



EXTRUSIONS

"EXTRUSION INFORMATION DATA"

What we make

Plastic extrusions can be made up from one or a number of different extrusions. Many profiles are common and are supplied to a number of customers others are dedicated custom designed to meet specific application needs. Some of the more common profile types are as follows:

Profile types

Rigid extrusions	Flexible extrusions
Co – extruded profiles	Joints, covers and corners
Flat strips and posts	Angles and gaskets
Channels single & double	Lipped channels and boards
Boxes and hollow profiles	Tubes, rods and vent trims
T sections and T barbs	Cable channels and connectors
F Track and rails	Cable filler and quadrants
Ticket and linking strips	Flexi angles and 'D' sections
Coving, fascia and joints	Roof / wall trims
Edging and capping trims	Co extruded and flexible seals
Shower and water seals	beads and capping profiles

In addition to a wide range of profiles PAL Extrusions also produce from a range of materials to suit every application.

Materials

PVC; Nylon; UPVC; Acrylic; EPDM; PETG; Flexible PVC; Polyester

HIPS; TPE; Polyethylene; TPR; Polypropylene; Hytrel; Polycarbonate

PVC nitrile; ABS; Stantaprene; Alcryn; FDA approved grades

Our advanced production and design facility now produces more products than ever from a greater range of polymers. The latest evolution involves the use of varied polymers to offer a base extrusion which is then skinned to improve its aesthetic and or physical properties. By mixing polymers which behave differently at the same processing temperature effects such as high gloss and wood grain type patterns can be achieved. The process can also be used to improve UV stability and as a result PAL have launched a range of leisure industry based products and are continuing to explore the many other possible applications for this technology.

PAL Extrusions markets

Office partitioning	Office screening
Office desk components	Filing profiles
Cable management	Electrical trunking
Seating trims	Plastic vertical and side opening shutters
Rendering beads	Touring caravan and motor home components
Automotive	Ticket and card display products
Glazing gaskets	Static caravan and holiday home products
Shop fitting ancillaries	Point of sale display
Building products	Plastic fencing systems
PVC decking systems	Plastic step and bench systems
PVC ballustrading	

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The extrusion process

PAL Extrusions process polymers to produce specific shapes utilising a process known as 'extrusion'. Polymers are plastic like materials produced from chemical "monomers" which in turn have been produced from alcohols and petrochemicals.

Plastic extruding involves the loading of powder and or granulated polymer into a screw and barrel arrangement known as an extruder, the polymer is then melted using a combination of added heat and friction. The molten plastic is mixed and blended in the barrel through the action of the rotating screw, the screw drives the material forward under pressure where it meets the die.

Gradually manipulating the material the die takes the polymer from a round to the desired extrusion shape. Additional material grades can be fed into the die through the use of multiple extruders giving the ability to add features such as flexible joints and seals. This process is known as co-extrusion and enables the production of co-extruded profiles. At this point the material briefly exits the tooling and passes into the calibration stage of the process.

The work carried by the die and calibration stages varies dependent upon the type and number of polymers, the dimensional complexity of the profile and also the speed at which it is to be extruded. The calibration stage is responsible for the fine tuning of the profile and setting the material in place; this can be done using metal forming plates, vacuum forming, air and water cooling and can be a combination of 2 or even all of these processes. Once the profile has been defined by the calibration phase it will pass into the haul of unit which applies a consistent pull on the profile drawing it through the calibration/forming tooling.

Other operations such as foiling, punching, silicon coating, wrapping, taping, length sizing and automatic coiling/packaging can be added in line delivering the most complete product possible from in line processing.

In addition to extruding PAL Extrusions offer complimentary ancillaries and services including:

Ancillaries and services – non extrusion

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|--------------------------------|------------------------------------|
| Press tool punching | CNC automated routing |
| Trimming, mitring and drilling | Injection moulding |
| Welding | Batching and kitting |
| Sub assembly | Production of ancillary components |
| Bending and forming | |

Delivering the product

PAL Extrusions pride themselves on supplying the product well presented and on time using a dedicated fleet of delivery vehicles.
