

## Resistant to fire, resistant to noise

Reduction of noise is one of the key issues for modern architecture. Noise control standards inside buildings inhabited by people are provided for in the currently binding regulations. Therefore, construction materials are selected based on their soundproofing and sound absorbing features, including other basic functions, like fire-resistant glass.

Modern architecture cannot do without fire-resistant glass any more. It is applied in facades, partitions, floors and ceilings; it is mounted in doors, skylights and stairs. The glass being a key element, its properties determine many utility features of indoor spaces, including its inhabitants' acoustic comfort.

It will be noted that fire-resistant glass of the same EI class may have different soundproofing parameters, i.e.,  $R_w$  – the weighted noise control index, depending on production technology. The  $R_w$  index is quoted in

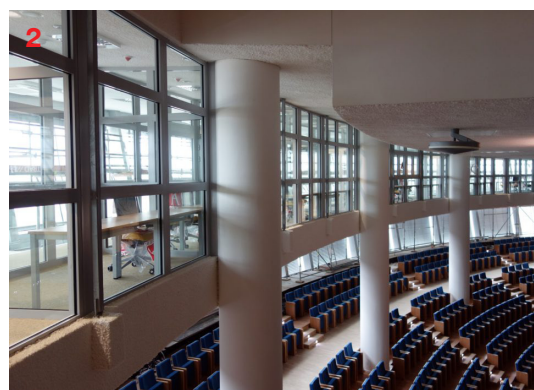
decibels (dB); the higher its value, the better soundproofing parameters the material has.

**POLFLAM® fire-resistant glass has perfect soundproofing parameters, including those recommended for areas of particular noise load.** Its  $R_w$  index, without any extra glass panes sealed to it, is 40-47 dB, depending on the EI class.

Numerous tests carried out in notified laboratories show that the use of various kinds of extra glass panes sealed to the unit, **easily takes the  $R_w$  index up to even 52 dB!**

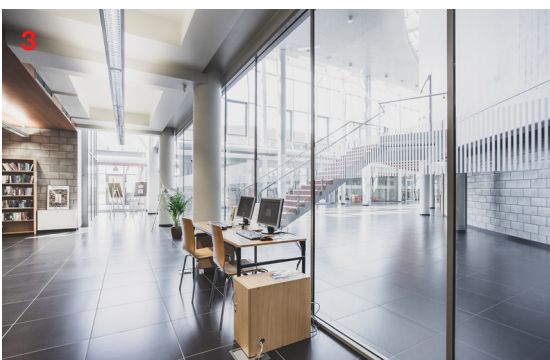
Where is it that the  $R_w$  index is the most important? It is in conference facilities where glass is part of the walls of large conference rooms or partitions between meeting rooms and the hall or corridors. Noise control is also important in office buildings where glass partitions are used as walls between rooms or in warehouses. The same is true for hospitals, schools, pre-schools, etc. Concert halls are spaces even more requiring for the  $R_w$  index.

It is worth having a closer look at it to find optimum solutions.



**1.** POLFLAM® fire-resistant glass has been applied, among other places, in the arched outwards-opening windows of the concert hall of Henryk M. Górecki Silesian Philharmonic in Katowice

**2.** The Exhibition and Congress Centre, Rzeszów-Jasionka. More than 3500 m<sup>2</sup> of POLFLAM® glass, EI 30 and EI 60 and EI 120, the latter rarely seen on the market, separates the congress space from that used for exhibitions.



**3.** POLFLAM® fire-resistant glass that has been applied in office spaces singles out some functional rooms while providing protection against fire and the sound coming from communication passages. In the photo: the 21st century Mediateque in Tychy.

**4.** In the Natural and Medical Science Centre for Innovative Research of the Rzeszów University, POLFLAM® EI 60 fire-resistant glass of the FR frameless system made it possible to perfectly single out acoustic laboratory space.