

OG[®]

culture has
no weight

METALFORM



METALFORM
ZERØ GRAVITY



METALFORM

We are an Italian company that manufactures integrated systems for windows and doors, and we have been doing so for over 70 years. We have conceived products expression of design and innovation that have become reference models for the industry in this sector. Our systems contribute to the development of restoration projects and interpret the trends of contemporary architecture.

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We offer to the architectural project nine different systems to select the most appropriate opening typologies and to solve the delicate balance between glass and frame.

The profiles might have strong and sharp lines, or very subtle ones with refined mouldings; inexhaustible design variations to find the right relationship between the surfaces of frames, facades and interiors.

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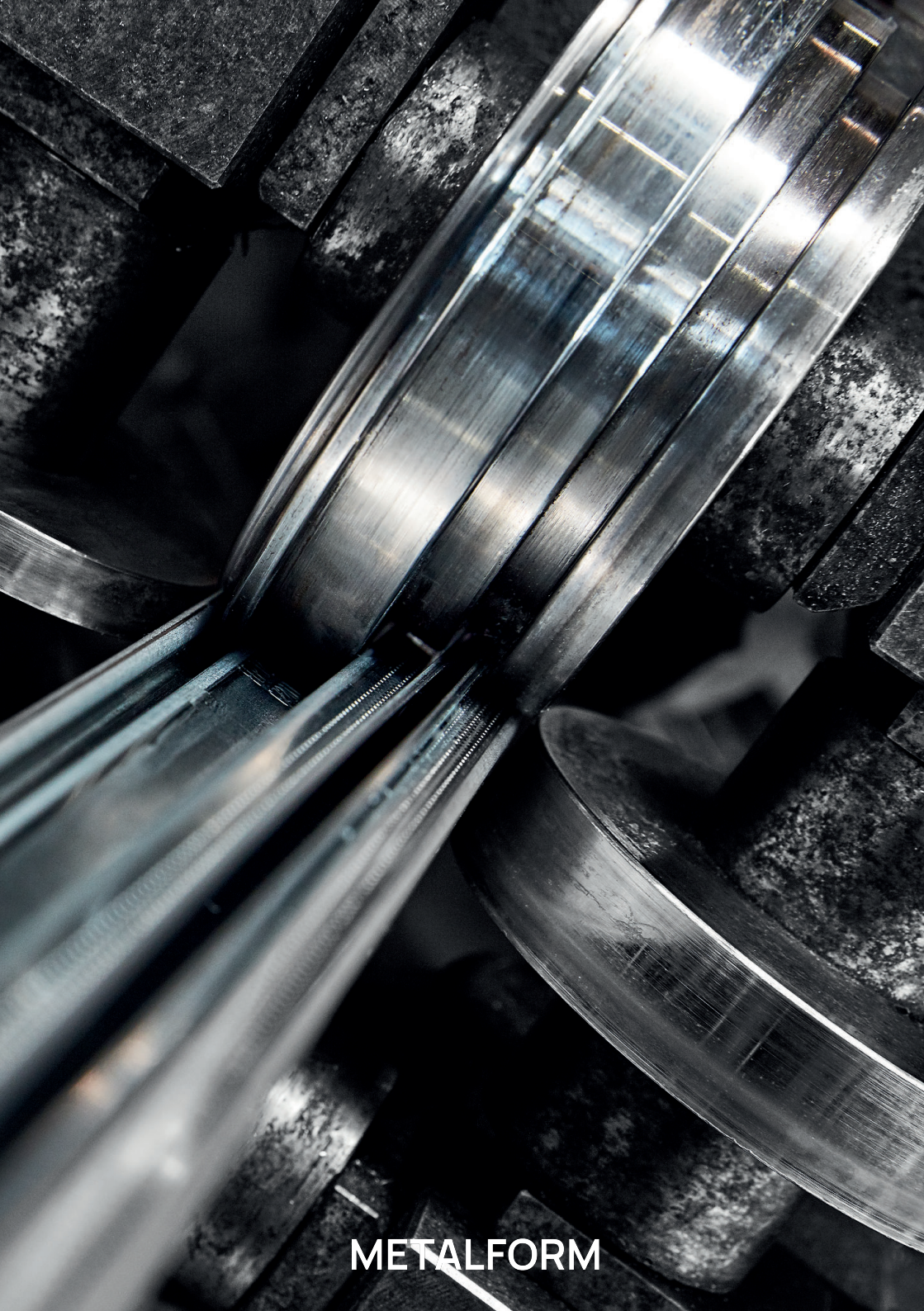
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In addition to the refined design, our profiles present a unique material richness in the world of windows and doors, as they are made of precious, solid and durable materials of extraordinary expressive capacities thanks to their natural surfaces: the elegance of brass (natural or patinated), the strength of stainless steel (natural or blackened), the warmth of CorTen, the versatility of galvanised steel.

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ØG[®]

why is born

we know that, in order to lift and slide a door or window of great dimensions and hence weight, we must adopt an elaborate system equipped with electric motors for lifting and sliding. Our aim, however, is to operate it manually, without electricity, freeing the frame from its weight, so that it can be moved as if it were in the absence of gravity.

ØG[®] = zerø gravity

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how is born

to free a door or window from its weight and make it float in the air, sliding without frictions, the best solution is that of magnetic levitation. Wanting to apply this technology without resorting to electrical energy, we identified a patent by Ironlev®, a peculiar geometry of passive magnets for lifting large masses along a thin track.

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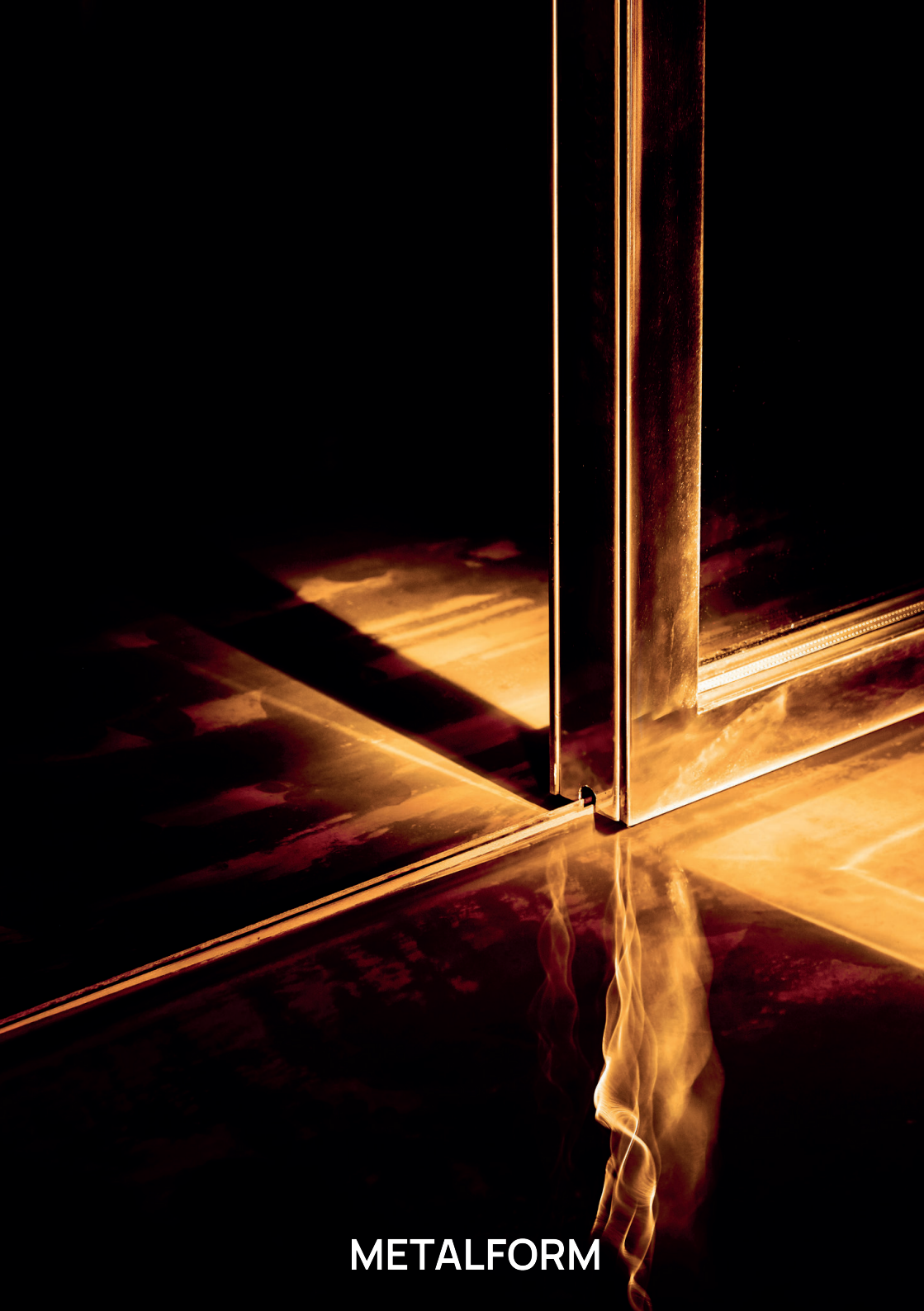
ØG®

just as a ship floats in the water,
so the ØG® lift-and-slide door or
window fluctuate in the air, freed
from its weight it flows effortlessly,
slowed down only by the inertia
of its mass. The naturalness and
power of magnets give to the simple
gesture of man, to lift and slide a
sash of enormous dimensions, an
unexpected force, perfect, without
noise, without electricity.

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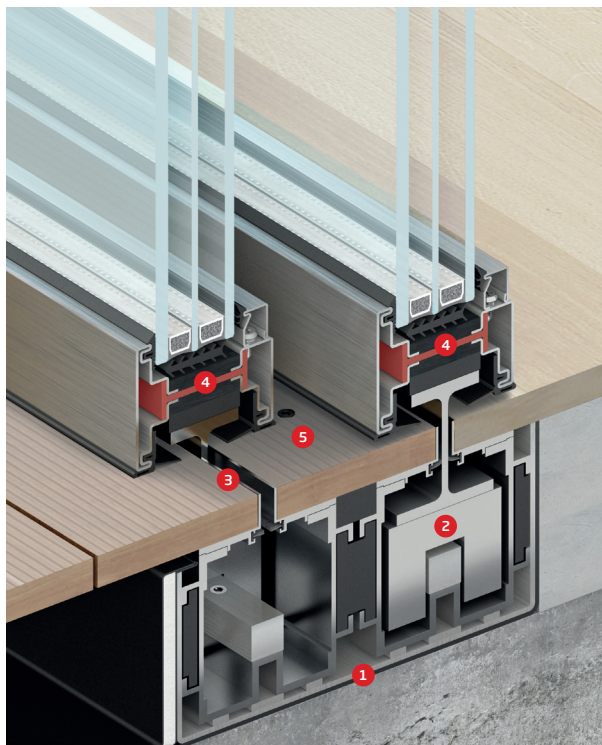


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ØG[®]



- 1 work group
- 2 Ironlev[®] magnetic levitation skid
- 3 sliding loop-hole
- 4 windows/shutters
- 5 flush capping profile, continuity between inside and outside

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Passive magnetic levitation system, with Ironlev® technology, for the movement of lift-and-slide doors.

ØG® [zerø gravity] consists of a levitation unit recessed into the floor made of a sliding rail, the Ironlev® magnetic pads and a connection beam to the sash frame.

The system is accessible for maintenance through removable capping profiles that can be fitted with the same finishes of the floor for a perfect continuity between internal and external floorings. Only an 8 mm gap, sealed with brushes, remains visible along the all length of the door, completely flush, avoiding any possible tripping.

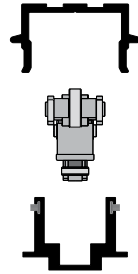
Along the upper track the ØG® system is fitted with mechanisms to counteract the lifting thrust of the magnets and then lower the sash providing locking and tightness.

The system does not require electricity, it works manually even with great weights, up to 1000 kg.

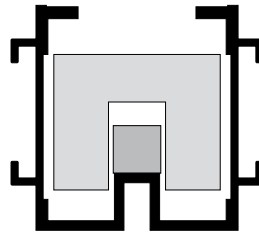
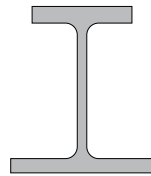
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ØG[®] patent

lowering and closing
unit

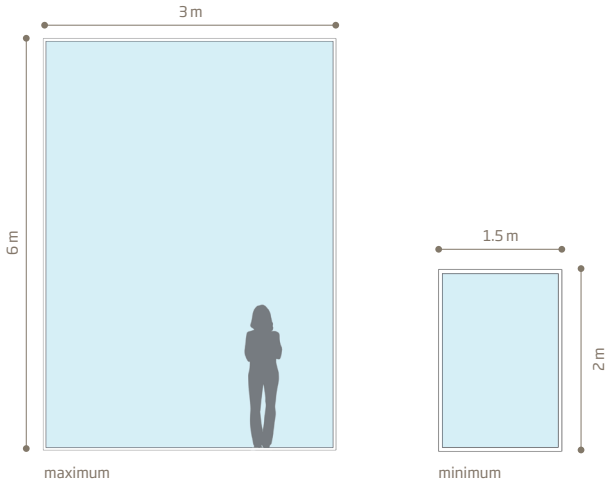


levitating and sliding
unit

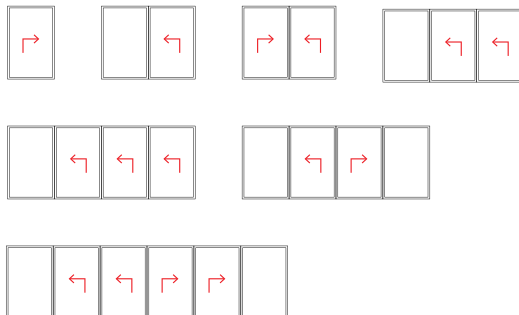


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dimensions

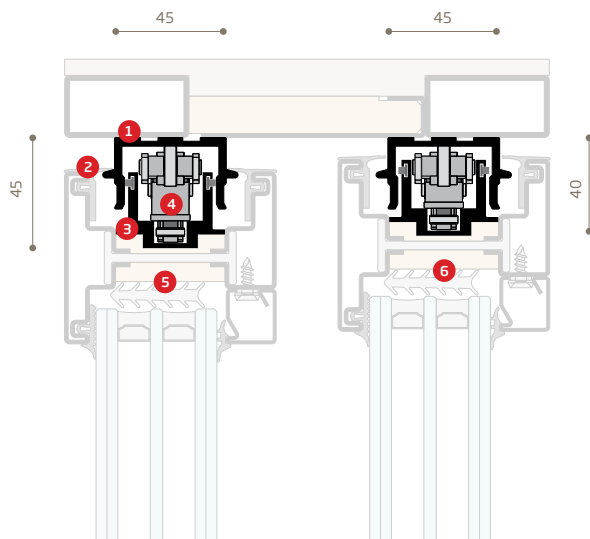


configurations



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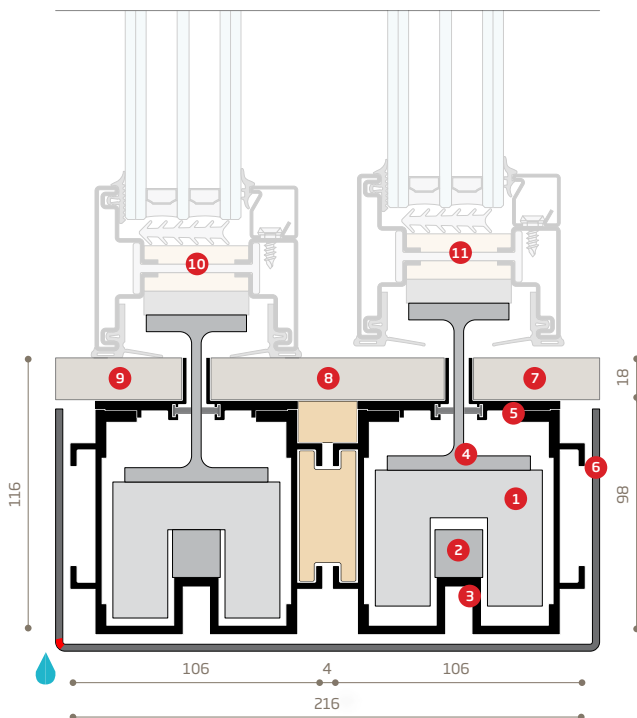
upper node



- ① thermally insulated polyamide guide
- ② double seal gasket
- ③ continuous alignment guide with brush-holder
- ④ lowering and closing mechanism
- ⑤ lowered sash frame - closure
- ⑥ lifted sash frame - opening

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lower node



- 1 Ironlev® magnetic levitation runner
- 2 ferromagnetic stainless-steel rail
- 3 alignment modular profile
- 4 connecting beam between runner and frame
- 5 finishing profiles with brush-holder
- 6 containment and laying box
- 7 internal floor
- 8 removable capping profile for access and maintenance
- 9 external floor
- 10 lowered sash frame - closure
- 11 lifted sash frame - opening

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FAQ

Does the system need electricity to work?

No, the magnetic field is passive, i.e. made by permanent magnets.

Can passive magnetism have negative effects on health?

No, the magnetic field generated by the system, embedded into the floor, is confined to the runners area; it has no negative effect on health, ref. Legislative Decree 159/2016.

Is the sash restraint system safe?

Yes, the restraint system prevents the leaf from tilting out of its sliding plane, even in the event of any misuse.

Does the system remain operational and safe in the event of flooding?

Yes, the system remains functional and safe, since the magnetic field is not affected by the presence of water.

Are air-watertightness, wind load resistance, acoustics and thermal insulation performance similar to standard systems?

Yes, the system is designed to have the same performance of traditional lift-and-slide systems.

Can the magnets be demagnetised?

No, they might only demagnetize up to a maximum of 5% in 20 years, with no side effects on the functioning of the system, to then stabilize for an indefinite period of time.

Can the magnetic field affect mobile phones, magnetic cards or any other objects sensitive to magnetism?

No, if electronic devices are placed nearby the runners, no negative effect occurs.

Does the sliding system require maintenance?

It is suggested to keep the running rail free from any accumulation of dirt, but it does not require lubrication.

How does magnetic levitation work?

The system of runners generates a passive magnetic field that balances the weight of the sash (magnetic spring effect) by keeping it lifted permanently.

How do I raise and lower the door or window?

By turning the handle. It is lowered by overcoming the magnetic thrust provided by the runners; the magnetic system remains always in operation, even when the sash is lowered.

What does it take to lift it and then slide it?

It depends on the weight of the sash; for example, if it weighted 700 kg, the effort to lift and lower it would be about 1 kg, while for sliding it, less than 1 kg.

the need
of a door
is to be
crossed

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MASTERS OF METAL

UNITED KINGDOM

METALFORM

NORWAYMETAL LTD

53 Chelsea Manor Street

London, SW3 5RZ

SALES@METALFORM.UK

+44 20 81298814

GERMANY

METALFORM GMBH

Carl-Zeiss-Ring 15A

85737 Ismaning

SALES@METALFORMGROUP.DE

+49 17663630406

NORWAY

METALFORM AS

Brochmannsveien 2

1950 Rømskog

SALG@METALFORM.NO

+47 401 62 446

METALFORMGROUP

SALES@METALFORMGROUP.COM

