

ParFrame

The versatile machine framework system

ParFrame offers a fast, economic method of producing industrial machine frames, work stations and enclosures. The system is based on an extensive range of extruded aluminium profiles, connecting components and accessories with almost unlimited fabrication possibilities.

Since the structure is made from modular elements, modification to suit changing requirements is very straightforward and most components may be re-used.



Machine enclosures

Typical applications include machine frames, supporting structures and enclosures, machine guards, linear conveyor systems, benches and workstations, exhibition displays, mobile platforms and trolleys.

A wide choice of profiles

There are seven different extrusion profiles, in rectangular and square as well as light and heavy versions, ranging in size from 28 x 28mm to 80 x 80mm. These profiles cover the full range of applications from light machine guards to heavy structural assemblies. Extrusions are fabricated from clear-anodised aluminium alloy, providing a durable and attractive surface requiring no subsequent finishing.

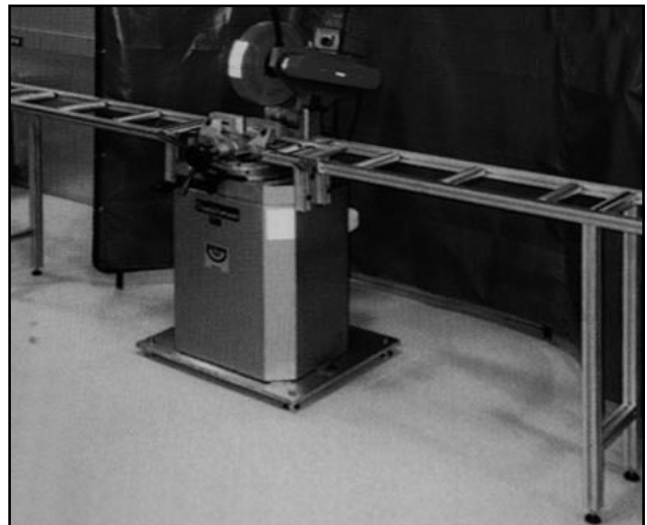
All sections are available in standard lengths up to 6 metres. The three heavier profiles have been designed to accommodate electrical cables or air lines, and may be used as a manifold for compressed air at pressures up to 10 bar.

Quick-fit, secure fastenings

All profiles are designed with a unique taper-lock fastening feature which acts as a built-in lockwasher. This prevents fasteners from working loose even in high vibration applications. Extrusions can be joined both at right angles and end-to-end, using quick-fit fasteners that ensure accurate alignment and provide low-profile or completely hidden connections. Concealed anchor and butt fastening assemblies are fabricated in die-cast zinc, with all nuts and studs made from zinc plated carbon steel.

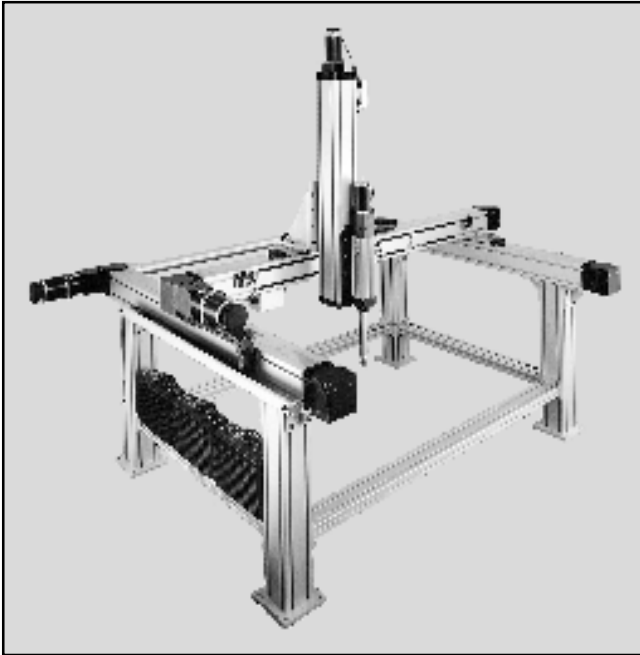
Each extrusion has T-slots on all faces to allow the attachment of external hardware. This is possible even on existing assemblies using a special domed nut which can be inserted into the T-slot at any point - it is not necessary for the end of the extrusion to be accessible. These nuts incorporate a rubber friction spigot to hold the nut in place prior to tightening, a particularly useful feature when the profile is vertical. Drilling jigs are available to provide accurate location of access holes where the machining has not been carried out by Digiplan.

Clear and smoked acrylic panels may be fitted to all extrusions to create visually attractive enclosures and screens. Coloured panels can also be supplied in expanded PVC, acrylic or polycarbonate material. PVC-coated wire mesh is available for applications such as machine guards.



Conveyor systems

A complete range of accessories & options



Machine framework

Accessories

ParFrame offers an exceptionally wide range of accessories. These include roller wheels and casters, levelling feet, adjustable and lift-off hinges, handles, push-button and L-handle latches, sliding panel track, gaskets, tool hangers and parts containers. Please refer to the full catalogue for a complete list of the available options.

CAD Services

Full CAD facilities are available through your local Automation Technology Centre. This service not only provides diagrams showing two and three-dimensional views of your completed structure, but can also create software files for integration into your own machine design.



Adjustable support structures

ParFrame may be supplied in various ways depending on your particular requirements, facilities and resources. Components are available as standard catalogue items, as parts machined to order or as kits for complete custom-designed structures.

Supply piece parts only

ParFrame may be ordered direct from the catalogue with extrusions supplied in 6-metre lengths. All necessary attachments and accessories are ordered at the same time. This option is particularly attractive when the requirements are subject to variation or when stocks of parts must be held for rapid prototyping or custom assembly as required.

Supply parts machined to order

Digiplan offer a machining service for parts supplied to customer specifications. Services available include cutting to length, drilling, counterboring & tapping. Infill panels and wire mesh may also be supplied cut to size. Details of the machining services available will be found in the full catalogue.



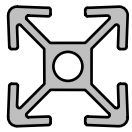
Display systems

Supply kit of parts for complete structure

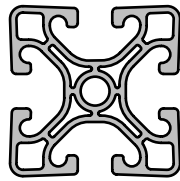
Digiplan will design a structure from your sketches or specifications and supply as a complete kit of parts together with an assembly drawing. Extrusions will be machined ready to assemble and all necessary fixings will be included. As well as minimising in-house design time, this option offers the convenience of simple and rapid assembly on site.

Whichever option you choose, you can rely on ParFrame to provide a flexible, versatile and economic approach to the construction of machine frames and related structures. The wide range of extrusions, fittings and accessories caters for every type of industrial and scientific application. For further information, please request a copy of the complete ParFrame catalogue.

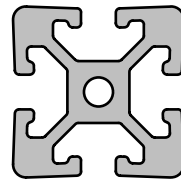
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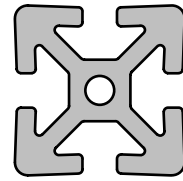
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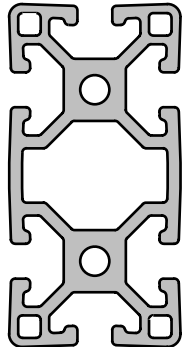
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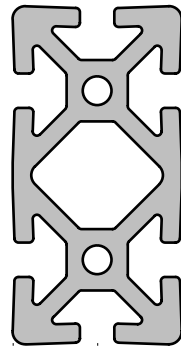
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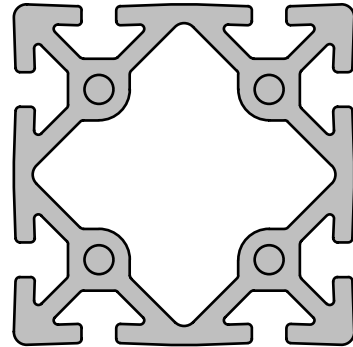
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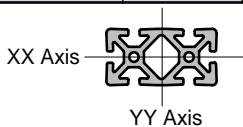


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Extrusion Specifications

Section	Overall size, mm	Weight kg/m	X-sectn. area cm ²	Moment of inertia cm ⁴	Section modulus cm ³	Typical application
ESL2828	28 x 28	0.83	2.99	2.38	1.70	Light duty guards/enclosures, very light framework
ESV4040	40 x 40	1.50	5.44	8.36	4.18	Light duty guards/enclosures, light structures
ESL4040	40 x 40	1.86	6.71	10.07	5.04	Light duty guards, light/medium structures
ESH4040	40 x 40	2.43	8.73	13.72	6.86	Light-medium duty structures
ESL4080	40 x 80	3.34	12.02	19.37* 73.96†	9.69* 18.49†	Light-medium duty structures, air/electrics §
ESH4080	40 x 80	4.35	15.67	25.94* 97.16†	12.97* 24.29†	Medium-heavy duty structures, air/electrics §
ESH8080	80 x 80	6.63	23.9	173.87	43.47	Medium & heavy structures, air/electrics §



*XX axis †YY axis §Profile can house air or electrical lines, or pressurised air up to 10 bar

Material Specifications

Material	6063-T6 aluminium alloy
Maximum length	6m
Yield strength	180 x 10 ⁶ N/m ² at 0.2% offset
Tensile strength	210 x 10 ⁶ N/m ²
Modulus of elasticity	69 x 10 ⁹ N/m ²
Brinell hardness	75 HB

Surface finish	204R1 clear anodise to approximate depth of 10µm
Straightness	Within 0.7mm/m, not to exceed 3mm over 6m length
Twist	Within 0.75°/m, not to exceed 1.5° over 6m length



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