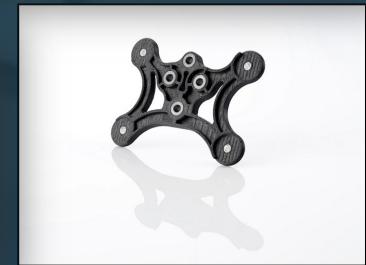
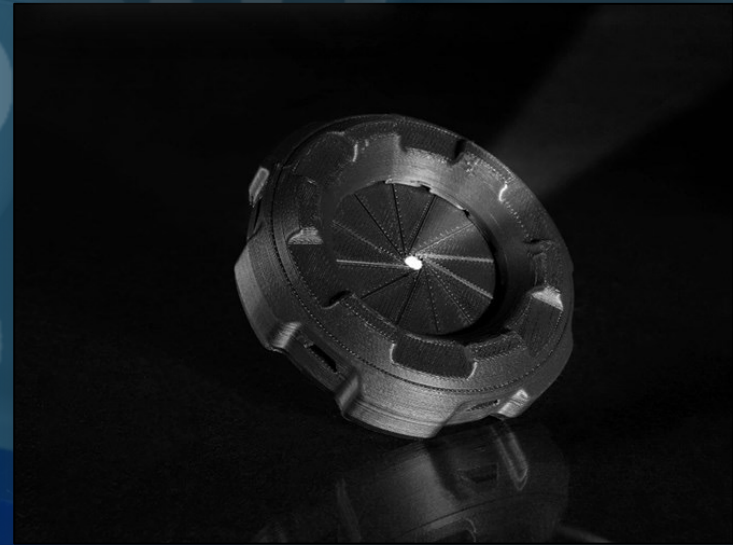


Fused Deposition Modelling
ADVANCED

MATERIAL

MANUFACTURE

INDUSTRIAL 3D PRINTING



g Goodflex
Rubber Co.
Fused Filament Fabrication

ACCELERATE



ACCELERATE your manufacturing and innovate quicker.

At Goodflex we can compress the design phase and compress time to market using the latest advanced additive material manufacture.

Up to 80% faster

Goodflex
Rubber Co

Accelerate prototype silicone hose production with 3D printed prototype tooling for design validation and advanced production builds.

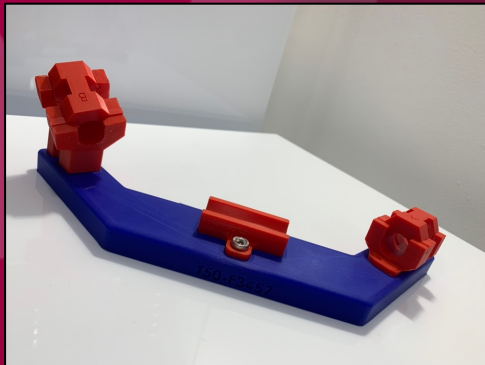
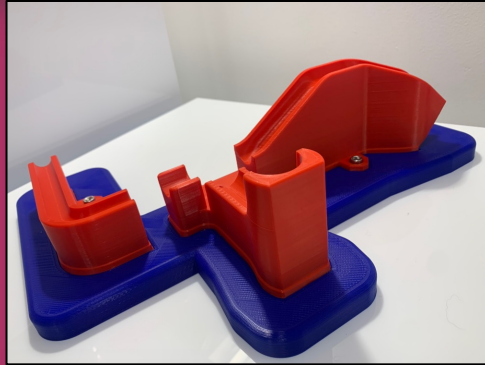
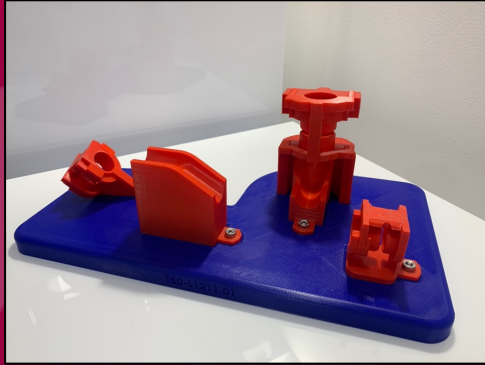
Excellent for complex geometry and dissolvable tooling applications

GOODFLEX RAPID PLUS



HOSE TOOLING

JIGS + FIXTURES



VALIDATION

Produce on demand 3D printed jigs, fixtures and workholding tools faster and with less cost.

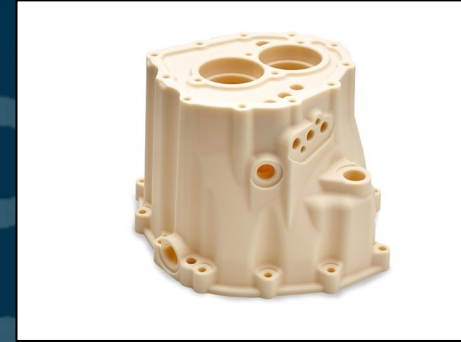
Significant lightweighting and ergonomic benefits over traditional tooling

SPEED | ACCURACY | COST

DESIGN

Accelerate product and part development with 3D printed functional prototypes made with high performance polymers to validate your design.

SPEED | ACCURACY | COST



PROTOTYPING

FULL DESIGN SUPPORT

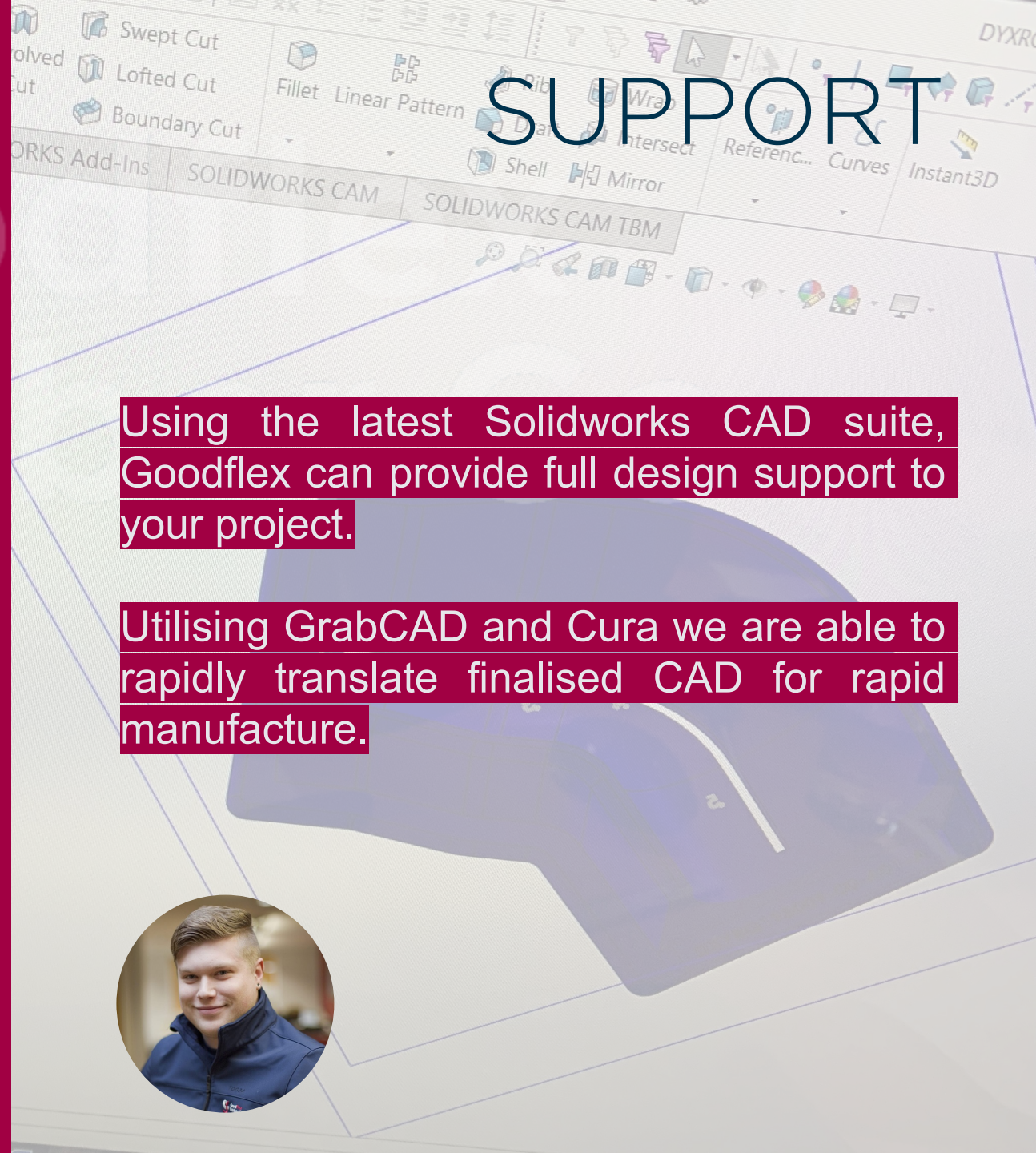


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Rub

SUPPORT

Using the latest Solidworks CAD suite, Goodflex can provide full design support to your project.

Utilising GrabCAD and Cura we are able to rapidly translate finalised CAD for rapid manufacture.



Reverse Engineering






















Validation

Using VX Inspect and VX Model, Goodflex are able to accurately scan parts to provide the full 'design, create and validate' service to your project

Goodflex
Rubber Co

SPEED | ACCURACY | COST

DETAILS			TYPICAL APPLICATIONS			PERFORMANCE PROPERTIES						
Name	Material	Description	Prototyping	Tooling	Production Parts	Ultimate Tensile Strength	Heat Deflection Temp.	Izod Unnotched*	Impact Toughness	Elongation at Break*	Tensile Modulus	Surface Resistivity
ASA	FDM Thermoplastic	Similar to ABS, only better. ASA filament (acrylonitrile styrene acrylate) is the perfect all-purpose 3D printing thermoplastic, suitable for many different applications. It has a similar chemical makeup to ABS plastic but offers three improvements: better mechanical properties, superior aesthetics and it's UV resistant. ASA material also comes in 10 colors, more than any other FDM material.				33MPa				9%		
Nylon 12 Carbon Fibre	FDM Thermoplastic	Carbon Reinforced. FDM Nylon 12 Carbon Fibre (Nylon 12CF) combines nylon 12 and chopped carbon fibre to achieve the highest flexural strength and stiffness-to-weight ratio of any FDM material. Nylon 12CF provides a cleaner carbon fiber additive process than SLA with equivalent strength properties. Lightweight Strength. FDM Nylon 12CF offers the strength and rigidity to replace metal in certain applications. Replace heavy metal tools with lighter, ergonomic carbon fiber FDM tools. Validate designs faster with carbon fibre functional prototypes instead of costly and time-consuming metal prototypes.				76MPa						
ULTEM™ 1010 resin	FDM PEI Thermoplastic	High Strength and Excellent Thermal Properties. ULTEM™ 1010 resin is a high-performance polyetherimide (PEI) thermoplastic, strong 3d printing material. It has high heat resistance while exhibiting the lowest coefficient of thermal expansion among FDM materials. Combined with high strength properties, ULTEM 1010 resin is the strongest FDM material and is perfect for demanding and specialized applications like lightweight composite tooling. Certified Grade for Specialty Applications. For special medical and food-related applications, ULTEM™ 1010 CG (certified grade) comes with additional documentation to demonstrate compliance with industry standards for ISO 10993 and USP Class VI biocompatibility, and NSF 51 food safety requirements.				81MPa	216°C					
ABS	FFF Filament	Used by an array of industries worldwide, ABS is known for its exceptional mechanical properties. ABS is specifically formulated to minimize warping and ensure consistent interlayer adhesion. Excellent mechanical properties and interlayer adhesion, superior aesthetics, minimal warping, and reliable bed adhesion. Used for visual and functional prototyping, and short-run manufacturing. Not suitable for food contact and in vivo applications. Long term UV exposure can negatively affect properties of an ABS print. Applications where the printed part is exposed to temperatures higher than 85 °C				33.9 MPa				5%	1,618.5 MPa	
PLA	FFF Filament	PLA filament provides a no-hassle 3D printing experience thanks to its reliability and good surface quality. Our PLA is made from organic and renewable sources. It's safe, easy to print with, and it serves a wide range of applications for both novice and advanced users. Good tensile strength and surface quality, easy to work with at high print speeds, user-friendly for both home and office environments, PLA allows the creation of high-resolution parts. There is a wide range of color options available. Used for household tools, toys, educational projects, show objects, prototyping, architectural models, as well as lost casting methods to create metal parts. Not suitable for food contact and in vivo applications. Long term outdoor usage or applications where the printed part is exposed to temperatures higher than 50 °C				45.6 MPa				5.2%	3,150 MPa	
Tough PLA	FFF Filament	Tough PLA is a technical PLA filament with toughness comparable to Ultimaker ABS. Ideal for reliably printing technical models at large sizes, our Tough PLA offers the same safe and easy use as regular PLA. With an impact strength similar and higher stiffness compared to Ultimaker ABS, Tough PLA is less brittle than regular PLA and gives a more matte surface finish quality. Heat resistance is similar to standard PLA filaments, so printed parts should not be exposed to temperatures above 60 °C. More reliable than ABS for larger prints, with no delamination or warping. Tough PLA is also compatible with support materials (PVA and Breakaway), giving full geometric freedom when designing parts. Used for functional prototyping, tooling, manufacturing aids. Not suitable for food contact and in vivo applications. Long term outdoor usage or applications where the printed part is exposed to temperatures higher than 60 °C.				37 MPa				3.10%	1,820 MPa	
Nylon	FFF Filament	Used by many manufacturers worldwide, Nylon is well known for its impressive durability, high strength-to-weight ratio, flexibility, low friction, and corrosion resistance. Enjoy a seamless 3D printing experience due to the reduced humidity absorption when compared to other Nylon filaments. Industrial-grade impact and abrasion resistance, durable, high strength-to-weight ratio, low friction coefficient, and good corrosion resistance to alkalis and organic chemicals. Used for functional prototyping, tooling, and industrial modelling. Not suitable for food contact and in vivo applications or applications where the printed part is exposed to temperatures higher than 80 °C.				34.4 MPa				210%	579 MPa	

TIME TO ACCELERATE

SPEED | ACCURACY | COST

