



TECHNICAL DOCUMENT

Arciform Shroud System

GFRP

modular profiles

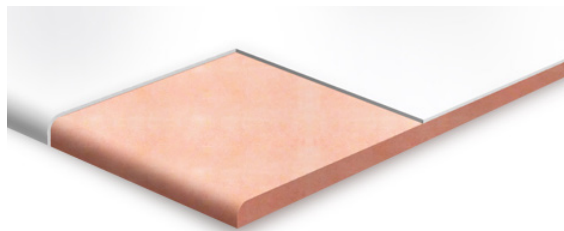
for

Beam & Column Covers

Bulkheads, Fascias

Soffits

Utility Chases



Arcoform shroud system

Arcoform Form meets function

Arcoform is a fully integral modular profile system. Made up of different profiles, when assembled, form into a protective shroud. The shroud is a division barrier, designed to conceal and protect building structures and MEP services.

Beam & column covers, bulkheads, soffits, fascias, utility chases are the standard profiles available with a range of variables. The custom profiles are made to specification and have almost unlimited design possibilities.

Please Note : All Arcoform shrouds are manufactured with a high gloss gelcoat surface.

Terminology

Arcoform : Molded fiberglass, Gel Coat surface, protective shroud.

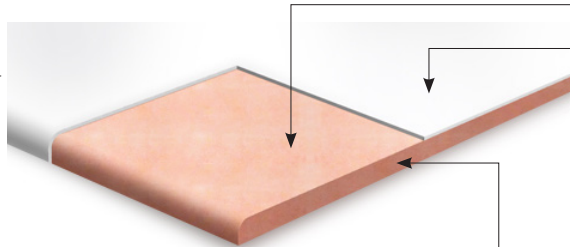
Arcoform profile : Shape and design of the molded fiberglass shroud.

Available as : Beam & column covers, bulkheads, soffits, fascias & utility chases.

Arcoform shroud : Architectural protective covering for building structures, MEPs and plant equipment.

Arcoform shroud profile, physical properties

Arcoform : Gelcoat surface, fire retardant resin embedded glass strand fiber-mat matrix.



Gelcoat high gloss surface : 0.018 inch | 0.4572 mm

Color – White, or available in most PMS colors

Color fast, antimicrobial, chemical resilient

No rejuvenating maintenance

Weights and dimensions

Thickness : 1/8 inch | 3 mm

Weight : 1 pound per sq foot | 4.88 Kg/Sq meter

Length : 12 feet | 3658 mm (includes flange 1 1/2 inch | 38 mm)

Width and Height : Relevant to final profile design

Flange Overlap • Square Cut

Joint Flush butt joint • Joggle joint

Adhesive Bio-Seal A-1010 adhesive sealant finishing compound

Factory fitted insulation : Closed-cell polyurethane foam insulation

Density	ft ³ : 2 pounds	M ³ : 0.0566337 Kg
Thickness	1/2 - 2 inch	12.5 - 50 mm
Weight	1/2 inch = 0.28 lb/ft ²	12.5 mm = 1.365 Kg/Sq M
R-value	Per inch = R-6.56	Per 25.5 mm = R-6.56

Arcoform shroud cleanroom compliance : ISO 4, 5, 6, 7, 8 • BSL-1 • BSL-2 • BSL-3 • cGMP

Arcoform ASTM test results

Description : Color fastness properties	Test	Result
Arcoplast cleanability & stain resistance	ISFA 2-01/td	Pass
Arcoplast surface and sealant chemical compatibility	ASTM D 1308-02	Pass
Arcoplast surface and sealant chemical compatibility	ISO 2812-4	Pass
Chlorine dioxide decontamination procedure	Coloration	Pass
Formaldehyde gas decontamination procedure	Coloration	Pass
Hydrogen peroxide vapor decontamination procedure	Coloration	Pass
Exposure cycles	UV test	Pass

Description : Compliance
USDA, FDA, NIH, CDC, NIAID, CANADA AGRICULTURE Compliant
Product Guide Specification Written According To CSI 3-Part Format

Description : Fire and Smoke development	Test	Result
On surface burning characteristics (USA)	ASTM E-84	0-25 FS - 0-450 SD
On surface burning characteristics (Canada)	UL S-102	18,9 FS - 634 SD

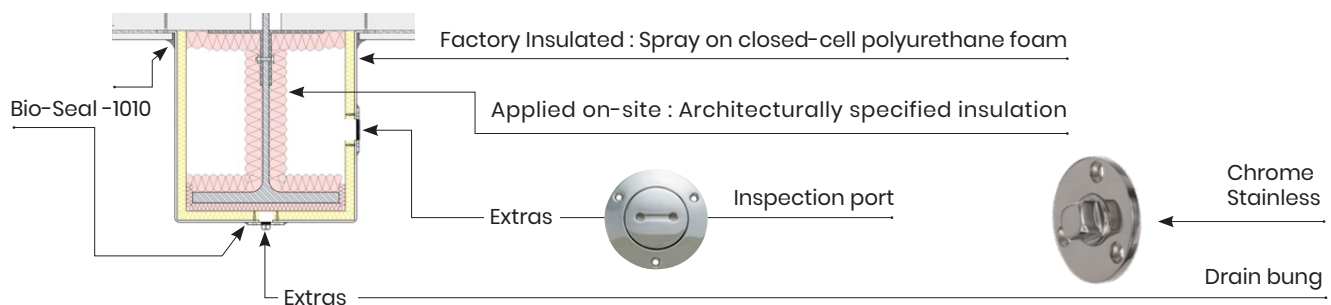
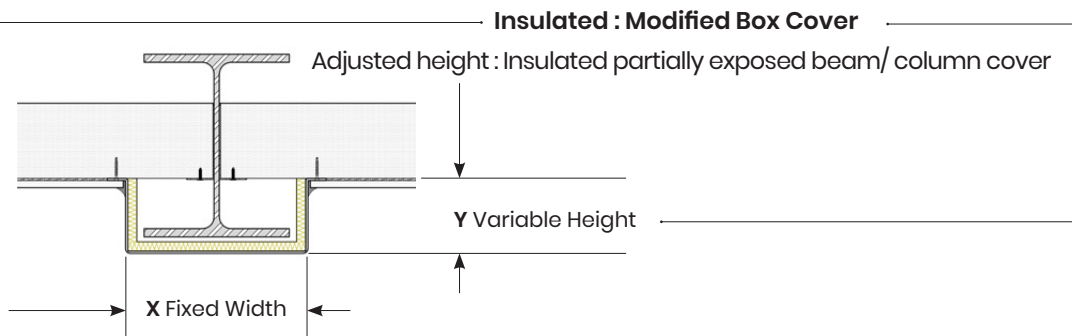
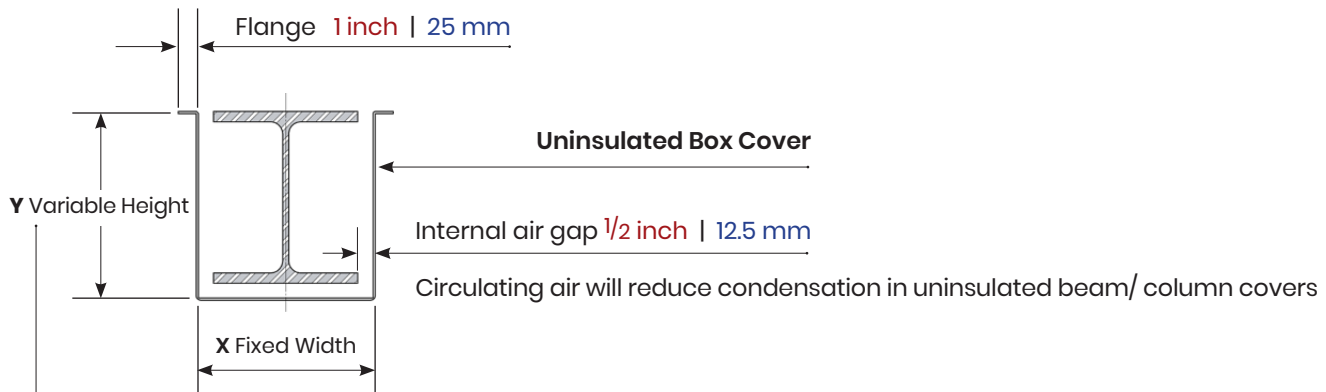
Description : Surface properties	Test	Result
The action of microorganism resistance to fungi and bacteria	ISO 846	Pass
Degree of surface disfigurement by fungal or algal growth, soil or dirt accumulation	ASTM D 3274	Pass
Resistance to growth of mold on surface	ASTM D 3273	Pass
Resistant to vermin and rodents, has no nutritional value		

Description : Physical properties	Test	Results
Barcol hardness	ASTM D 2583	Ave 46.3
Compressive strength properties	ASTM D 695-02A	17506.7 (PSI)
Flexural properties reinforced plastics	ASTM D 790-03	27753.3 (PSI)
Tensile properties	ASTM D 638-03	10659 (PSI)

Coefficient of thermal expansion	ASTM E 228	58.5 L (-30C°) (mm)
	ASTM E 228	58.89 L (30C°) (mm)
Thermal conductivity	ASTM C 518-17	0.15 BTU in/ft-h-degree F (0.022 W/m-degree C)
Thermal resistance	ASTM C 518-17	R : 6.56 per inch of foam
Water vapor transmission	ASTM E 96-05	0.01

Arcoform beam, column covers

Box beam, column covers | Insulated or Uninsulated | Application : Vertical or horizontal



Extras : Factory fitted or retro fitted : Screw-in drain bung. Inspection port.

Standard : Insulated and Uninsulated Box beam column cover dimensions

Arcoform profile	Width X Fixed		Height Y Variable		Length manufactured	
Box cover	6 inch	152 mm	1 - 6 inch	25 - 152 mm	12 feet	3658 mm
Box cover	6 inch	152 mm	1 - 12 inch	25 - 305 mm	12 feet	3658 mm
Box cover	10 inch	254 mm	1 - 10 1/2 inch	25 - 254 mm	12 feet	3658 mm
Box cover	16 3/4 inch	425 mm	1 - 12 1/2 inch	25 - 317 mm	10 feet	3048 mm

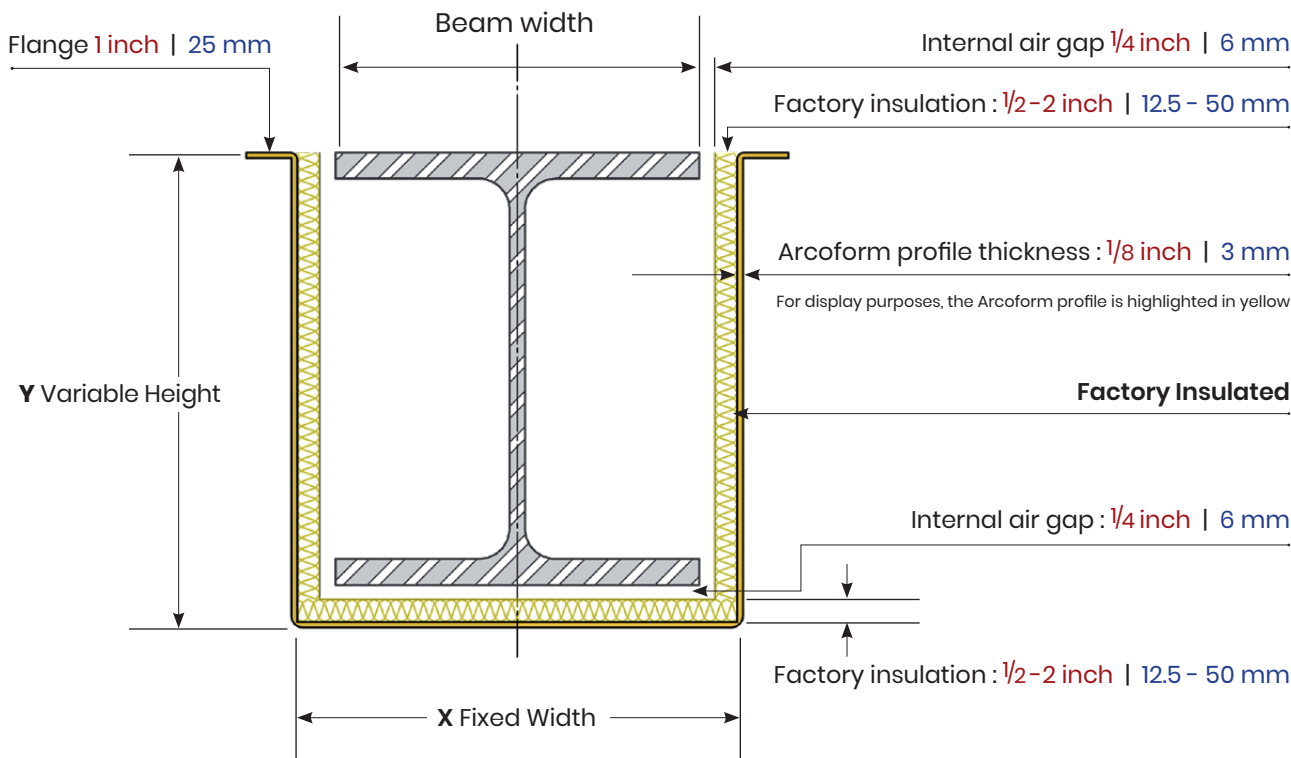
Weight : 1 Lb/Sq foot | 4.88 Kg/Sq Meter

Flange : 1 inch | 25 mm

Joint : Joggle joint

Arcoform insulated covers

Box beam, column covers | Insulation & dimensions | Application : Vertical or horizontal



Fixed : Profile dimension, relating to height or width, are fixed & can not be cut or trimmed

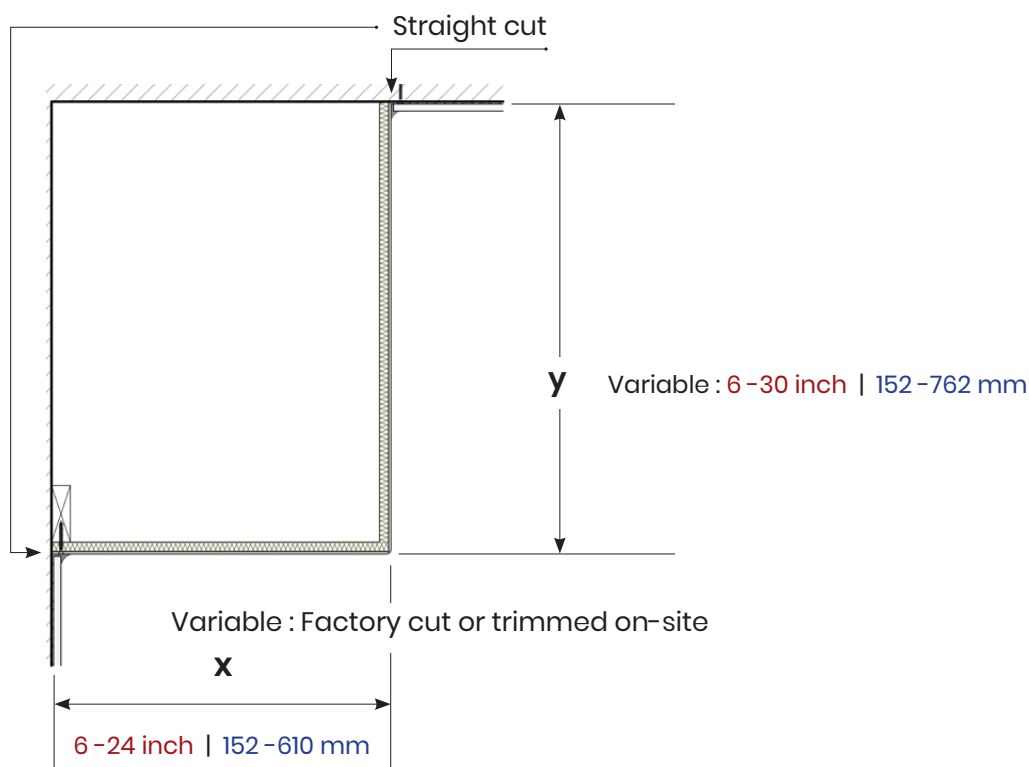
Variable : Within given dimensions the profile is able to be factory cut, or trimmed on-site

Extras : Factory fitted or retro fitted : Screw in drain bung. Inspection port

Factory fitted insulation : Closed-cell polyurethane foam insulation

Density	ft ³ : 2 pounds	M ³ : 0.0566337 Kg
Thickness	1/2-2 inch	12.5-50 mm
Weight	1/2 inch = 0.28 lb/ft ²	12.5 mm = 1.365 Kg/Sq M
R-value	Per inch = R-6.56	Per 25.5 mm = R-6.56

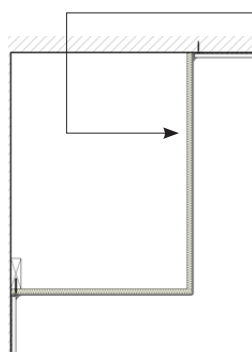
Corner cover | Insulated or uninsulated | Application : Vertical or horizontal



Arcoform profile	Width X Variable		Height Y Variable		Length manufactured	
Corner cover	6 -24 inch	152 -610 mm	6 -30 inch	152 -762 mm	12 feet	3658 mm
Weight : 1 Lb/Sq foot 4.88 Kg/Sq Meter			Flange : Straight cut		Joint : Butt joint	

Extras : Factory fitted or retro fitted, screw in drain bung. Inspection port.
Access hatches with or without, inspection monitoring window.

Insulation Closed-cell polyurethane foam



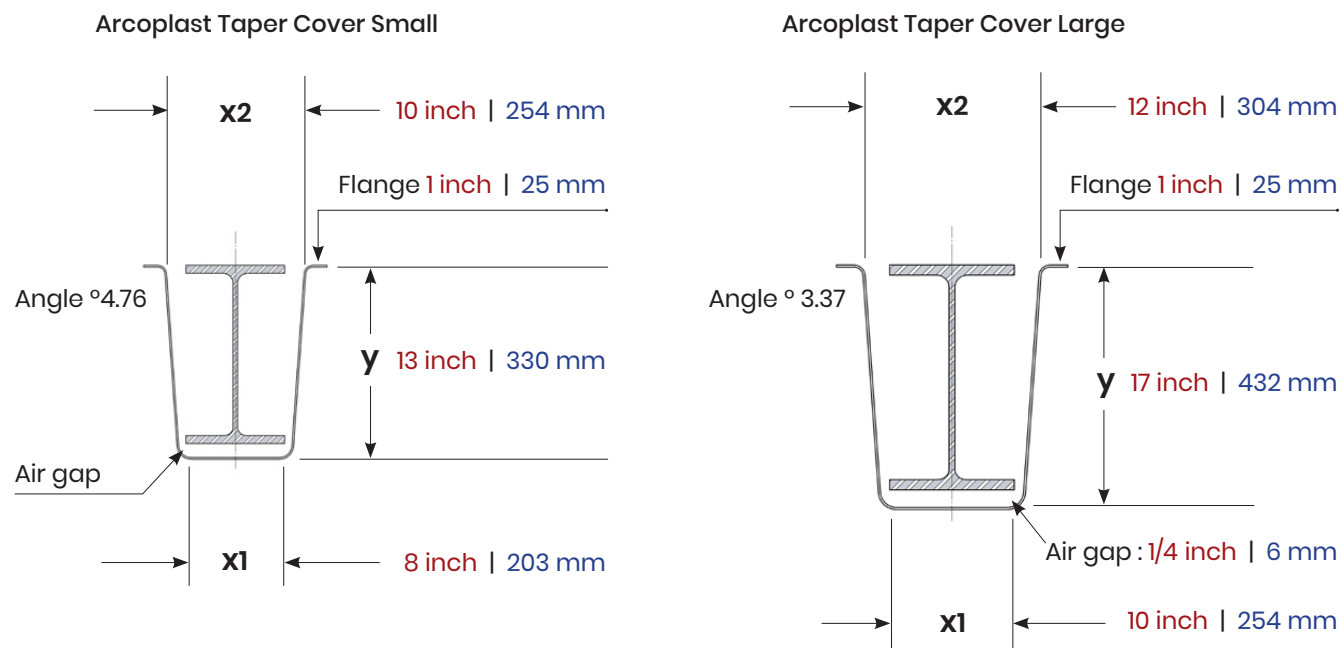
Insulation properties

Factory fitted insulation : Closed-cell polyurethane foam insulation

Density	ft ³ : 2 pounds	M ³ : 0.0566337 Kg
Thickness	1/2 -2 inch	12.5 -50 mm
Weight	1/2 inch = 0.28 lb/ft ²	12.5 mm = 1.365 Kg/Sq M
R-value	Per inch = R-6.56	Per 25.5 mm = R-6.56

Box, Corner and Taper covers are designed to encase : Columns/ beams, water pipes, air vents, MEP services, cables, ducting, exhaust conduits etc...

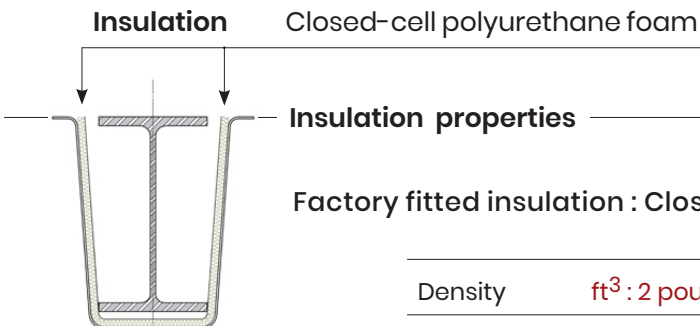
Taper cover | Insulated or uninsulated | Application : Vertical or horizontal



Arcoplast Taper covers are available in two sizes : small and large. The dimensions for the width are fixed. The dimensions for the height can be factory cut or trimmed on-site. The length can be trimmed on-site.

Arcoform profile	Width X Fixed		Height Y Fixed		Length manufactured	
Taper cover Sm	X1 8 inch X2 10 inch	203 mm 254 mm	13 inch	330 mm	12 feet	3658 mm
Taper cover Lg	X1 10 inch X2 12 inch	254 mm 304 mm	17 inch	431 mm	12 feet	3658 mm
Weight : 1 Lb/Sq foot 4.88 Kg/Sq Meter			Flange : 1 inch 25 mm		Joint : Joggle joint	

Extras : Factory fitted or retro fitted : Screw in drain bung. Inspection port



Factory fitted insulation : Closed-cell polyurethane foam insulation

Density	ft ³ : 2 pounds	M ³ : 0.0566337 Kg
Thickness	1/2 - 2 inch	12.5 - 50 mm
Weight	1/2 inch = 0.28 lb/ft ²	12.5 mm = 1.365 Kg/Sq M
R-value	Per inch = R-6.56	Per 25.5 mm = R-6.56

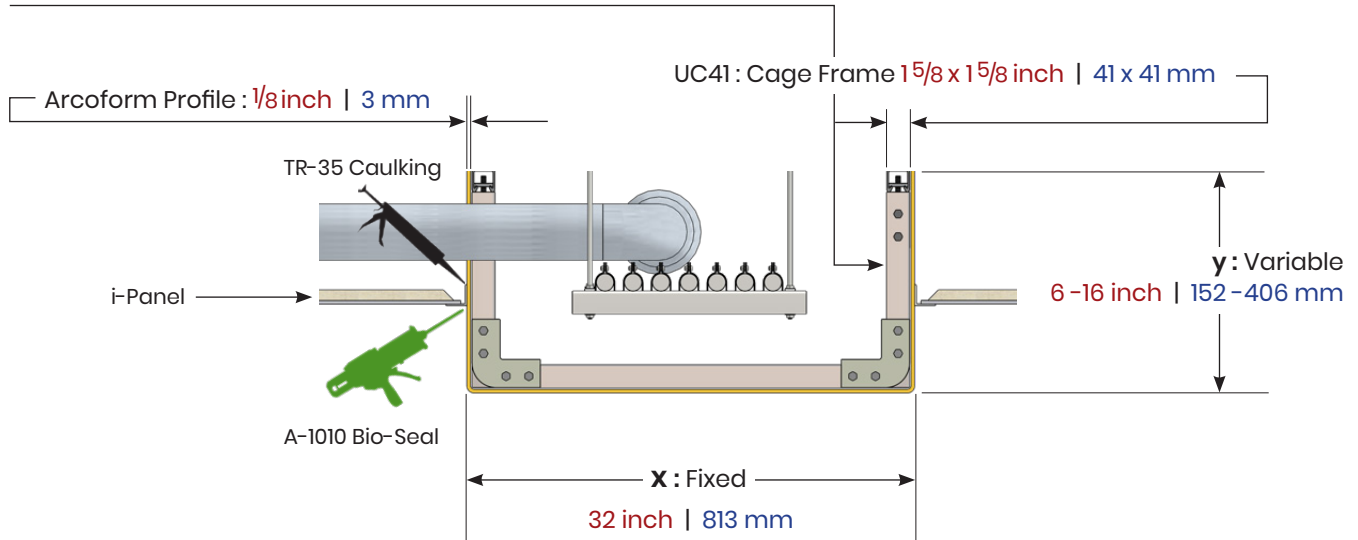
For more information : Please contact Arcoplast.

Arcoform utility chases

Utility Chase | Box profile | Insulated or uninsulated | Application : Vertical or horizontal

For display purposes, the Arcoform Utility Chase profile is highlighted in yellow

UC41: 41mm U Channel, pultruded polyester resin, non-metallic cage frame



Box Utility Chase dimensions : Maximum x + y footprint = 64 inch | 1626 mm

Width : X fixed		Height : Y variable		Profile wall thickness		Length manufactured	
32 inch	813 mm	6 – 16 inch	152 – 406 mm	1/8 inch	3 mm	12 feet	3658 mm
Weight : 1 Lb/Sq foot 4.88 Kg/Sq Meter				Flange : Straight cut		Joint : Butt joint	

Extras : Factory fitted or retro fitted

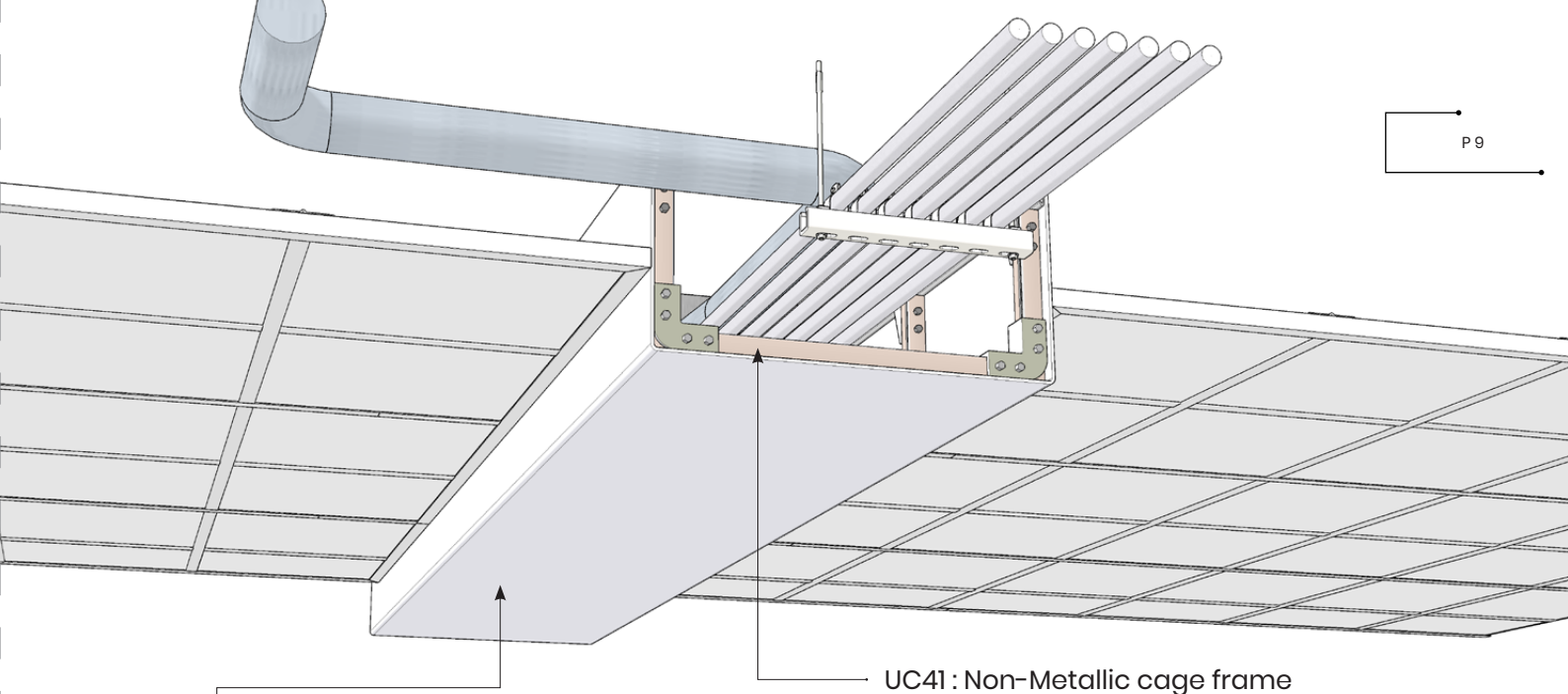
Screw in drain bung. Inspection port. Access hatch, with or without inspection window

Factory fitted insulation : Closed-cell polyurethane foam insulation

Density	ft ³ : 2 pounds	M ³ : 0.0566337 Kg
Thickness	1/2 -2 inch	12.5 -50 mm
Weight	1/2 inch = 0.28 lb/ft ²	12.5 mm = 1.365 Kg/Sq M
R-value	Per inch = R-6.56	Per 25.5 mm = R-6.56

Application : Clean-rooms, food & beverage, pharmaceutical, medical, life science industries...

Arcoform shroud cleanroom compliance: ISO 4, 5, 6, 7, 8 • BSL-1 • BSL-2 • BSL-3 • cGMP



Utility Chase : Molded one piece reinforced fiberglass profile with a high gloss gelcoat surface

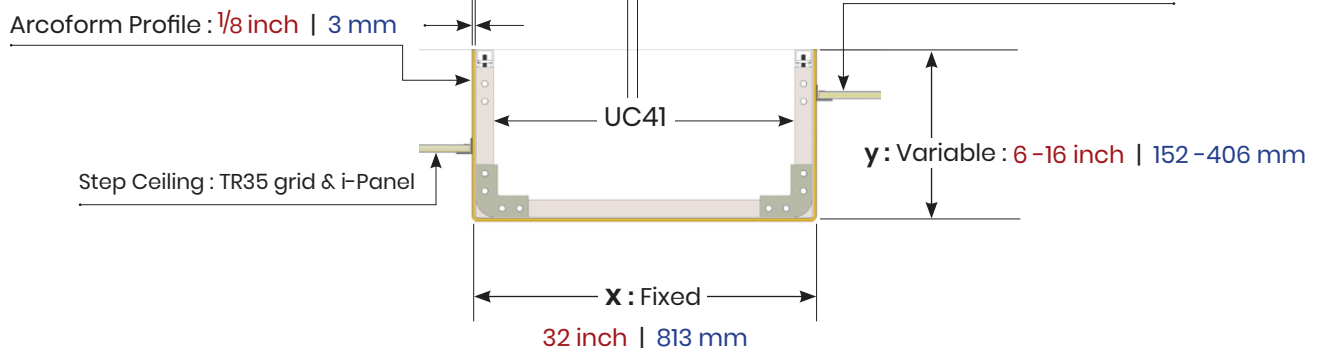
Simplicity... is in the design

UC41 : Non-metallic cage frame assembled using pultruded fiberglass struts

UC41 : $1\frac{5}{8} \times 1\frac{5}{8}$ inch | 41 x 41 mm

Arcoform Profile : $\frac{1}{8}$ inch | 3 mm

Step Ceiling : TR35 Grid installed with i-Panel



On-site assembly

The Arcoform system fits together like a giant kit set. Arcoform cage frames are mechanically fastened together, the shrouds are modular and assemble together without brackets, external fasteners or any auxiliary attachments. As there are no bulk weight components or complicated installment processes, a small experienced crew can quickly and efficiently handle and install the most complex of designs.

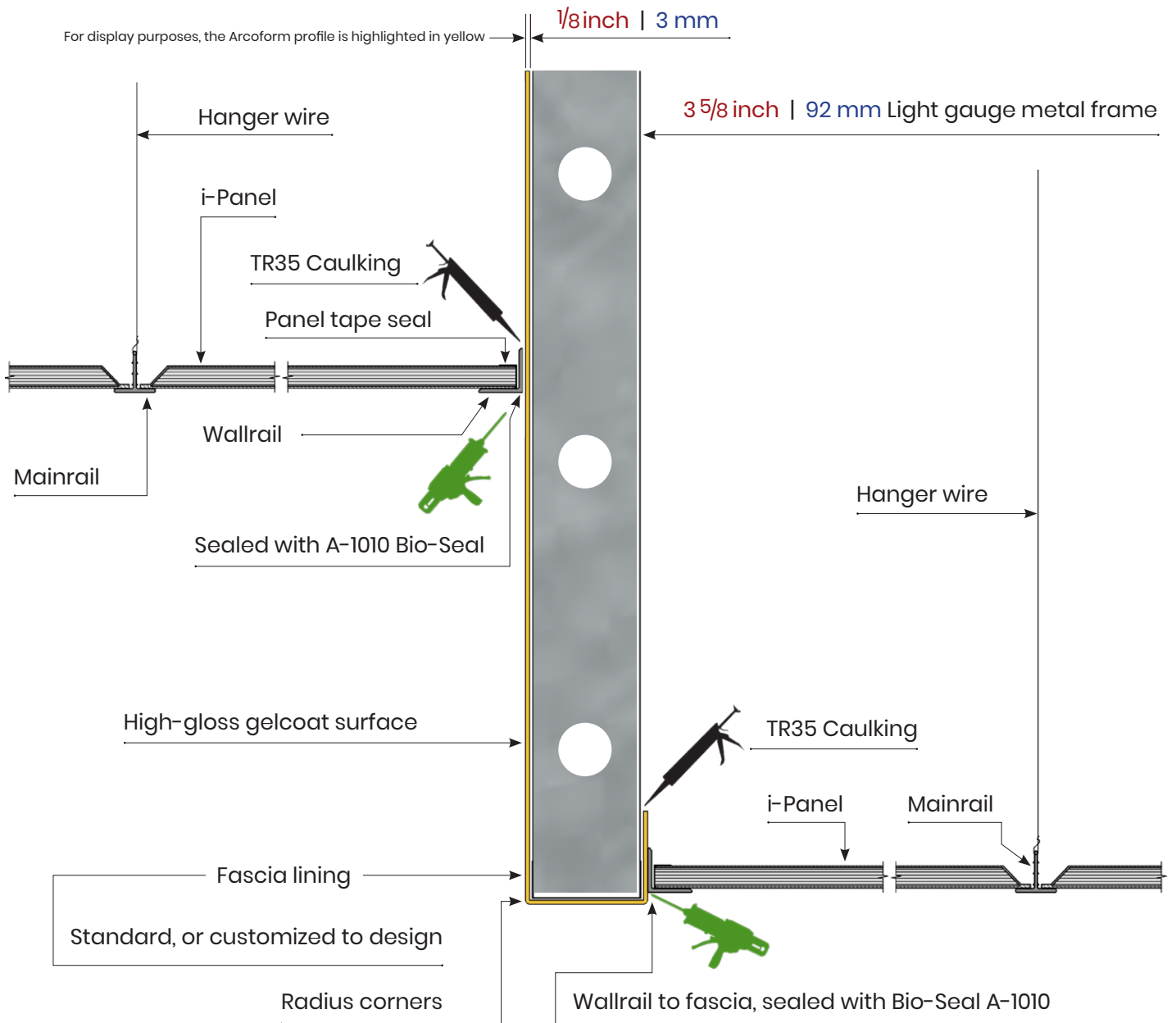
Installation or retro fitting auxiliary components is a clean on-site process. No specialized tools are required, there is no plastering, sanding, painting, welding or pop riveting.

Arcoform shrouds and integration of most third party components are joined, sealed and finished using Bio-Seal A-1010. The Bio-Seal adhesive sealant finishing compound does not distort, crack, shrink or color blotch.

In the event a shroud is damaged, it is easily repaired using the Arcoplast GC Repair kit.

Arcoform fascias

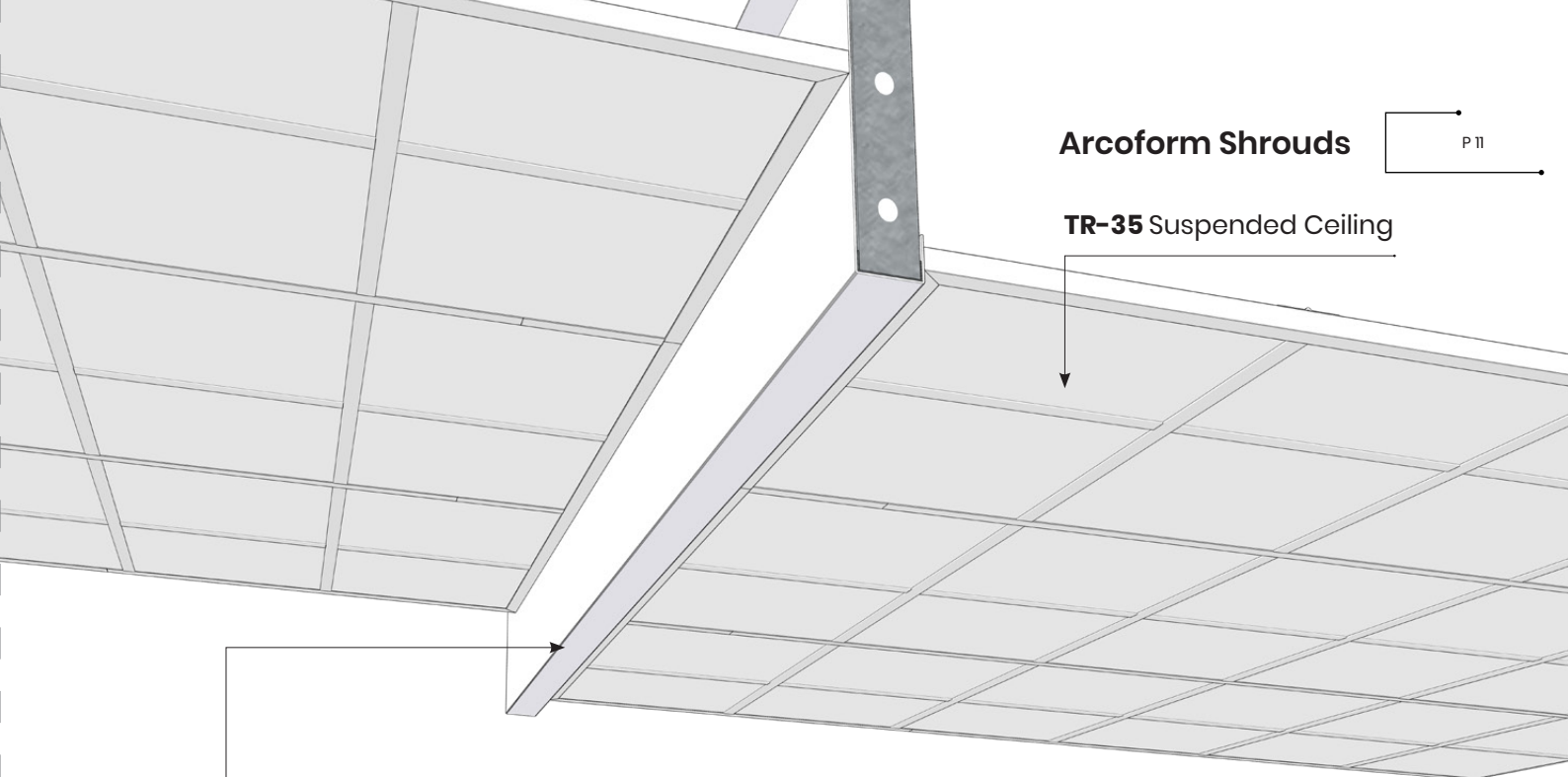
Arcoform Standard and customized fascias available in a range of sizes and formats



Arcoform Fascias and Bulkheads

Arcoform fascia shrouds are designed to fit around designated support framing. The frame ensures the fascia shroud retains its shape without sagging, shrinking or undulating. Arcoform shrouds do not, delaminate, bubble, blister or fray.

All Arcoplast products must be installed by qualified, experienced installers.



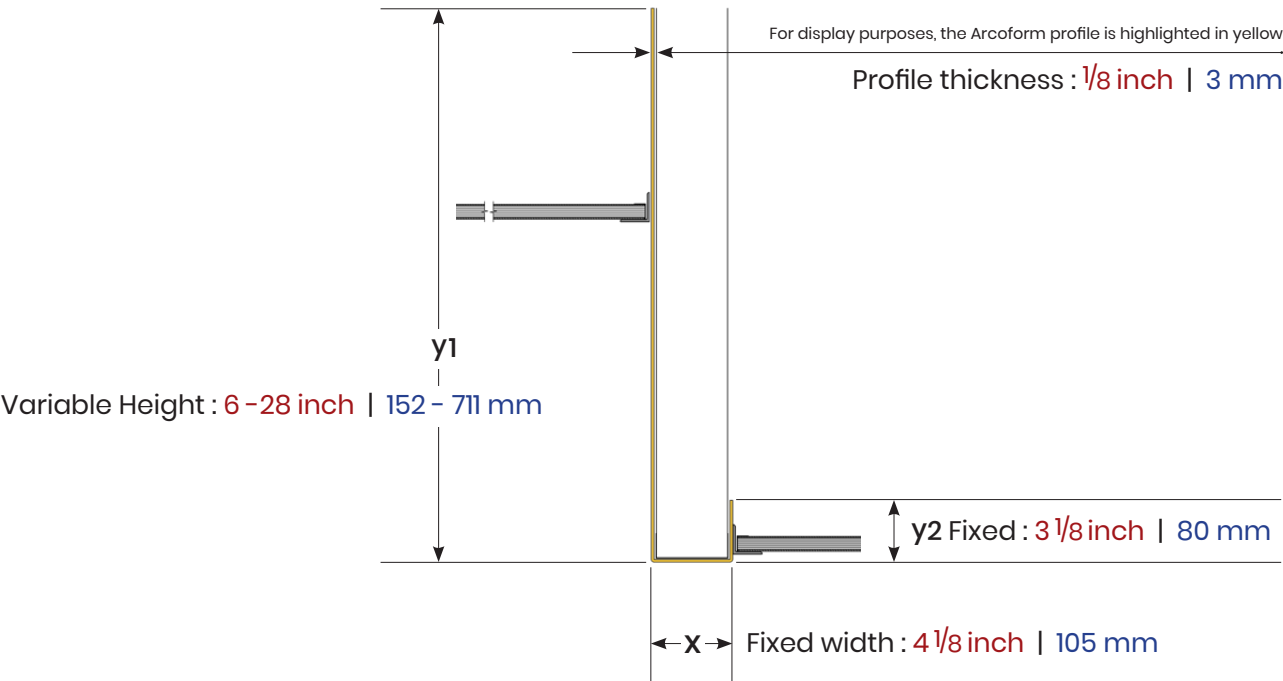
Arcoform Shrouds

P 11

TR-35 Suspended Ceiling

Fascia : Molded one piece reinforced fiberglass shroud. Step ceiling fitted with i-Panel.

Fascia | Standard profile | Insulated or uninsulated | Application : Vertical or horizontal



Width X Fixed		Height Y1 Variable		Height Y2 Fixed		Length manufactured	
$4 \frac{1}{8}$ inch	105 mm	$6 - 28$ inch	152 - 711 mm	$3 \frac{1}{8}$ inch	80 mm	12 feet	3658 mm
Weight : 1 Lb/Sq foot 4.88 Kg/Sq Meter				Flange : Straight cut		Joint : Flush butt joint	

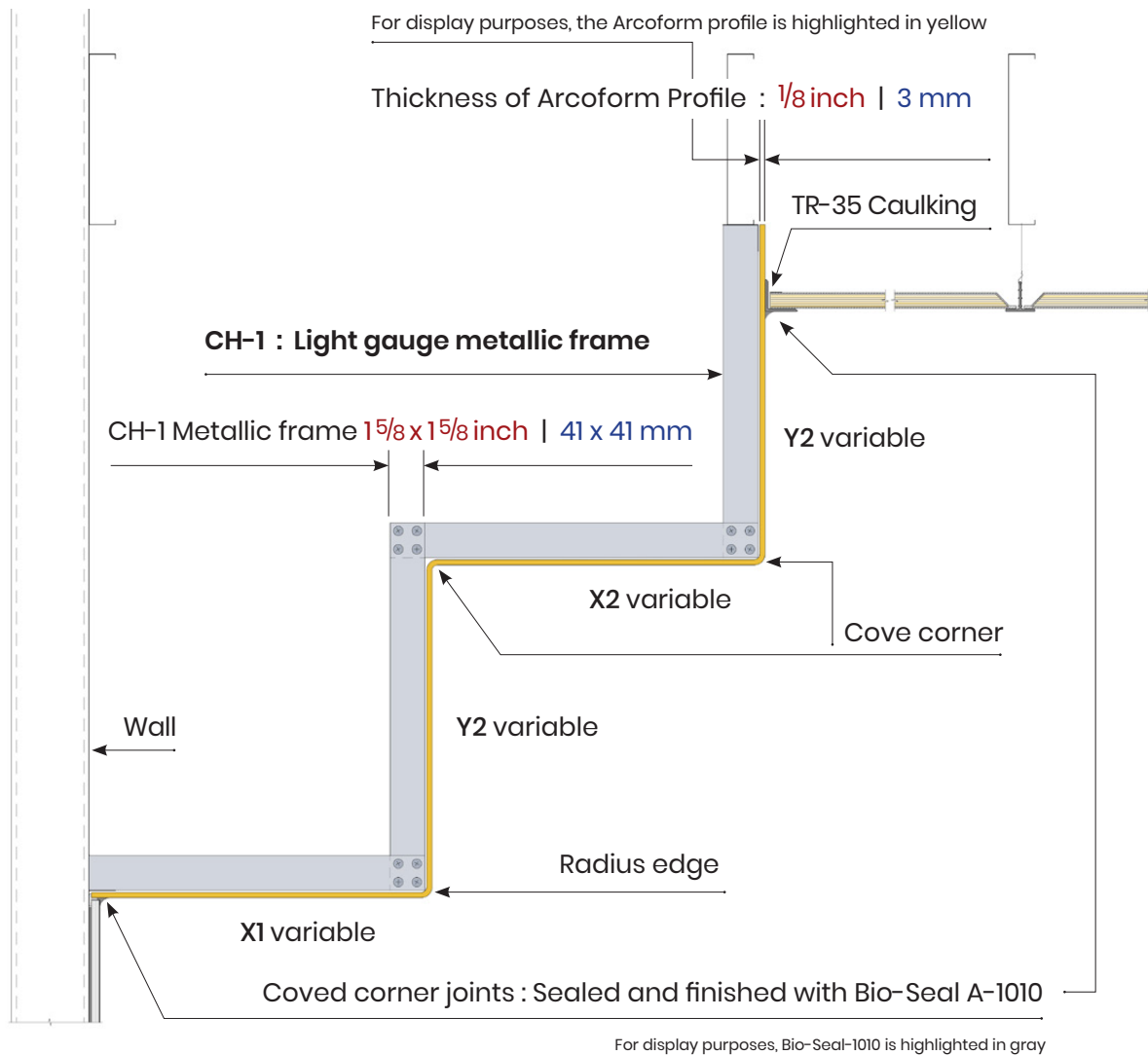
Architecturally specified insulation : Applied on-site.

Standard fascia : Designed to wrap around light gauge metal frames : $3 \frac{5}{8}$ inch | 92 mm.

Contact Arcoplast to have a customized profile, fabricated to your design & specifications.

Arcoform step utility chase

Utility Chase | Customized Step profile | Insulated or uninsulated | Application : Vertical or horizontal

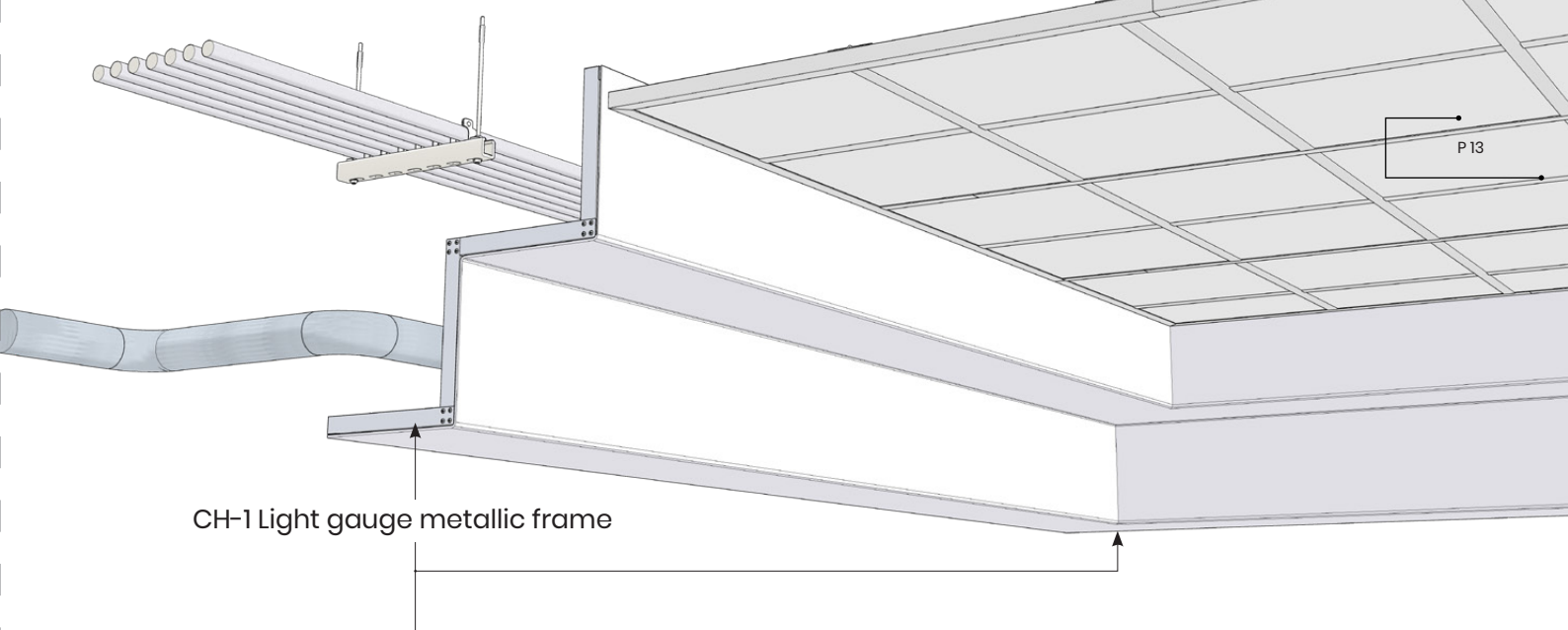


Standard fitted Length = 12 feet | 3658 mm (includes flange $1\frac{1}{2}$ inch | 38 mm)

X1-Y1-X2-Y2 : Asymmetric variable dimensions

Step Utility Chase Profiles are Flush butt jointed.

Having a customized Arcoform profile is sometimes the only option.
For more information on how to proceed please call Arcoplast.



Arcoform Utility chases connect together using a flush butt joint and A-1010 Bio-Seal three in one adhesive sealant finishing compound, forming a seamless air tight water proof joint.

Functional performance

Ceilingscapes have a foot print often entangled in plant equipment, diverse linear and non linear projections, accidented ceilings with different geometries. The conundrum architects, engineers designers face, is how to address all these factors and create a practical, functional, aesthetically pleasing outcome.

Arcoform Shrouds are a new science in the field of clean room division barrier systems. The protection of a buildings fundamental structure and infrastructure is critical to the longevity and uninterrupted delivery of a buildings equipment and structural performance. Arcoform shrouds significantly diminish the risk of failure by encapsulating and protecting the columns, beams, MEP's and plant equipment of the building.

Arcoform profiles have coved internal and rounded external edges, preventing harboring of water, inhibiting development of mold and mildew; essential for efficient cleaning and good house keeping practices. Arcoforms high gloss gelcoat ultra smooth non-porous surface is antimicrobial, resilient to mildew, bacteria and chemical staining.

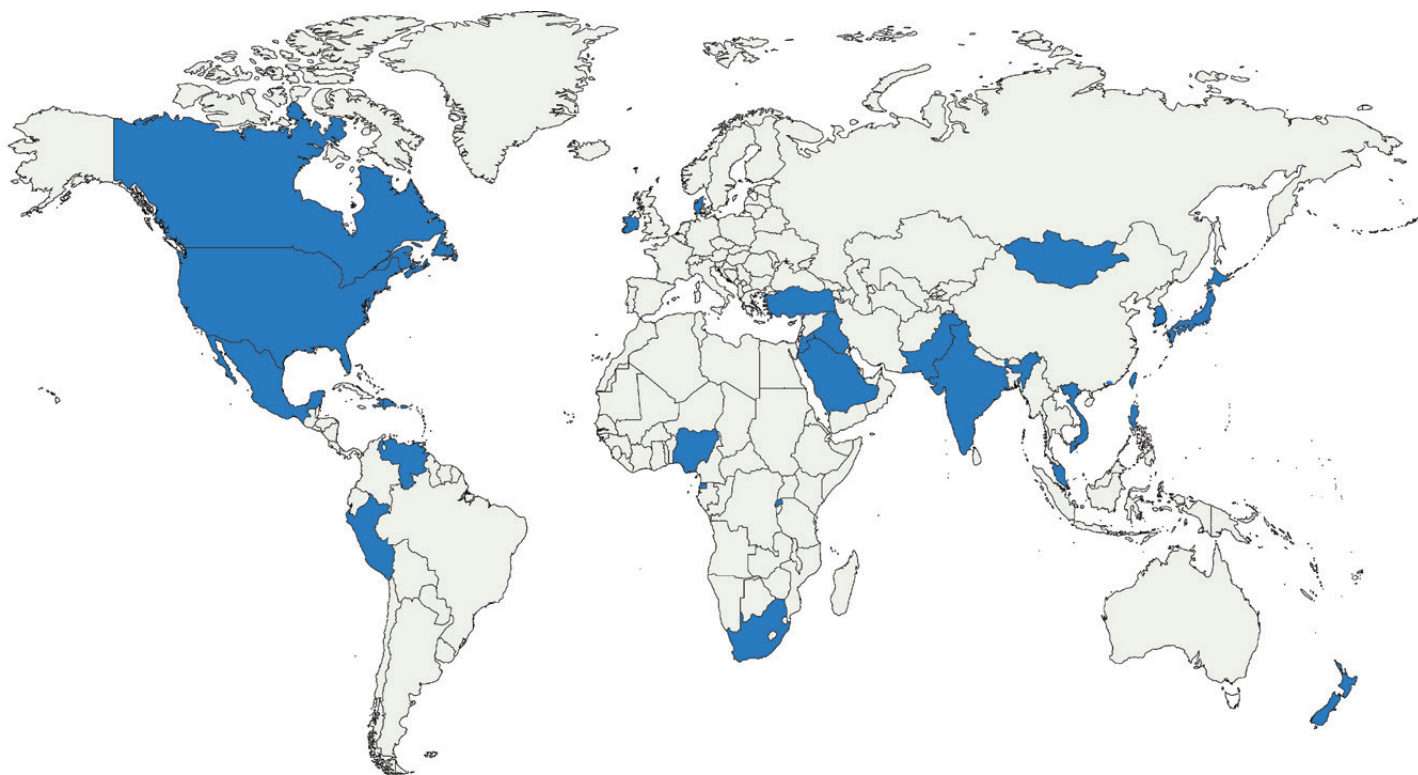
From design, manufacture to final application

Consistent end results, through immutable quality controlled fabrication and installment, ensures increased performance in hygiene, longevity of critical infrastructure, with no ongoing maintenance programs or extra hidden costs, equating to a cost return on investment.

Practical aesthetics

Arcoform shrouds are made up of elegant clean modern lines, streamline shapes, easy to clean accented radius coves and corners with no hard edges or exposed auxiliary components.

Thank you for considering Arcoplast



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