

English edition



INNOVATION

# ***FlexBoard*** **MOTION** PPS



## **DIGITAL LED-ADVERTISING** **Set your dasher board in MOTION**

[www.engo-ice.com](http://www.engo-ice.com)

FRONTLEFT

Distribution partner

**engo**  
ice arena equipment



## Digital animated LED-banners Entertain and advertise

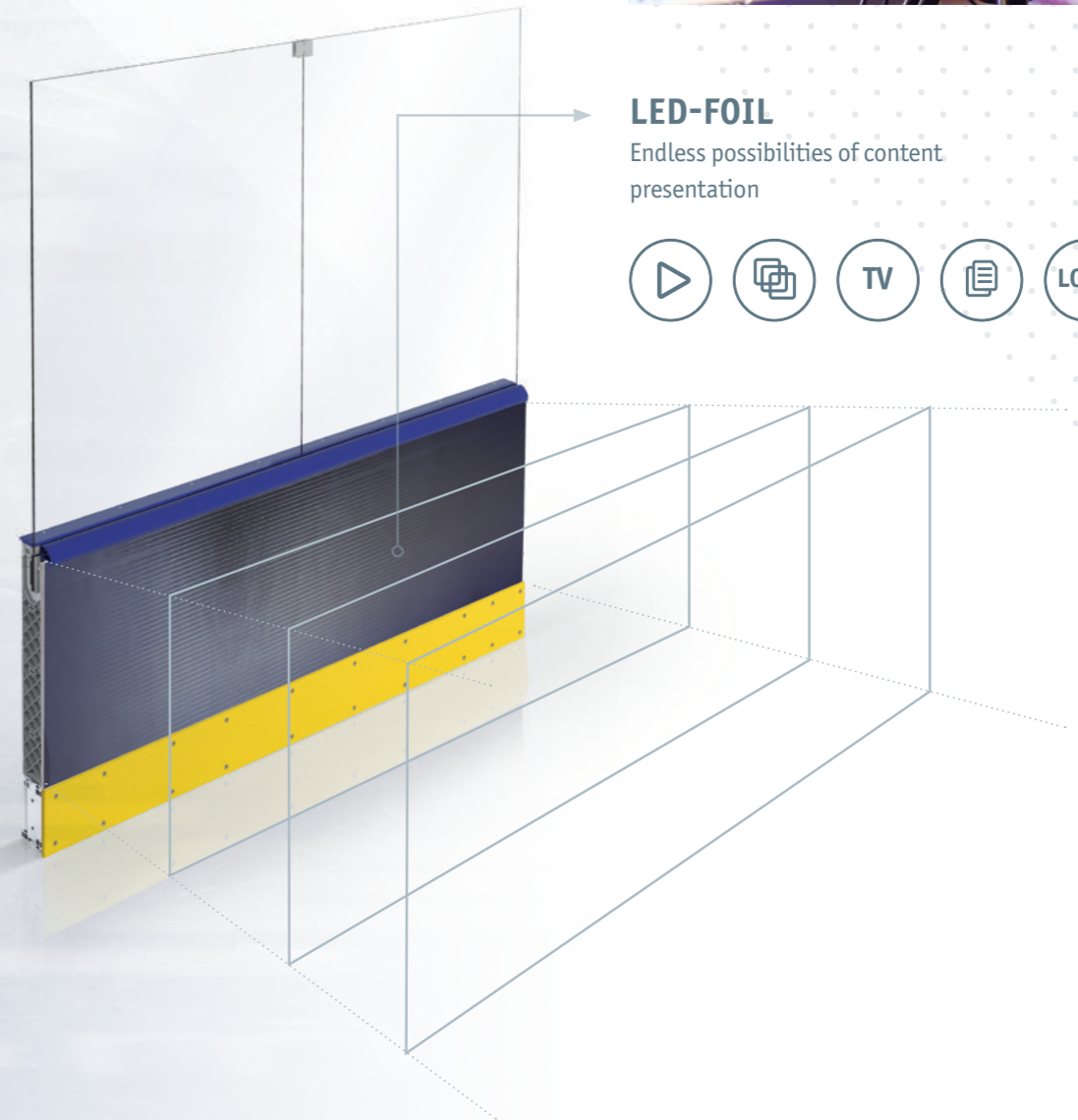
Digital, animated LED advertising **increases the attention** of viewers and TV recipients. Studies show **longer viewing time and better recall** compared to static print advertising.

In addition, digital LED banners can react to the ice action in real time and contribute to the **entertainment** of the viewers during ice hockey matches, ice galas or figure skating competitions.

**FlexBoard** MOTION  
PPS



**ARE YOU READY?**



**LED-FOIL**  
Endless possibilities of content presentation





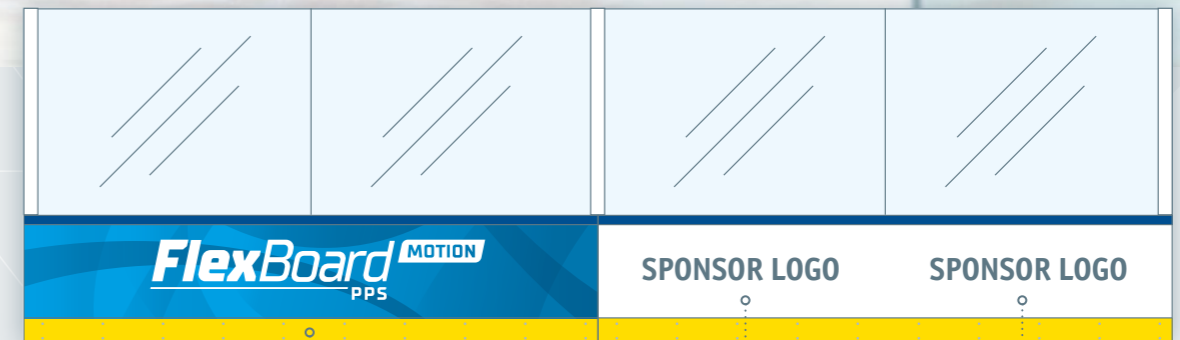
## New sponsorship potential

Sponsors' visibility at ice sport matches and events is primarily focused on the dasher board. Thanks to digital LED advertising banners, unlimited possibilities are opening up:

- Sponsors no longer have to choose a single advertising message.
- One surface offers countless possibilities for different content and many different sponsors

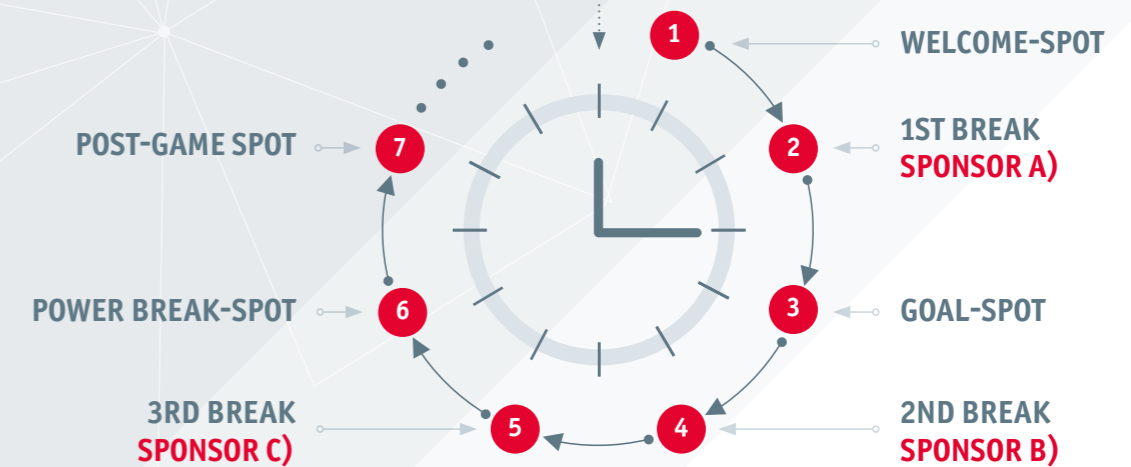
### engo-Tip

To gain the best possible visibility on TV we suggest to position one LED-element next to each bully point.



Dasher board with static print advertising

**Example:**  
Dasher board with **animated digital LED-advertising**





# FlexBoard PPS MOTION

## Why choose FlexBoard PPS MOTION?

- Multiple sponsors alternating on the same space
- Quick and easy sponsor change with a few clicks
- Exclusively software and W-Lan based
- The dasher board remains flexible in its structure
- Can be retrofitted for older FlexBoard PPS
- Cold resistant up to  $-15^{\circ}$  and non-condensing
- Show effect for all kinds of ice events (matches, galas, ...)
- Place it everywhere on your rink (center board, players' boxes, radius, ...)
- Remote access (mobile, desktop, laptop, ...)
- Compatible with all common standard video formats
- Daylight compatible for open ice rinks



## FlexBoard PPS MOTION

### The dasher board with integrated LED-foil

The dasher board elements around the goal area are particularly interesting for advertisers, as this is where the most exciting scenes take place and receive special visibility on TV.

### Bendable, ultra-thin LED foil

The FlexBoard PPS Motion dasher board from engo is equipped with an innovative LED foil. This is ultra-light, thin and bendable. As a result, it **adapts perfectly** to the curved board elements in the radii.

There are no limits to LED dasher board advertising. Even elements with doors or gates can be equipped with it - for a **360° LED ice rink**.

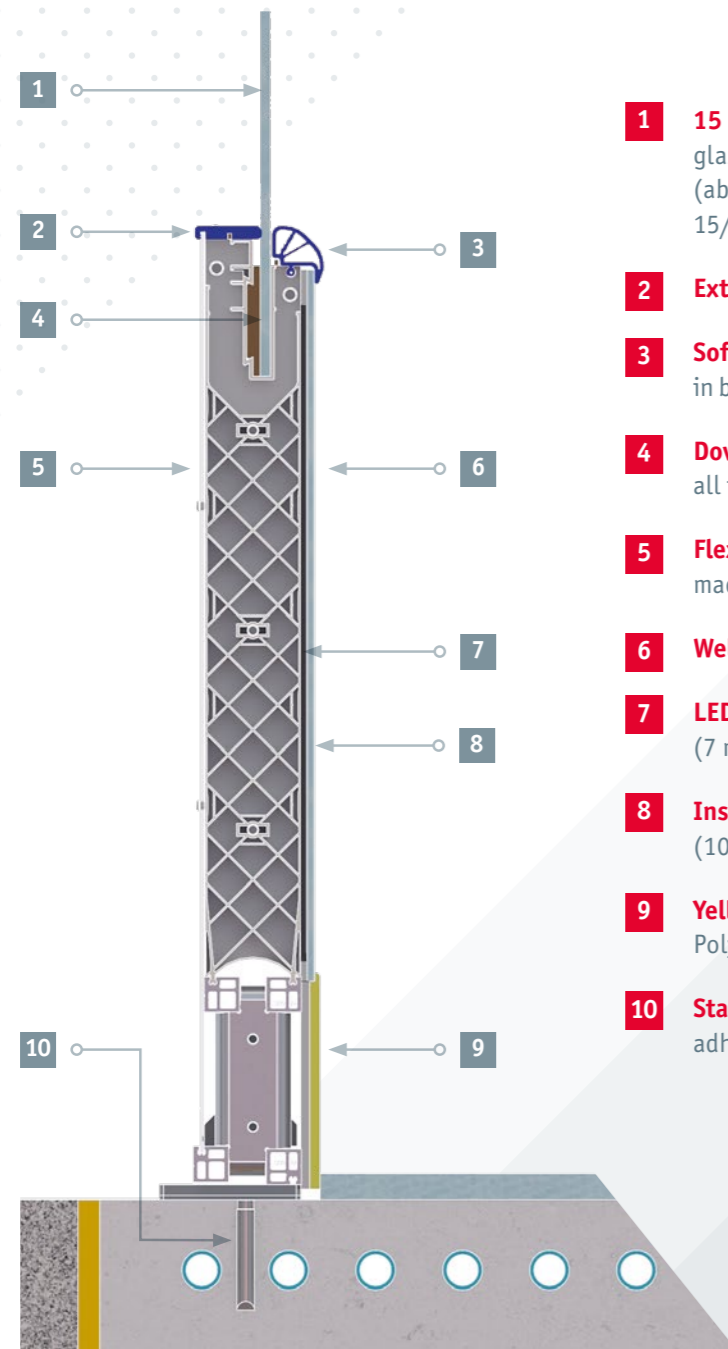


## LED-technology



# FlexBoard PPS MOTION

Due to the low installation depth, the dasher board construction remains completely untouched and therefore keeps its certifications in terms of flexibility and safety. The LED foil is covered with a transparent polycarbonate sheet of calculated thickness for protection.



- 1** 15 mm acrylic shielding with glazing posts, up to 2.400 mm high (above the handrail) or as alternative 15/12 mm tempered glass shielding
- 2** External handrail made of PE HD 500
- 3** Soft rounded handrail made of polymer in blue with air chambers (Red as optional)
- 4** Dovetail shielding fixation compatible with all types of glass shielding
- 5** Flexible board-upright made of fiberglass-reinforced plastic
- 6** Welded aluminum frame
- 7** LED-foil (7 mm thickness, 750 mm height)
- 8** Inside polycarbonate white paneling (10 mm thickness)
- 9** Yellow kick plate made of Polyethylene (12 mm thickness)
- 10** Standard anchoring with immersed adhesive anchors in the concrete

## How it works Technical description

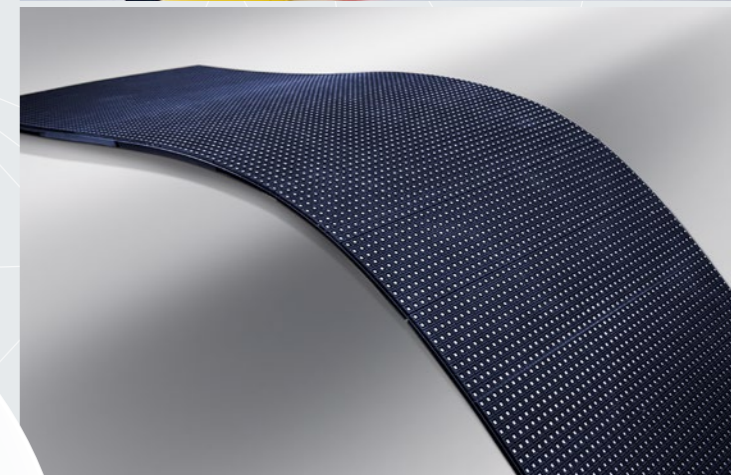
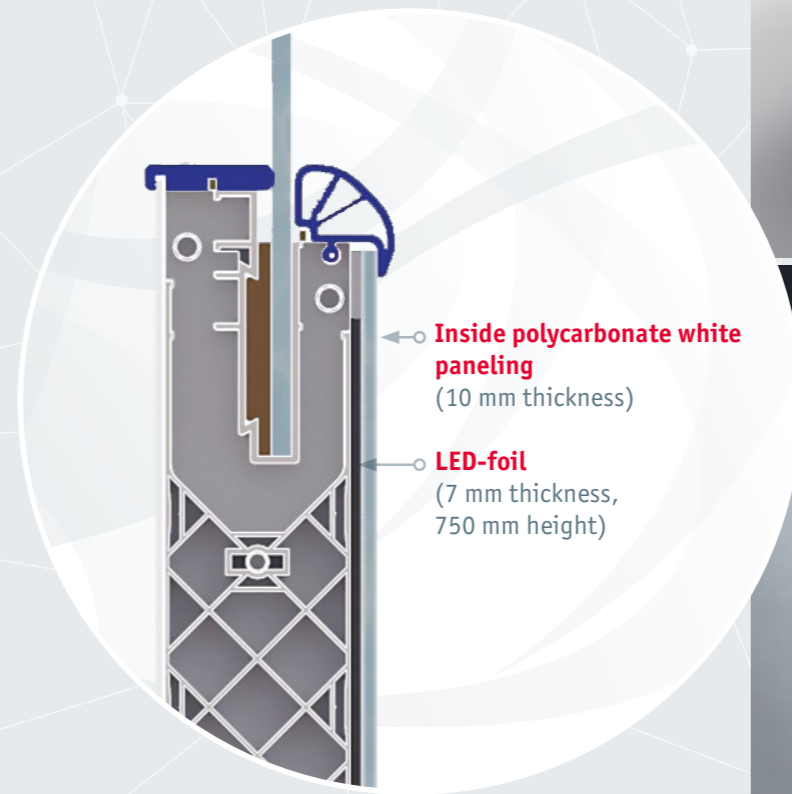
The LED foil is integrated inside the dasher board body, including the installation and control system. It only needs power supply provided by the ice arena.

The LEDs with a pixel pitch of 5 mm are embedded in a soft urethane bed and thus optimally protected against impacts.

The innovative, bendable LED foil is 7 mm thin and weighs only 6.25 kg per square meter.

The LED foil is designed for maximum viewing angles (horizontal 160° - vertical 160°).

The LED foil works in combination with the control unit and the software.







• Bolzano, Italy

**Technical specification** for flexible LED Module

STRUCTURE PARAMETER	
Nomination	Flexible display ZS RGB P5
Pixel composition	Full color SMD 1818 Black
Pixel pitch	5 mm
Graphic resolution - Pixel density per m <sup>2</sup>	dot/m <sup>2</sup> 40000 RGB SMD LED
Module resolution	48x150
Module size	750 x 240 x 7 mm
LED-Pixel per single foil	7'200 LEDs per foil
LED-Pixel per linear meter	30'000 LEDs per lm
Module weight	1.5 kg
Surface processing	Conformal coating
Material of bottom case	rubber
OPTICAL PARAMETER	
Brightness	(NIT) 1200 cd/m <sup>2</sup>
Color coordinates	[x, y,] [0.31, 0.32]
Color temperature	K 2600-9500
Viewing angle of the video screen	horizontal/vertical
Horizontal viewing angle	° 160 (± 60°)
Vertical viewing angle	° 160 (± 60°)
Minimum viewing distance - m	m 5
Optimum viewing distance - m	m 15 - 150
Maximum viewing distance - m	m 220
Physical distance - mm	P5 (high contrast)
Characters per line - No.	Full width and length of foil possible
Contrast	5000 : 1
Color range	16'7 Million
Minimum character height - mm	1 pixel
Height of video screen area	750 mm
Width of video screen	min. 240 mm, extendable to the entire perimeter of the dasher board systems
ELECTRIC PARAMETER	
Driving IC	MBI5253
Scanning method	lines 25 Scan
Module power consumption	W 50
Power supply	AC 110/230V-1000W
Chassis input voltage (power supply)	VAC 86~264/50Hz
Power distribution	W / m <sup>2</sup> 350
Maximum power distribution	W / m <sup>2</sup> 280
Average power consumption	W / m <sup>2</sup> 85
Maximum heat dissipation	BTU/HR/m <sup>2</sup> 2040
Average heat dissipation	BTU/HR/m <sup>2</sup> 570
PERFORMANCE	
Grey level	14~16bit
Refresh rate	≥2880
Frame frequency	59.94, 60, 120
Interface type	HDMI, WIFI, Wlan, DVI, SDI, DF
Signal transmission distance	CAT6E <100m, M-fiber ≤ 500, S-fiber ≤ 10km
ENVIRONMENT	
Storage temperature	-40 °C~60 °C
Operating temperature	-10 °C~40 °C
Storage humidity	10%~90% RH
Working humidity	10%~90% RH
Protection Level	IP45
LED lifespan (75% brightness)	L50 @ 25 °C - 50000 Hrs
MTBF	L50 @ 25 °C - 10000 Hrs

## First experiences & feedbacks

### Successful test

In October 2020, engo's new LED dasher board was presented for the first time in Switzerland at a Swiss Cup match.

Not all leagues have yet included LED-advertising on the dasher board in their rule book. Therefore this presentation was a test and important step.

„More and more new show and advertising elements are being sought. Also in ice hockey. What has long been common in other sports is now finally arriving also in ice hockey.“

■ Pierre Fasel, distribution partner engo

### Customer feedback

„This is a unique opportunity for our various sponsors and business partners to increase their visibility. Not only: thanks to the various features, we can offer added value to our spectators through specially created videos of goals, powerplay and other game situations. This novelty has already been positively received by the audience during the direct TV broadcasts.

When our fans can watch the games in the arena again, I am sure that this fantastic product will be able to unfold its potential even more.“

■ Dr. Dieter Knoll, CEO HCB Südtirol Alperia

• First presentation in Kloten, Switzerland



• First assembly in Bolzano, Italy



# engo

ice arena equipment

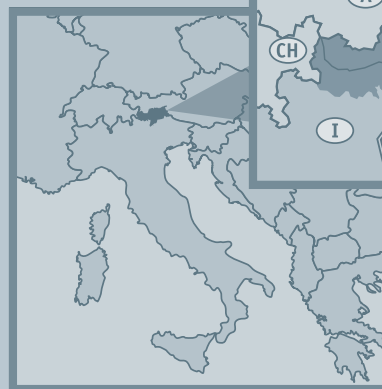
## engo Ltd.

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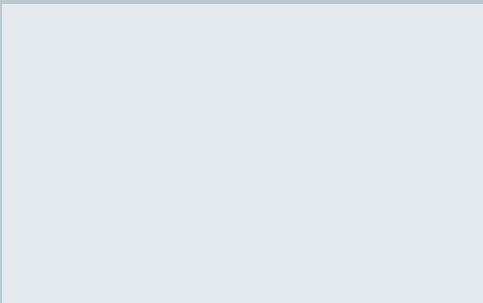
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Distribution partner

FRONTLEFT



engo Dealer



Certification



Member



Member of the TechnoAlpin Group

TECHNOALPIN



This brochure has been prepared only as a general guide for the customer. Some equipment described or shown may be optional at additional cost. Specifications are subject to change. For current product information, please contact the engo Company.