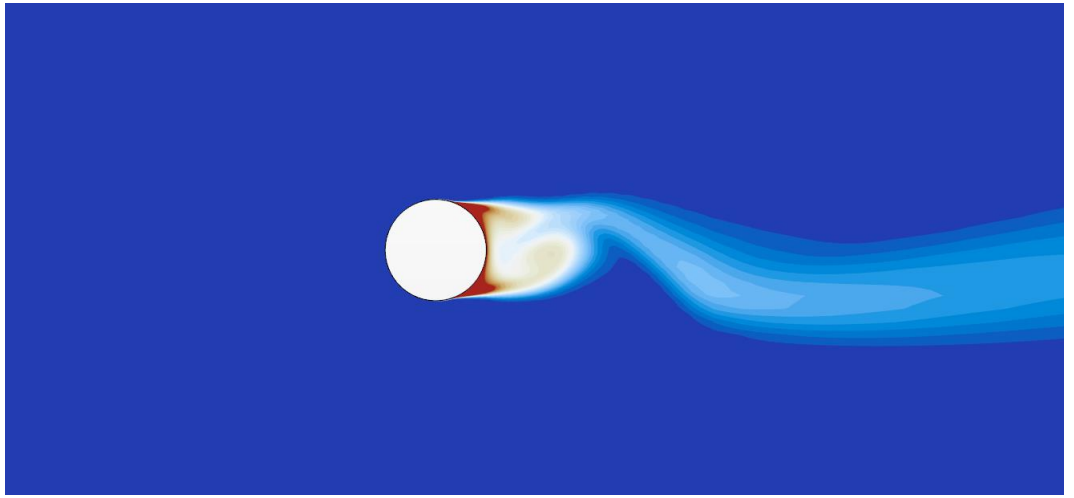
Laminar
Re = 255

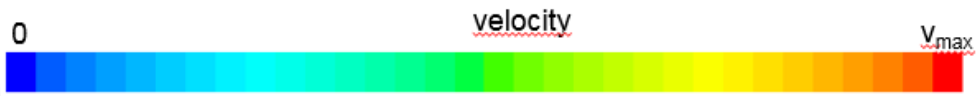


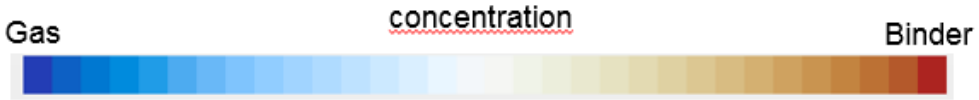


Turbulent
Re = $2{,}5 \cdot 10^7$









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EBO 120 MIM|CIM: CATALYTIC DEBINDING 120°C

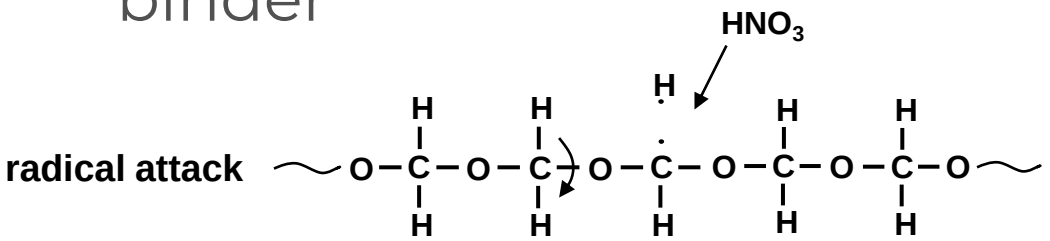
NEW

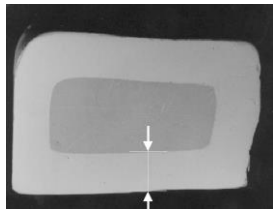
SAFETY

- Pressure test
- Post combustion
- No housing required

APPLICATION

- Catalytic (HNO_3) debinding of main binder





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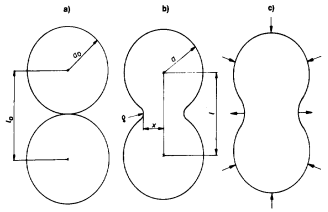
GLO: THERMAL DEBINDING & PRE SINTERING 1000°C

SAFETY

- Pressure test/leakage test
- Complete combustion

APPLICATION

- Removal of backbone binder
- pre-sintering



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HTK DEBINDING & SINTERING 1400°C

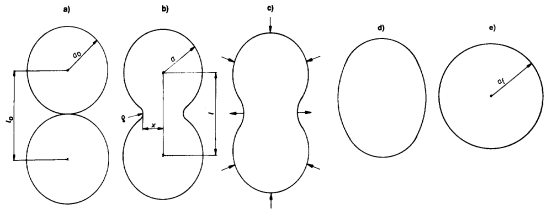
NEW

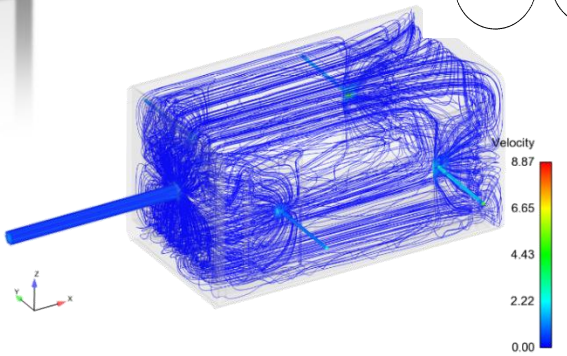
HTKMIM 3

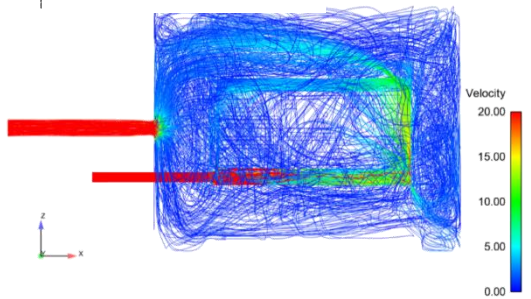
- For safe hydrogen heat treatments
- Metallic (MO/W) furnace for highest quality of the MIM parts, also for Titanium

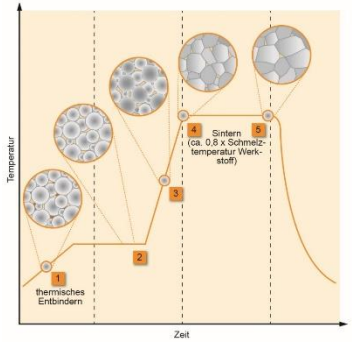
APPLICATION

- Removal of backbone binder
- full-sintering









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MIM A FAMILY OF PRODUCTS FOR YOU

CARBOLITE GERO 30-3000°C

Furnaces for (residual) debinding and sintering for laboratory and industry

	HTK 8 MO/16-3G MIM	HTK 25 MO/16-3G MIM	HTK 40 MO/16-3G MIM	HTK 80 MO/16-3G MIM	HTK 120 MO/16-3G MIM	HTK 200 MO/16-3G MIM	HTK 320 MO/16-3G MIM
T_{max} atmosphere [°C]	1600	1600	1600	1600	1600	1600	1600
$T_{max, work}$ atmosphere [°C]	1500	1500	1500	1500	1500	1500	1500
HxBxT Internal dimensions with retort [mm]	170x190x190	250x250x410	320x320x460	400x430x520 HTKMIM 2	400x420x790 HTKMIM 3	520x520x1000 HTKMIM 4	520x520x1500 HTKMIM 6
HxBxT Useful space with retort [mm]	160x180x180	240x240x400	300x300x450	380x410x500	380x400x770	500x500x800	500x500x1300
Number of stacks	Laboratory units						

Associated catalytic debinding furnace

	EBO 25 MIM	EBO 25 MIM	EBO 25 MIM	EBO 120 MIM	EBO 120 MIM	EBO 120 MIM Two runs	EBO 120 MIM Two runs
T_{max} atmosphere [°C]	130	130	130	130	130	130	130
HxBxT Useful space with retort [mm]	250x250x400	250x250x400	250x250x400	380x400x770	380x400x770	380x400x770	380x400x770
Installed power [kW]	3	3	3	15	15	15	15

Associated thermal debinding pre-sintering furnace

	GLO 40/11 MIM	GLO 75/11 MIM	GLO 120/11 MIM	GLO 260/11 MIM	GLO 260/11 MIM	GLO 600/11 MIM	GLO 600/11 MIM
T_{max} atmosphere [°C]	1100	1100	1100	1100	1100	1100	1100
T_{max} vacuum [°C] for different retort material	1.4841/601 900/1000	1.4841/601 800/900	1.4841/601 700/800	1.4841/601 600/750	1.4841/601 600/750	1.4841 500	1.4841 500
HxBxT Useful space [mm]	200x200x600	250x250x600	300x300x700	400x400x800	400x400x800	500x500x1200	500x500x1200
Installed power [kW]	25	40	60	70	70	95	95

OUR PERFORMACE FOR YOU

- More than 200 installed MIM furnaces worldwide. Customers mainly confidential
- Consultation for injection molding machines
- Consultation on BASF feedstock
- Develop your program in our MIM test center including full metallurgical analysis of the final part
- Supply, install and get the production started for EBO, GLO and HTK in your company

https://www.carbolite-gero.com/applications/heating-applications/metal-injection-moulding/
info@carbolite-gero.com

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