

Reflex-Rol

SOLAR GLARE, REFLECTION AND HEAT CONTROL SYSTEMS

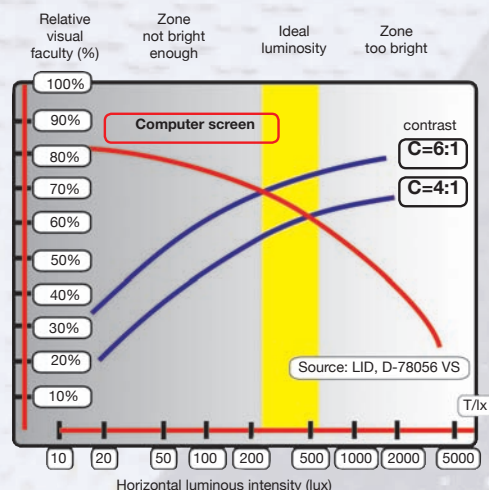


Reflex-Rol is a division of De Leeuw Ltd

Reflex-Rol

The universal system combining all functions in a single reflector

- **First-class thermal protection**
- **Ergonomic solar shading**
- **Regulation of luminous intensity and brightness, both on the work surface and in the room**
- **Outward visibility**
- **Daylight entering without causing discomfort**
- **Additional thermal insulation**



INNOVATIVE AND DECISIVE ADVANTAGES FOR SOLAR AND THERMAL PROTECTION



Tel: 01989 750704 Email: info@reflex-rol.co.uk Web: www.reflex-rol.co.uk

THERMAL INSULATION

Reflex-Rol blinds are fitted with a semi-transparent, metallic polyester foil with excellent reflective power. The thermal insulation has a twofold action - in summer it prevents the greenhouse effect associated with large expanses of glass and in winter it prevents heat loss.

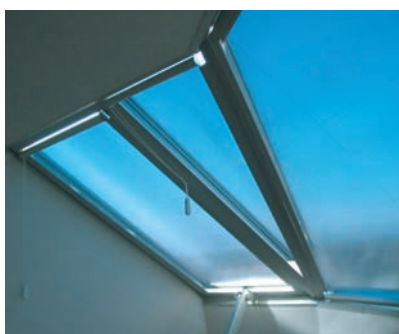
ANTI-GLARE



Reflex-Rol has studied the problem of excessive glare in-depth, particularly when working with computers. This research carried out in conjunction with various university institutes reveals that only soft light, filtered uniformly, guarantees good visual comfort, as there is no loss of contact with the natural exterior light. For this reason Reflex-Rol fits semi-transparent metallic polyester foils to its blinds.

SOLAR PROTECTION

Intense exposure to the sun's rays causes excessive temperatures in summer and damages the furniture. With Reflex-Rol blinds, electro-magnetic waves pass through the exterior glass, bouncing off the metallic reflectors, and are then reflected once more towards the exterior without being converted into long waves and therefore heat energy. The room remains at a pleasant temperature, savings are made on air-conditioning costs, and outward visibility is maintained.



REFLEX-ROL DATA

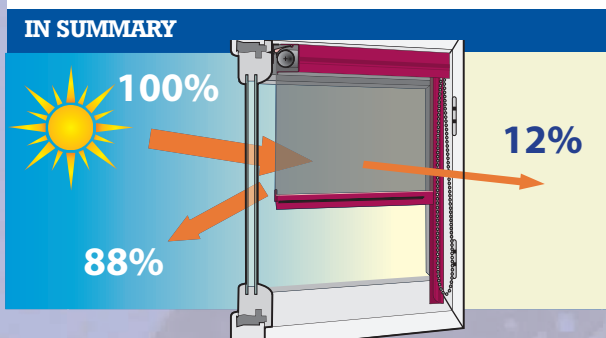
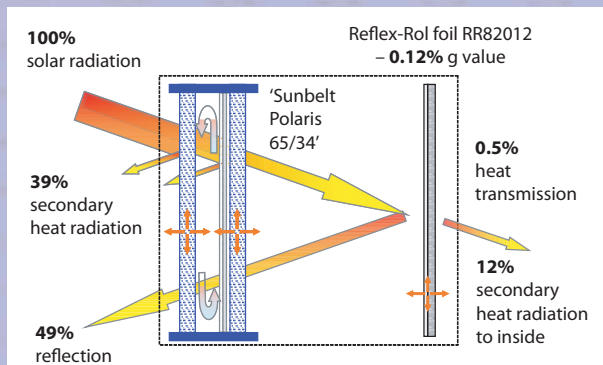


Today, European standards are in place in order that building engineers can make accurate calculations in respect of the heating, cooling and lighting requirements and performances of a building.

Below please find details of the results of the Reflex-Rol Filters when used as internal shading in combination with the four standard glazings of EN14501 (12).

| Shade Sample | Single Clear Glass (A) | | | Double Clear Glass (B) | | | Solar Control 1 (C) | | | Solar Control 2 (D) | | | R_s^* | T_v^* |
|--------------|------------------------|------|---------|------------------------|------|-------|---------------------|------|-------|---------------------|------|-------|---------|---------|
| | g_{tot}^* | SC* | F_C^* | g_{tot} | SC | F_C | g_{tot} | SC | F_C | g_{tot} | SC | F_C | | |
| RR83033 | 0.50 | 0.58 | 0.59 | 0.52 | 0.60 | 0.69 | 0.46 | 0.53 | 0.78 | 0.28 | 0.32 | 0.87 | 30% | 1% |
| RR81023 | 0.29 | 0.33 | 0.34 | 0.33 | 0.37 | 0.43 | 0.34 | 0.39 | 0.57 | 0.24 | 0.28 | 0.76 | 70% | 2% |
| RR82023 | 0.30 | 0.35 | 0.36 | 0.34 | 0.39 | 0.45 | 0.34 | 0.40 | 0.58 | 0.25 | 0.28 | 0.77 | 67% | 3% |
| RR80022 | 0.23 | 0.26 | 0.27 | 0.27 | 0.31 | 0.36 | 0.30 | 0.35 | 0.51 | 0.23 | 0.27 | 0.73 | 81% | 2% |
| RR82013 | 0.25 | 0.29 | 0.29 | 0.29 | 0.34 | 0.39 | 0.31 | 0.36 | 0.53 | 0.24 | 0.27 | 0.74 | 77% | <1% |
| RR84002 | 0.24 | 0.27 | 0.28 | 0.28 | 0.32 | 0.37 | 0.31 | 0.35 | 0.52 | 0.24 | 0.27 | 0.74 | 79% | 0% |

* g_{tot} = Total Solar Energy Transmittance; SC = Shading Coefficient; F_C = Shading Factor; R_s = Solar Energy Reflectance; T_v = Visible Light Transmission (These calculations are contained in accredited laboratory data reports from Sonnergy of Oxford. Copies available on request.)



CASE STUDY

Schematic of the flow of energy when Reflex-Rol foil RR82012 is used in combination with solar protection glass 'Sunbelt Polaris 65/34'.

Put simply, we can reflect over 87% of the solar energy, whilst controlling the visible light and still giving a clear outward view.

AESTHETIC,
DISCRETE,
CAN BE
FITTED
ANYWHERE



Tel: 01989 750704 Email: info@reflex-rol.co.uk Web: www.reflex-rol.co.uk

- Reflex-Rol is discrete, attractively presented and integrates with all decors.
- Reflex-Rol suits all types of construction – wood, metal and aluminium.
- Reflex-Rol is fitted inside, on, or between the opening joinery. The entire assembly only requires two fixing brackets.
- Reflex-Rol is presented in a small, carefully designed aluminium casing.
- Five sizes of headbox/cassette are available to optimize the minimum visual impact (see inside back cover).
- A large selection of side guides is available to suit most window constructions (see inside back cover).
- All headboxes and side guides can be anodised or powder coated to any RAL colour you wish to specify.

Reflex-Rol VUNO

Upstroking blinds (*From Bottom To Top*)

PERFECT SOLAR AND THERMAL PROTECTION IN EVERY WAY

Using the type C2 head box, type L40 side guides and a tried and tested arrangement of reverse motion, the **VUNO** system allows inclination from the horizontal through to a full up-stroking vertical. The slim profile of the head box makes this system particularly useful for rooflights shading and is easily accommodated within ceiling recesses.

Maximum sizes:

Horizontal: 1,000mm x 4,000mm/1,500mm x 2,000mm

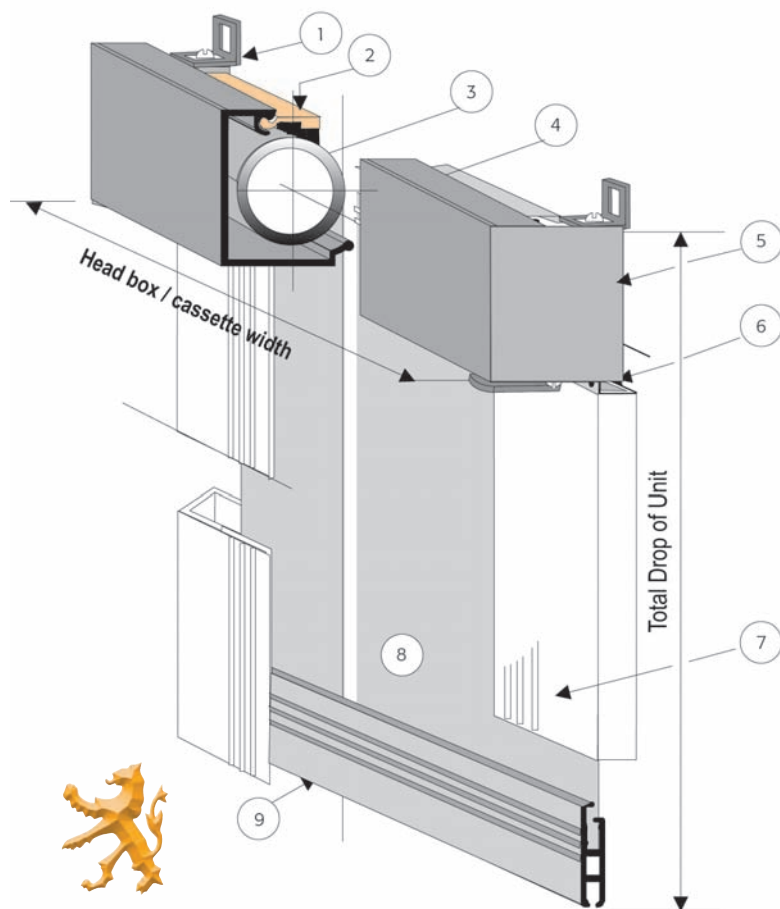
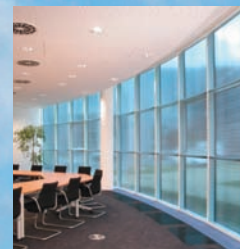
Vertical Up-Stroke: 1,500mm x 2,000mm

Note: Larger sizes are possible, but please consult us first

(A specialised variant of this system has been developed for the shaped and inclined windows common to Air Traffic Control Towers across the world. Please request our separate ATCT Shading brochure or see www.atctshading.com)

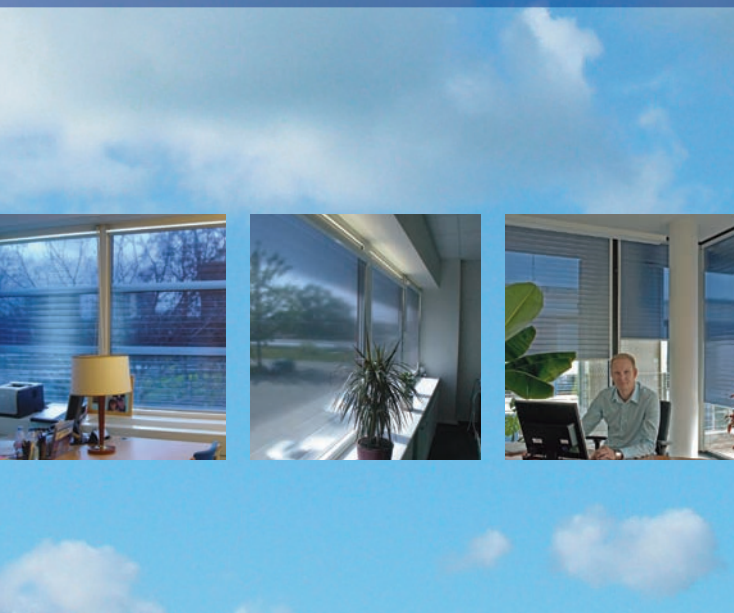


THE REFLEX-ROL ROLLER BLIND SYSTEM



REFLEX-ROL CLASSIC HEADBOX AND SINGLE CORD

1. **Fixing Bracket**
(normally facing down)
2. **Self adjusting cleaning brush**
for reflector dust removal
3. **Roller Tube/standard**
aluminium 26/28mm
or steel 26/27mm
4. **Head box (shown is type C1)**
5. **Nickel plated end-plate**
6. **Head box flange**
(adjust side-guides here)
7. **Side-guides made of aluminium**
(many different types
available)
8. **Flat embossed High Capacity**
Reflector-foil (different grades
available)
9. **Aluminium Bottom bar**



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AN EFFICIENT DRIVE SYSTEM WITH PROVEN RELIABILITY

Reflex-Rol blinds are powered by proven Somfy drive systems. With a motor of only 34mm diameter fitted inside the roller head box, full floor-to-ceiling drops of up to 3,500mm can be achieved from a head box of less than 50mm square.

POSITIONING

Infinitely adjustable

CONTROL

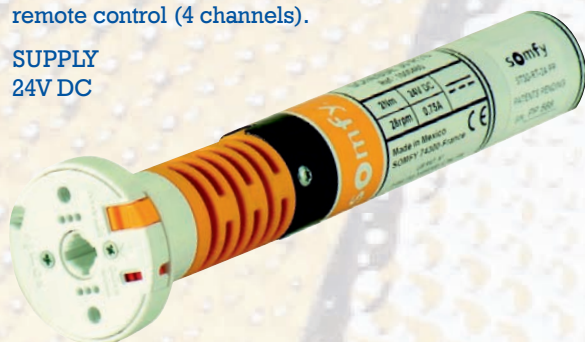
Individual or grouped connection depending on requirements; external sensors (for operating according to luminous intensity, temperature, time-clock, etc.) can be fitted.

OPERATION

Via wall-mounted switch or infrared remote control (4 channels).

SUPPLY

24V DC



INTEGRATED POWER

Intelligent blinds – can be integrated without difficulty into a centralised building control system.



Reflex-Rol

No reflection on
computer screens

Less eye strain for
increased concentration

Extended productivity

Ideal brightness and
contrast on the work
surface and in the
surroundings

Permanently beneficial
luminous intensity

Reflex-Rol
prevents
headaches,
eye irritations,
sight difficulties,
irritability, lack
of concentration
and premature
tiredness.

Reflex-Rol



Impression of more space from being able to see out.

Being able to see out and natural light increase well-being.



Reflex-Rol is the ideal equipment for all buildings, both new and undergoing renovation.

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RE-INVENTS COMFORT IN THE WORKPLACE THROUGH CONTROL OF HEAT AND LIGHT

LUMINOUS INTENSITY

On all work stations with screens, luminous intensity (surface brightness) is between 300 to 500 Lux. Daylight entering the room is obviously a major contributor to this figure.

The luminous intensity of all fairly large objects and surfaces in the visual field should be in the same order of magnitude wherever possible.

BRIGHTNESS

The surface of objects such as keyboards, mouse mats, work surfaces and, of course, screens, produces brightness - measured in candela (cd/m^2) - that depends on the level of reflection. For the eyes, these differences are called contrasts.

The recommended brightness for the visual field, i.e. the lower part of the windows, is very important, to achieve a contrast pleasing to the eye.

CONTRASTS

The pupil is continuously adapting, which means time lost and gymnastics for the eye muscles. Brightness must therefore be adjusted not only to the work surface but also to the entire surroundings, including the windows. In the mid-sections of the visual field (mid-field), contrasts in surface brightness should not exceed a ratio of 3:1.



HEADBOXES

Our range of five headboxes is suitable for most window constructions:

COMPACT



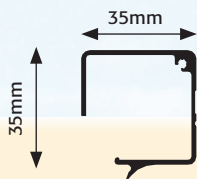
CLASSIC



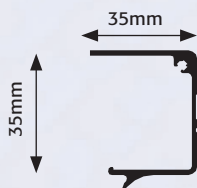
LARGE FACADE



Compact Line



Closed



Open

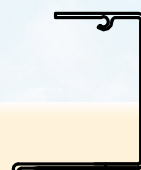
Classic Line



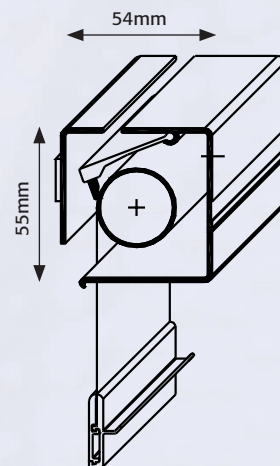
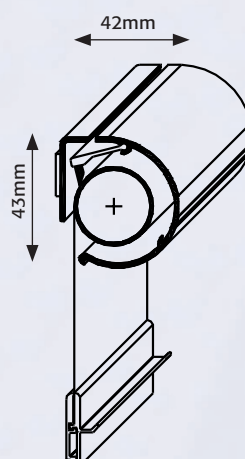
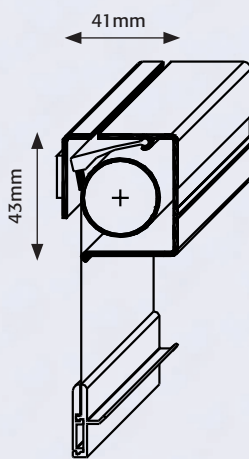
C1



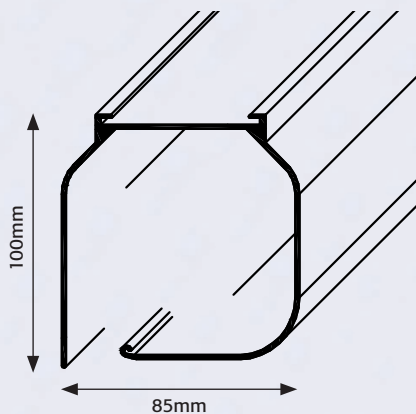
R1



C2



Large Facades System



All head boxes are aluminium with zinc plated end-plates. Automatic cleaning brushes are optional. All are suitable for manual or motorized systems.

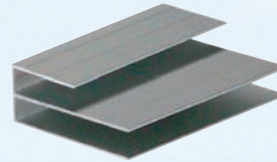
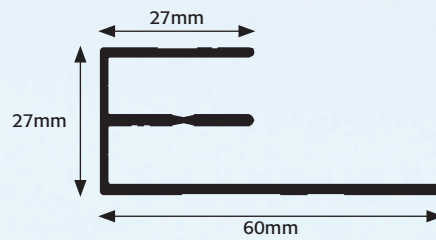
| Headbox Type | Maximum Width (mm) | Maximum Drop (mm) | | | |
|---------------|--------------------|--------------------------|--------|-----------|-----------|
| | | Chain | Spring | Motorised | Multistop |
| Compact | 1500 | 3400 | 2800 | 2800 | 2800 |
| Classic C1 | 1500 | 3400 | 2200 | 2200 | 2200 |
| Classic C2 | 2200 | 3400 | 3400 | 3400 | 3400 |
| Classic R1 | 1500 | 3400 | 2200 | 2200 | 2200 |
| Large Facades | 3000 | 6000 (with crank handle) | | 6000 | - |



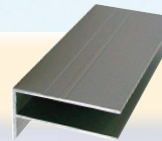
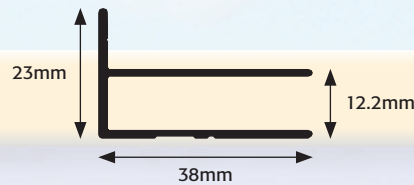
SIDE GUIDES

We have a wide range of side guides available:

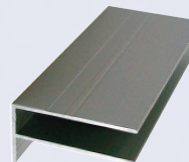
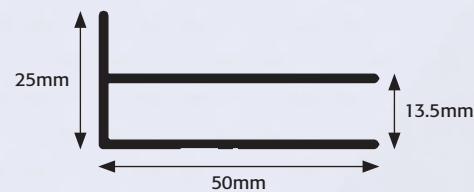
Type E60-27



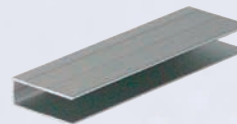
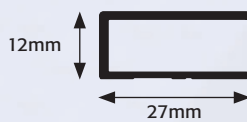
Type UL38



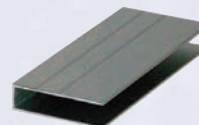
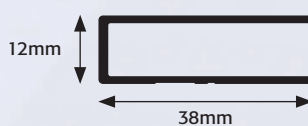
Type UL50



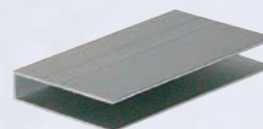
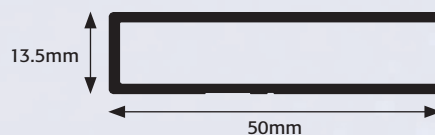
Type U27



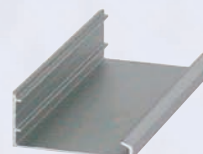
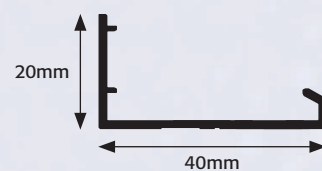
Type U38



Type U50



Type L40

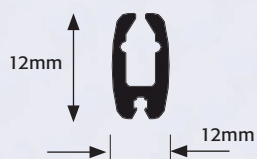




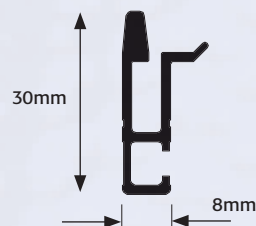
BOTTOM BARS



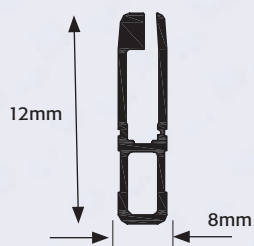
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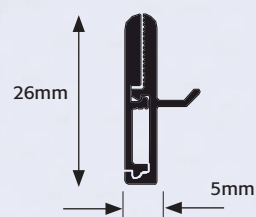
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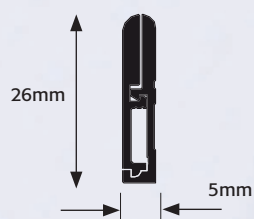
Type E



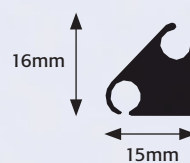
Type L



Type M



Type D





Reflex-Rol

BESPOKE APPLICATIONS

Although Reflex-Rol roller blinds are best suited to standard sizes of glazing, special projects have required us to produce bespoke solutions that have included:

- **a single motorised blind 7.0 metres wide;**
- **covers with an 11.0 metre drop;**
- **blinds in acoustically absorbent fabrics and the sourcing of acoustically transparent fabrics;**
- **fabrics suitable for tensioned structures and digital printing;**
- **black out blinds with zero light transmission through to blinds with less than 1%, through to 3, 5, 10, & 20 % light transmission as required, along with the understanding of what affords privacy and what gives best through vision; and**
- **more varieties of control and colour than we can list here.**



We look forward to our next challenge.

The years of experience have also led to the development of initially bespoke, but now established, specialised shading systems suitable for the shaped and inclined windows associated with Air Traffic Control Towers*.

*request 'Aviation' literature or see www.atctshading.com



Reflex-Rol

SOLAR GLARE, REFLECTION & HEAT CONTROL WORLDWIDE

Reflex-Rol UK, a division of De Leeuw Ltd, has been a supplier of commercial shading solutions in the UK for 30 years. Utilising scientifically proven materials, (as attested to by the laboratory reports by Professor Mick Hutchins of Sonnergy, Oxford - copies available on request) Reflex-Rol roller blinds provide market-leading levels of light, heat, and glare control.

This tensioned and guided system is now being adapted for some of the challenging glazings which leading Architects are working into their more eye catching designs.

With over 30 years experience, and blinds still in operation that were installed 30 years ago, we also understand what can really be considered sustainable best practice.

Properly specified solar shading can give you free lighting and significant reductions in cooling and air conditioning costs, whilst simultaneously improving comfort. To see this gain full recognition and understanding is why we continue to be active as a company within both national and international trade associations.

Reflex-Rol (UK)

Insulating Solar & Glare Control Systems

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De Leeuw Ltd

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