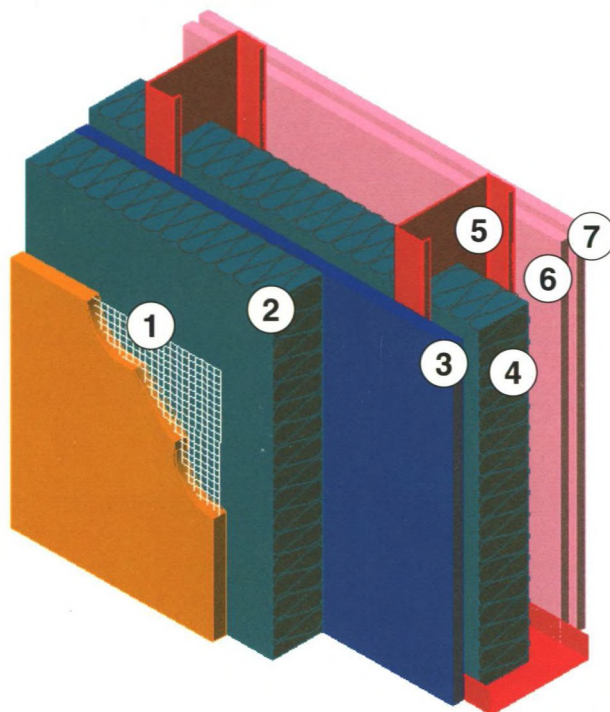




ASF EXTERNAL INSULATED RENDER SYSTEMS

DATA SHEET: ER01

- 1 Render system and support mesh
- 2 Insulation board
- 3 Sheathing Board
- 4 Mineral fibre insulation to suit fire, thermal and acoustic performance requirements
- 5 Galvanised Ayrshire Steel Framing stud.
- 6 Plasterboard including vapour barrier
- 7 Plasterboard to fire and acoustic requirements



- Ayrshire Steel Framing is used to form the inner leaf of the external wall of a concrete, or a hot rolled steel framed building. It rapidly forms a dry enclosure, so that internal fit out can begin earlier. This is normally as soon as the slab over the next floor is finished. The erection of the outer leaf can therefore be taken off the critical path.
- Fast track steel framing can be erected in all weathers, unlike masonry solutions. The minimum reduction in programme is therefore equal to the number of frosty and rainy days during construction of the building's fabric. In practice the actual speed of erection is also greater than for blockwork.
- The studs act as integral wind posts to laterally support the outer skin. The system is designed, using condensation risk analysis, so that the studs are warm and dry. This ensures long life without the expense of using stainless steel.
- With minimal wall thickness, the studs also provide space for wiring and plumbing, support for dry lining, and zones for enough insulation to match and exceed the recommended "Part L" "U" factor requirements for 2002 and beyond. Maximum thermal efficiency will lead to reduced energy bills, and also a more cost effective heating installation.
- The low weight of the system leads to easy handling, and reduced frame and foundation costs, if designed in soon enough.
- In commercial and multi-residential applications, (built in hot rolled steel or concrete framing), floor to soffit heights are usually less than column to column spans. It is therefore more economical to use vertical support steelwork.
- A large variation in floor to soffit height can be expected within normal building tolerances. Ayrshire Steel Framing is carefully designed to allow the prefabricated components to be altered to fit.
- **Installation from prefabricated panels**

If Ayrshire Steel Framing is to be placed outside the slab the accuracy of the framing elements simplifies construction. In this situation prefabricated panels can speed erection on site. Partnering is advisable because final panel design needs to be started earlier than normal, to allow time for prefabrication. Savings accrue from the reduction in programme time, with factory quality as an added bonus.

System Performance

Typical Figures are:

Thermal 'U' value

0.3 to 0.2 w/m²k

Sound Insulation

48 - 57 RwdB

Fire Resistance

30mins to 120mins

Wind Loads

Integral wind posts to suit

These figures are based on various combinations of vertical steel studs, drywall boards, insulation and external cladding.

Method of Construction:

Use individual prefabricated components screwed together in-situ, or factory assembled bare or clad panels for speed, accuracy and quality.

Your choice will be influenced by cost, specific application, and site conditions.

Generally, walls spanning between floors are built in-situ from individual components, and incorporate a deflection head detail.

Walls outboard of the floor slab can be built either as above, but without a deflection head, or from prefabricated panels, which are available from us on a longer leadtime.

Stud options range from 70 mm to 340 mm deep, in 390 N/mm² material, with service slots @ 610 centres for a speedy first fix.

Ayrshire Steel Framing

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For Design software to choose the most cost effective stud for the job, ask for our AyrSuite Professional CD. Visit www.ayrshire.co.uk to order the CD or associated literature.

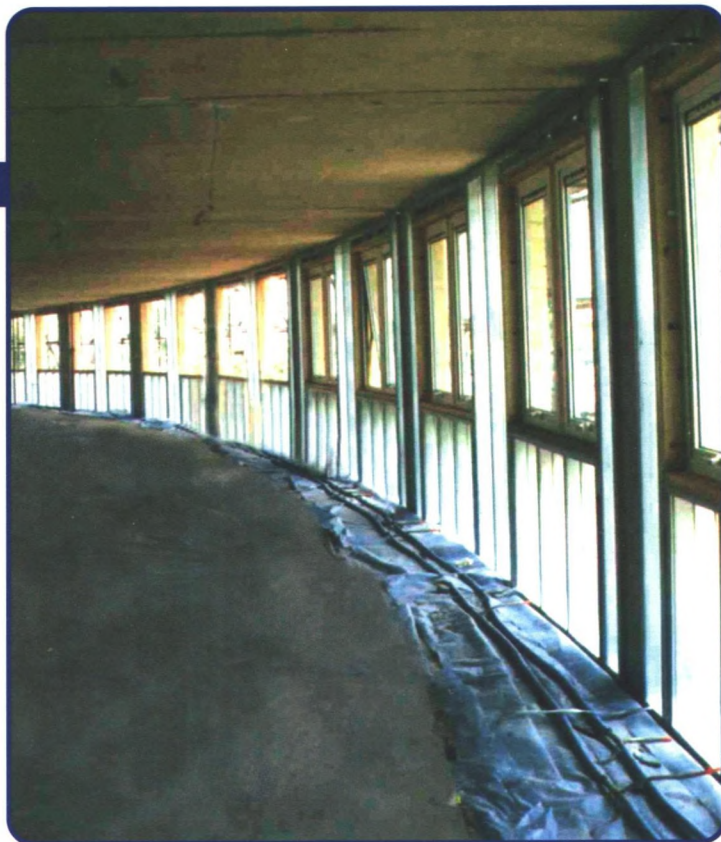


◀ Loughborough University

The main entrance building has a graceful curved façade in an external insulation system, supported on Ayrshire Steel Framing.

Loughborough University Internal ▶

Extra deep studs were used to hide the columns within the depth of the curved wall. The wall was faceted to the curve. Internal fit out was able to begin as soon as the studs were boarded, and the windows were fitted. The external insulation and render were completed off the critical path. The external cladding boards were stacked under cover on the slab, and passed out between the studs to the cladding team



◀ Ladbroke Grove

Entirely built in Ayrshire Steel Framing, this building was designed to meet the regulations on disproportionate collapse, since it was five stories high. The low weight of the structure provided substantial cost savings on the slab and piles. Twin walls between the flats provide excellent noise separation. The polymer modified render finish, over external insulation, results in very low fuel bills for Kensington Housing Trusts' tenants.

