

HANDBOOK



JUNO.am

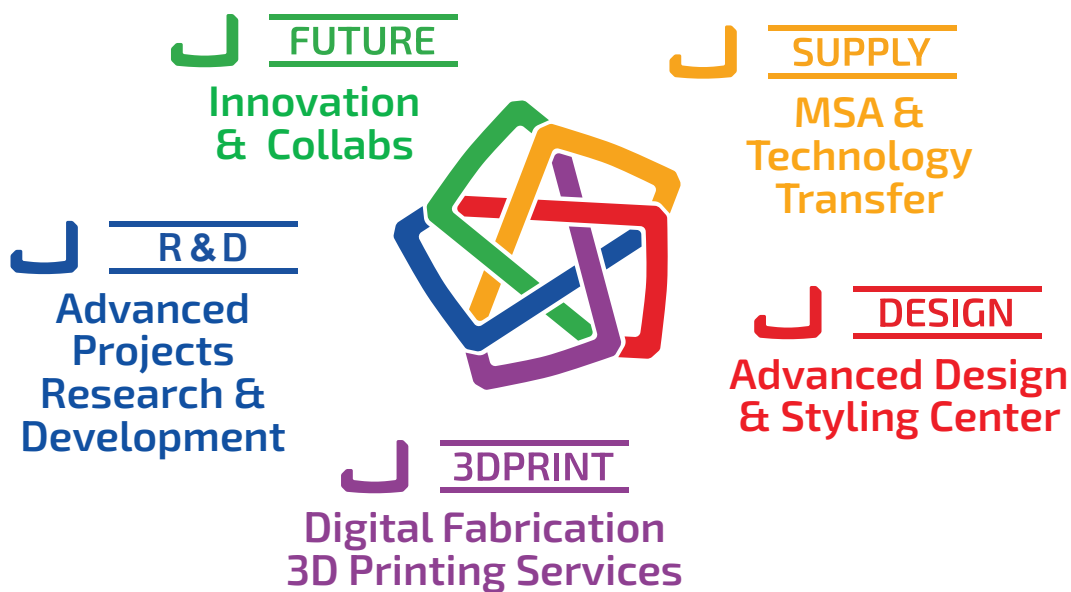


V2026/01

The Additive Manufacturing Galaxy

Chi siamo

Progettazione & Manifattura Digitale Un servizio a 360° per tutte le necessità



Esperti nell'Additive Manufacturing
Più di 15 anni di esperienza

Carbon®

CERTIFIED PARTNER



Digital Manufacturing Partner

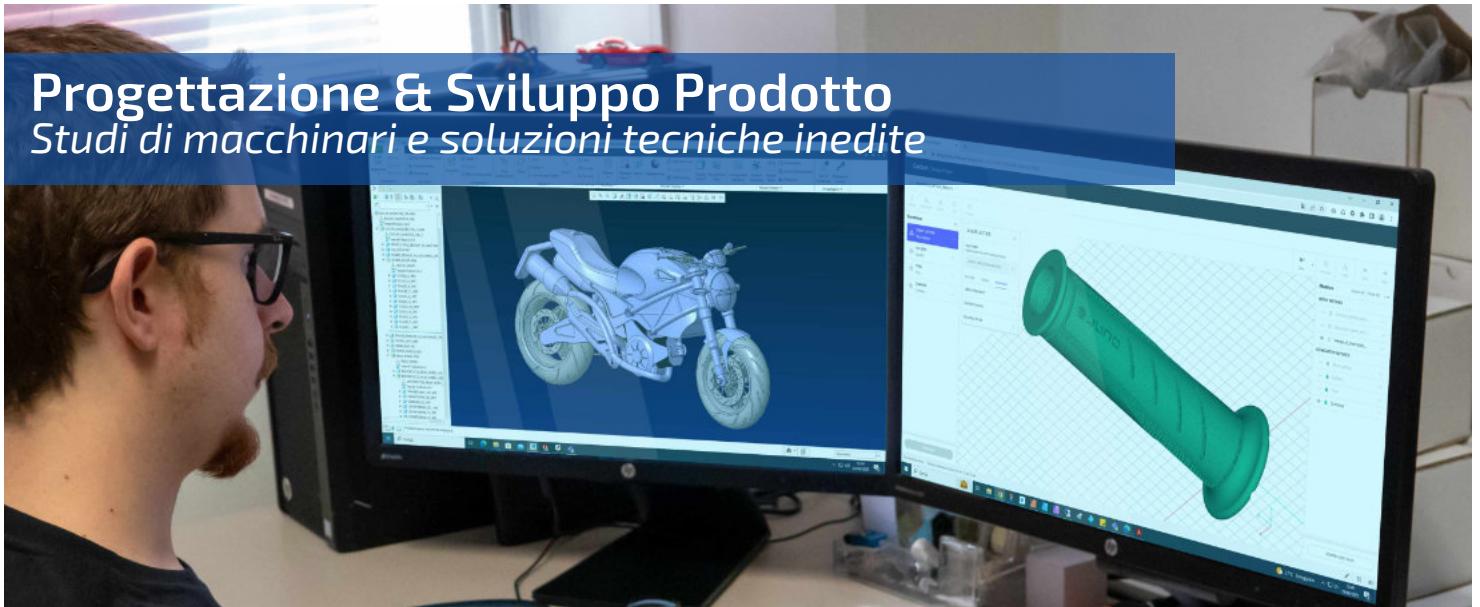
La Forma segue la Funzione
Stile e Design per grandi risultati

Industrializzazione & Reverse Engineering
Competenza ed esperienza

By Studio Pedrini
Ufficio Tecnico per ogni esigenza

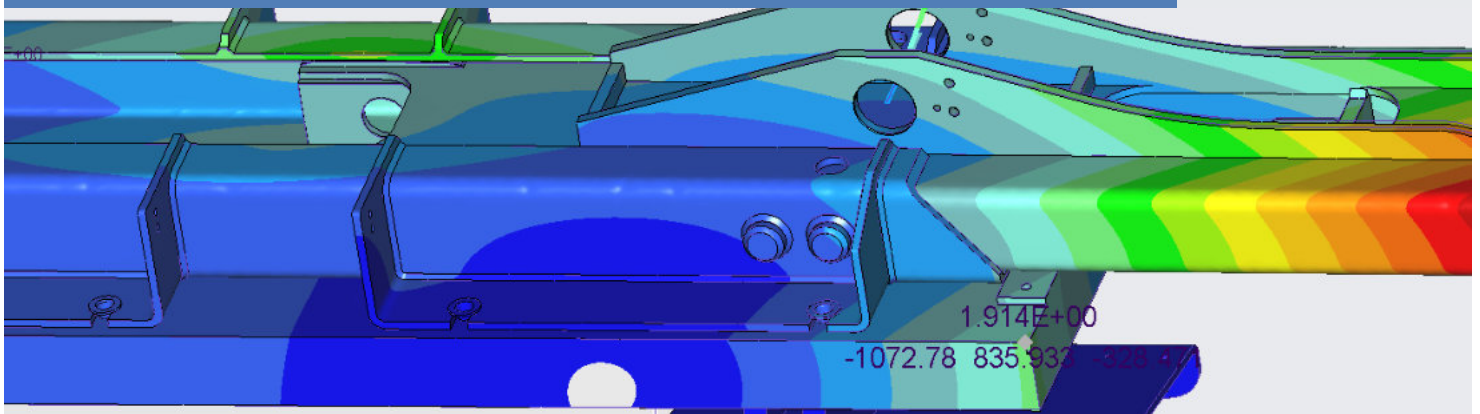
Progettazione & Sviluppo Prodotto

Studi di macchinari e soluzioni tecniche inedite



Industrializzazione & Simulazioni FEM

Analisi delle criticità e approccio Cost-Saving



Reverse Engineering

Superfici organiche e oggetti meccanici



Personalità e funzionalità

Emergi dal mercato con stile

Ricerca di Stile

Sketch iniziali per sondare i gusti del cliente



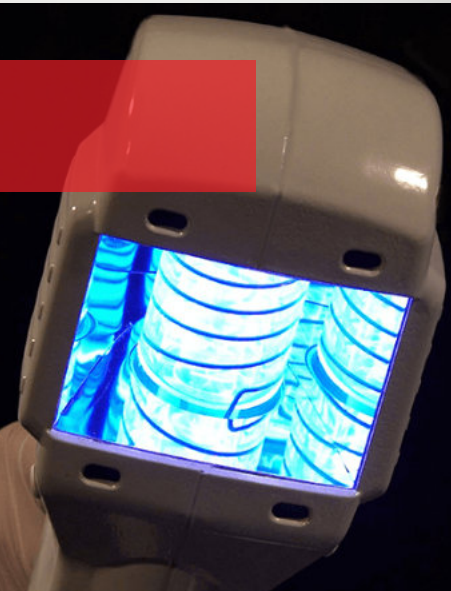
Modellazione & Rendering

Realizzazione in 3D della proposta scelta



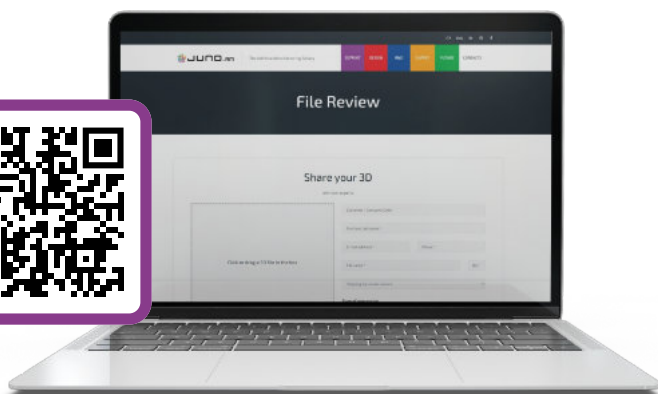
Ingegnerizzazione & Prototipazione

Industrializzazione per la produzione seriale

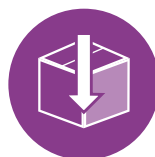


Chiedi ai nostri esperti
 Flessibilità senza limiti

**REVISIONE DEI TUOI
 FILE 3D**



http://www.freepik.com - Designed by zlatko_plamenov



**RIDUZIONE del
 MAGAZZINO**

Oggi l'unico magazzino necessario è quello virtuale.



CUSTOMIZZAZIONE

Personalizzazione senza limiti: cambio di dettagli, forme, incisioni, loghi...



TIME TO MARKET

Ricerca e sviluppo più flessibile, iterazioni fra i progettisti più rapide.

Esperti nell'additive manufacturing
 Più di 15 anni di esperienza

Guidiamo il cliente nella scelta della tecnologia...
 Con creatività e additive-mindset

...e dei materiali
 La più ampia scelta sul mercato

Carbon[®]

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Digital Manufacturing
 Partner

Lattice estetica

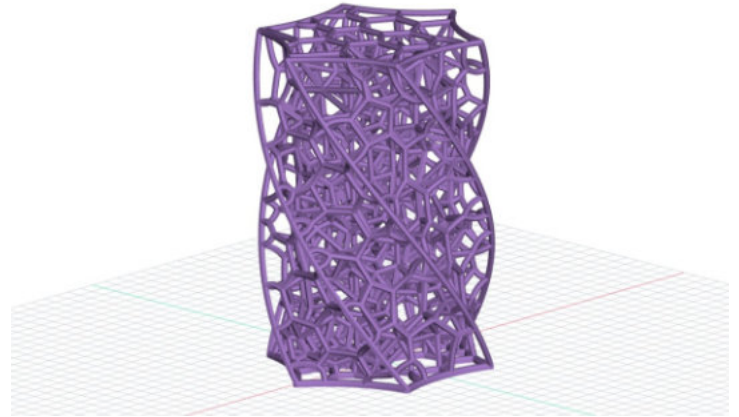
Tante geometrie base per differenti rese estetiche.

Lattice funzionale

Riduci le deformazioni nella stampa 3D.

Lattice per alleggerimento

Diminuisci il peso del componente senza compromettere le prestazioni dell'oggetto.



Main lattice cells:



Voronoi

Foam-like non-linear stress-strain response



Icosahedral

High stiffness to mass ratio



Rhombic

Absorb energy at high strains



Tetrahedral

Constant force stress plateau



Kagome

Linear stress-strain response
High stiffness to mass ratio

Custom cells available

Topology Optimization



Component 3DPrinted for UniBo Motorsport

Ridurre il peso senza diminuire le prestazioni meccaniche

Textures for aesthetics

Disponibili diverse texture, anche **personalizzabili**.

Powered by Carbon Design Engine



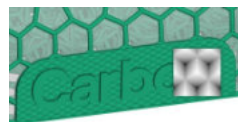
Noise



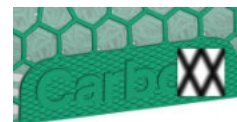
Noise Fine



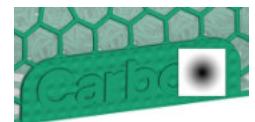
Noise Super Fine



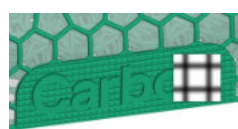
Cube



Diamond



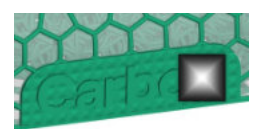
Dot



Grid



Hex



Pyramid

Materiali concettuali

Ideali per una rapida visualizzazione di forme o finiture (resina, filo...).

Materiali funzionali

Ideali per la produzione o lo studio di prototipi funzionali (polvere, resine...).

Materiali prestazionali

Adatti ad applicazioni nel mondo reale, anche con elevate proprietà meccaniche.

Materiali elastomerici

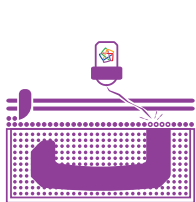
Gomme ad alta resa estetica e/o funzionale disponibili in differenti shoraggi.



Photo courtesy of Carbon, Inc.

Contact us: 3D@JUNO.AM

Le principali tecnologie additive sul mercato:



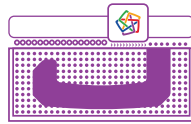
LPBF
Laser Powder
Bed Fusion

Stainless Steel
Aluminium



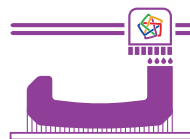
DLS
Direct Light
Synthesis

Resin
Production



MJF
Multi JetFusion

Nylon PA12



PJ
PolyJet

Multimaterial



FDM
Fused Deposition
Modeling

Functional
Concept

[INFO](#)



[INFO](#)



[INFO](#)



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[INFO](#)



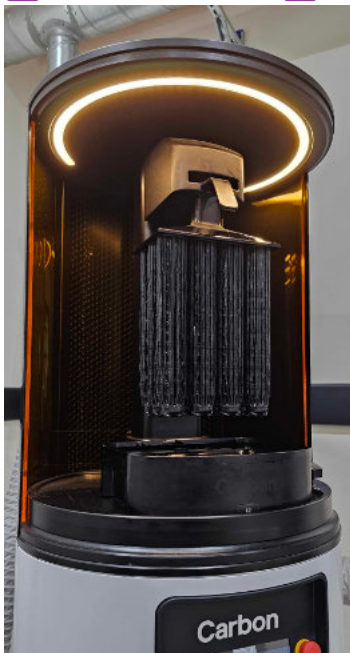
Tutte le informazioni ivi contenute possono essere suscettibili di errori di revisione o incomplete; sollecitiamo i gentili clienti a verificare le informazioni utilizzando i link alle schede dei materiali di loro interesse, per una miglior comprensione delle proprietà e dei limiti di questi.

Chiedi sempre al nostro responsabile di riferimento esplicitando tutti i dettagli di progetto.

Every information hereby written is mistake-susceptible. We kindly advice our customers to verify materials' properties and informations through the various clickable links in the following pages, in order to check better every material's limits and behaviour. Feel free to ask more to our experts.

PRODUCTION GRADE								
	EPX 82	EPX 86 FR	EPX 150	RPU 70	RPU 130	MPU 100	IND 147	LOCTITE 3843
Technology								
Ultimate tensile strength (Mpa)	80	90	79	40	35	35	67±16	51±2
Elongation at break (%)	5	5	4	100	100	25	2,4±0,7	43±10
Tensile modulus (Mpa)	2800	3300	2900	1700	900	1200	1150 ±160	1806 ±47
Shore hardness	89D	88D	86D	80D	77D	81D	94D	75D
Impact Strenght (J/m) Notched Izod, ASTM D256	45	30	26	15	75	30	14.6±0.1	53±4
Heat Deflection Temp (°C)@0,45 Mpa, ASTM D648	130	135	142	60	120	50	291±15	63
Comparable thermoplastic	20% glass filled PBT	20% glass filled PBT	PEEK, PEI, PBT, PC, Nylons	ABS PC ABS	ABS PEEK, Nylon PC, PP, POM	Medical grade ABS	Ideal for moulds	Ideal for tooling
 Certifications	B* C*	Fire Retardant	B* C*	B*	B*	B* C*	-	-
*Carbon is not responsible for the results of any biocompatibility tests other than those case specified in the Carbon Official Technical Data Sheet.								

B* Biocompatibility* **C*** Citotoxicity*





PRODUCTION GRADE



Possibilità di personalizzare lo shoraggio (EPU)

SIL 30	EPU 40	EPU 41	EPU 43	EPU 45	EPU 46	EPU46 Soft	EPU46 Extra Soft
------------------------	------------------------	------------------------	------------------------	------------------------	------------------------	----------------------------	----------------------------------

Technology								
Ultimate tensile strenght (Mpa)	1	19	15	17	24	23	19	13
Elongation at break (%)	350	300	300	380	290	300	300	270
Tensile modulus (Mpa)	1	8	8	10	17	15	9	4
Shore hardness (Instant/5 sec.)	35/31A	72/71A	71/70A	76/71A	77/62A	80/78A	71/71A	59/56A
Comparable thermoplastic	Silicone	TPU	High resiliency	Soft, Durable	Energy damping	TPU	TPU	TPU
Certifications	B* C*	B* C*	B*	B*	B*	B* C* *Black	B* C* *Grey	B* C* *Grey
<small>*Carbon is not responsible for the results of any biocompatibility tests other than those case specified in the Carbon Official Technical Data Sheet.</small>								

B* Biocompatibility* **C*** Citotoxicity*



PROTOTYPING



Possibilità di simulazione di costampaggio

RUBBER FAMILY

Technology	
Ultimate tensile strenght (Mpa)	0.8-5*
Elongation at break (%)	45-240*
Tensile modulus (Mpa)	N.A.
Shore hardness (Instant/5 sec.)	26-77*A
Certifications	N.A.

*This is a range of values of different materials available

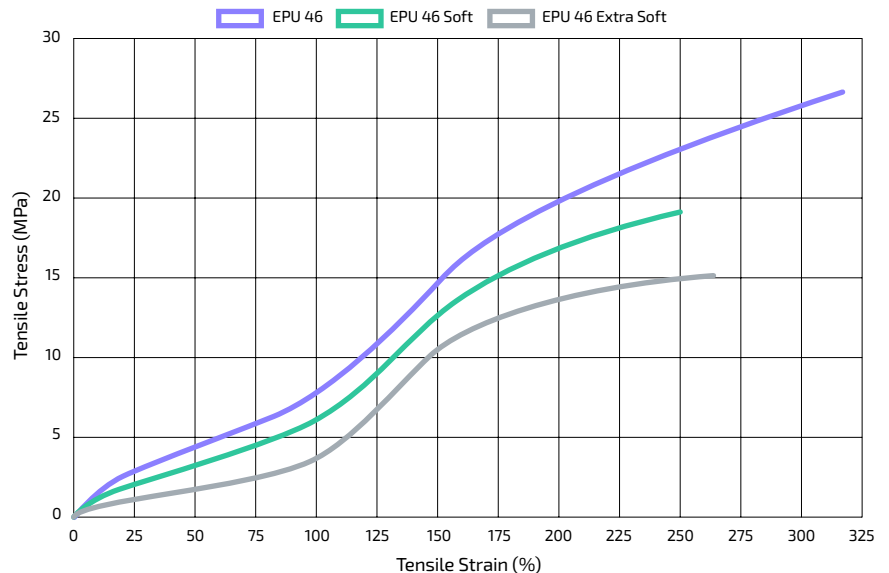


Photo courtesy of Carbon, Inc.

PRODUCTION GRADE



Nylon PA12 - Dyeing Colouring



Grigio Grezzo

Toys Certified



Grigio Scuro



Nero



Rosso



Blu



Verde Scuro

Nylon adatto a tanti campi di applicazione, elevata precisione dimensionale.

**PA 12
Nylon**

Technology



Parts density
g/cm³, ASTM D792

1,01

Tensile Strength, max load (XY)
(Mpa)/6960 psi

50

Tensile Strength, max load (Z)
(Mpa)/6960 psi

50

Traction module (XY)
(Mpa)/245 ksi

1700

Traction module (Z)
(Mpa)/245 ksi

1900

Elongation at Break (XY)
%, ASTM D638

17

Elongation at Break (Z)
%, ASTM D638

9

Heat Deflection Temp (0,45 MPa) (Z)
°C

175

Heat Deflection Temp (1,82 MPa) (Z)
°C, ASTM D648

95



*See each datasheet to check the real application of any biocompatibility Tests other than those case specified in the Official Technical Data Sheet.



POST PROCESSING:

Acrylic Painting



Chrome/Metal Plating



Disponibili servizi di:

- Verniciatura
- Fresatura di precisione
- Finitura superficiale
- Incollaggio
- ecc...

PRODUCTION GRADE



**Aluminium
AlSi10Mg**

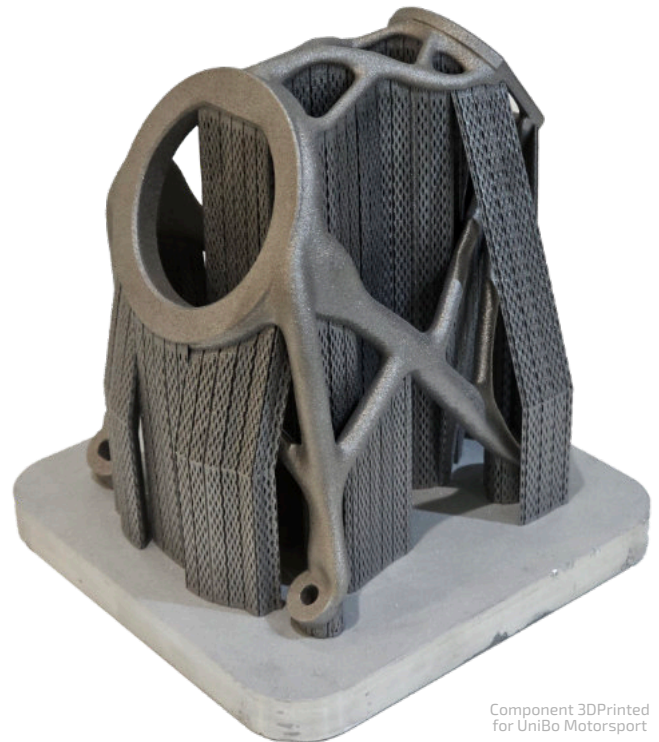
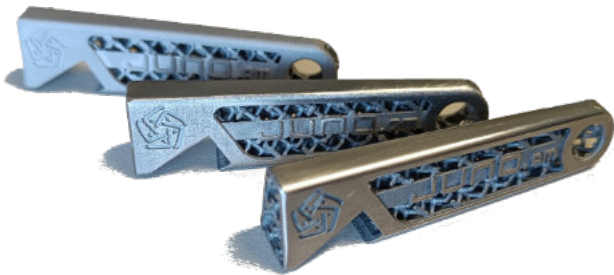
**Stainless
Steel 316L**

**Titanium
Ti6Al4V**

Technology			
Tensile Strength MPa	411±12	620±9	1200±40
Yield Strength % (MPa)	207±3	N.A.	1100±50
Elongation at break %	5±1	40±4	8±2
Hardness HBW	120±5	≈18 HRC	34 HRC
Density g/cm ³	2.67	7.90	4.43
Test method	ISO 6892-1	ISO 6892-1	ASTM E8 / E8M (round unmachined specimen with ø 5mm at gauge section)

FINITURE

Sabbiatura
Satinatura
Lucidatura



Component 3DPrinted
for UniBo Motorsport

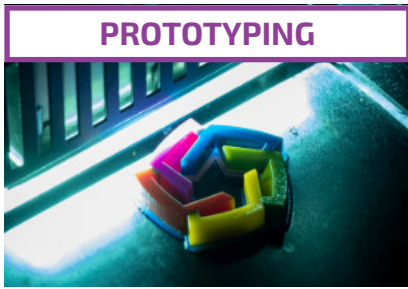
Thermal Treatments Available

PRODUCTION GRADE		PROTOTYPING		Colors Palette:		
	<i>Biocompatibile (solo trasparente)</i> ISO 10993-5, ISO 10993-23	IND 405	<i>Possibilità di simulazione di costampaggio</i>	Clear MED610 B*	VERO CLEAR	FULLCURE RGD720
Technology		Technology				
Ultimate tensile strenght (Mpa)	39±1	Tensile strenght MPa	50-65	50-65	45-65	
Elongation at break (%)	127±6	Elongation at break %	10-25	10-25	15-25	
Tensile modulus (Mpa)	1378±41	Modulus of elasticity MPa	2000-3000	2000-3000	1700-2500	
Shore hardness	79/76D	Flexural Strenght MPa	75-110	75-110	75-110	
Impact Strenght (J/m) Notched Izod, ASTM D256	72±2	Flexural Modulus MPa	2200-3200	2200-3200	2100-3300	
Heat Deflection Temp (°C) @ 0,45 Mpa, ASTM D648	53	Shore Hardness	83-86 D	83-86 D	N.A.	
Comparable thermoplastic	PP	Izod Notched Impact J/m	20-30	20-30	20-30	
		Heat Deflection Temp °C @ 0,45 MPa	45-50	45-50	45-50	
Certifications	-	Tg °C	52-54	52-54	N.A.	
*Carbon is not responsible for the results of any biocompatibility tests other than those case specified in the Carbon Official Technical Data Sheet.		Check the Official Technical Data Sheet for more informations.				

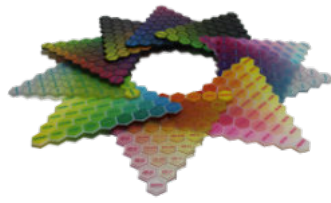
B* Biocompatibility*

IND 405 - Juno Colors Palette

Trasparente	Grigio	Nero	Blu	Verde
Rosso	Arancione	Arancione 1	Giallo	Giallo 1



PROTOTYPING



Colors Palette:







Possibilità di simulazione di costampaggio

RIGUR RGD450

VERO FAMILY

PLA

TOUGH

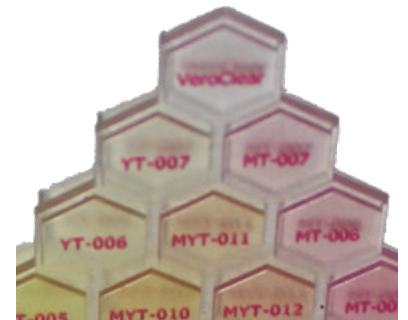
Technology		 White only			
Tensile strenght MPa	Method ASTM D638-03	40-45	50-65	62	35
Elongation at break %	Metodo ASTM D638-05	20-35	10-25	>4.4	>52.7
Modulus of elasticity MPa	Metodo ASTM D638-04	1700-2100	2000-3000	3600	2800
Flexural Strenght MPa	Metodo ASTM D790-03	52-59	75-110	-	-
Flexural Modulus MPa	Metodo ASTM D790-04	1500-1700	2200-3200	2600	2600
Shore Hardness	Metodo ASTM Scale D	80-84 D	83-86 D	-	-
Izod Notched Impact J/m	Metodo ASTM D256-06	30-35	20-30	32	220
Heat Deflection Temp °C @ 0,45 MPa	Metodo ASTM D648-06	49-54	45-50	52-49	52-49
Tg °C	Metodo ASTM DMA, E>>	48-52	52-54	-	-

Check the Official Technical Data Sheet for more informations.



AMPIA GAMMA FILAMENTI DISPONIBILE CONTATTACI PER UNA CONSULENZA

Prototipi dal feeling reale



MultiMateriale

Rigido
Gomma

MultiColore

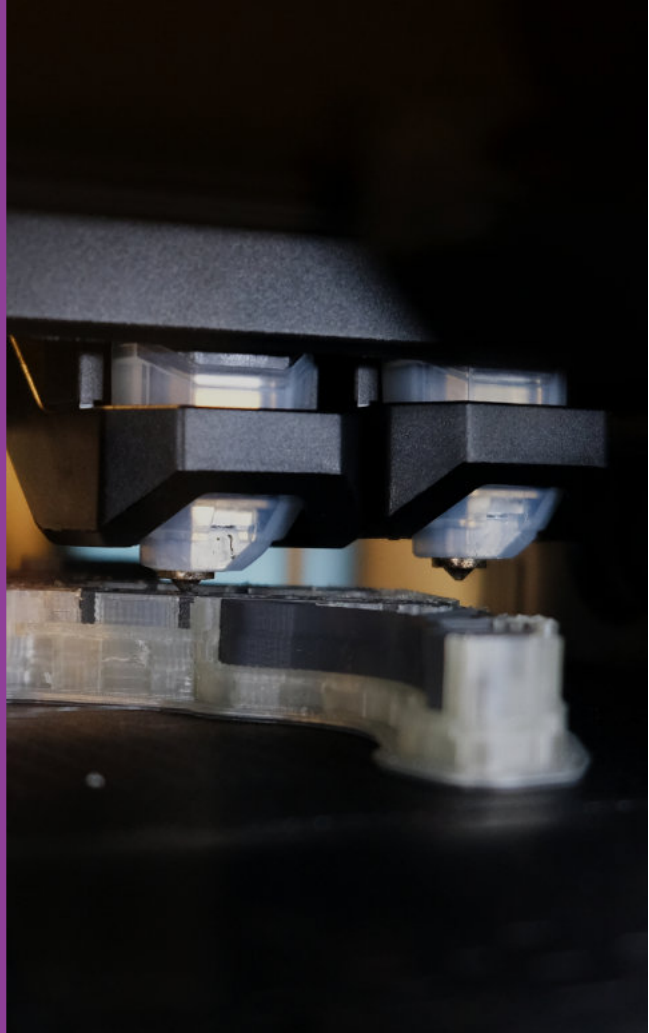
Cyan
Magenta
Yellow

Traslucido

Colori
traslucidi

PROTOTYPING / PRODUCTION								
	PETG	ASA	NYLON	NYLON 6 C. F.	NYLON 12 C. F.	PC	PC-ABS FR	
Tensile strenght Metodo ASTM D638 MPa	44	49	66	110	66	XZ orient. 57.3	ISO 527 60	
Elongation at break Metodo ASTM D638 %	>3.8	>6	>10	N.A.	N.A.	5.2	ISO 527 >50	
Modulus of elasticity Metodo ASTM D638 MPa	1900	2100	2200	7600	6000	2250	ISO 527 2850	
Flexural Modulus Metodo ASTM D790 MPa	2000	2300	1700	N.A.	N.A.	N.A.	N.A.	
Notched Impact Strenght Metodo ASTM D256 J/m	18.7	140	187	N.A.	N.A.	76.8	N.A.	
Heat Deflection Temp °C @ 0,45 MPa Metodo ASTMD648	70	96	91	184	154	142	N.A.	
<div style="border: 1px solid black; padding: 5px; text-align: center;"> AMPIA GAMMA FILAMENTI DISPONIBILE CONTATTACI PER UNA CONSULENZA </div>							Impact Strenght Charpy method 23°C ISO 179 (kJ/m ²)	42.5
							Vicat Softening Temp ISO 306	104
							Flammability Rating UL94	V0

PRODUCTION GRADE			
	ABS	ULTEM 1010	ULTEM 9085
Tensile strenght Metodo ASTM D638 MPa	31-26 (Ultimate)	81-37 (Ultimate)	69-42 (Ultimate)
Elongation at break Metodo ASTM D638 %	7-2	3.3-2.0	5.8-2.2
Modulus of elasticity Metodo ASTM D638 MPa	2230 (XZ) 2180 (ZX)	2770 (XZ) 2200 (ZX)	2150 (XZ) 2270 (ZX)
Flexural Modulus Metodo ASTM D790 MPa	2060 (XZ) 1760 (ZX)	2820 (XZ) 2230 (ZX)	2300 (XZ) 2050 (ZX)
Notched Impact Strenght Metodo ASTM D256 J/m	128-300	41-24	120-48
Heat Deflection Temp °C @ 0,45 MPa Metodo ASTMD648	82	216	153
Check the Official Technical Data Sheet for more informations.			
	Tg °C	209	177
Bio Compatibility Certification USP Class	VI	VI	
Flammability Rating UL94	V0	V0	



Ricerca & Network

Le nostre competenze per l'innovazione

Software & AI

Workflow software AI for AM



bi-REX

3FESTO



CLUST-ER MECH



FABLAB NETWORK

ANY3DP .APP

ANY3DP .SMART

CONTEMPORARY ART



CONFINDUSTRIA EMILIA AREA CENTRO
Le imprese di Bologna, Ferrara e Modena

J SUPPLY



MASTER SERVICE AGREEMENT

Scalabilità produttiva e ottimizzazione dei costi.



PLANNED DELIVERY

Produzione continuativa e tempi di consegna certi.

J CONTACTS

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S.R.L.

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40132 Bologna
P.IVA/VAT (IT) 03250141201

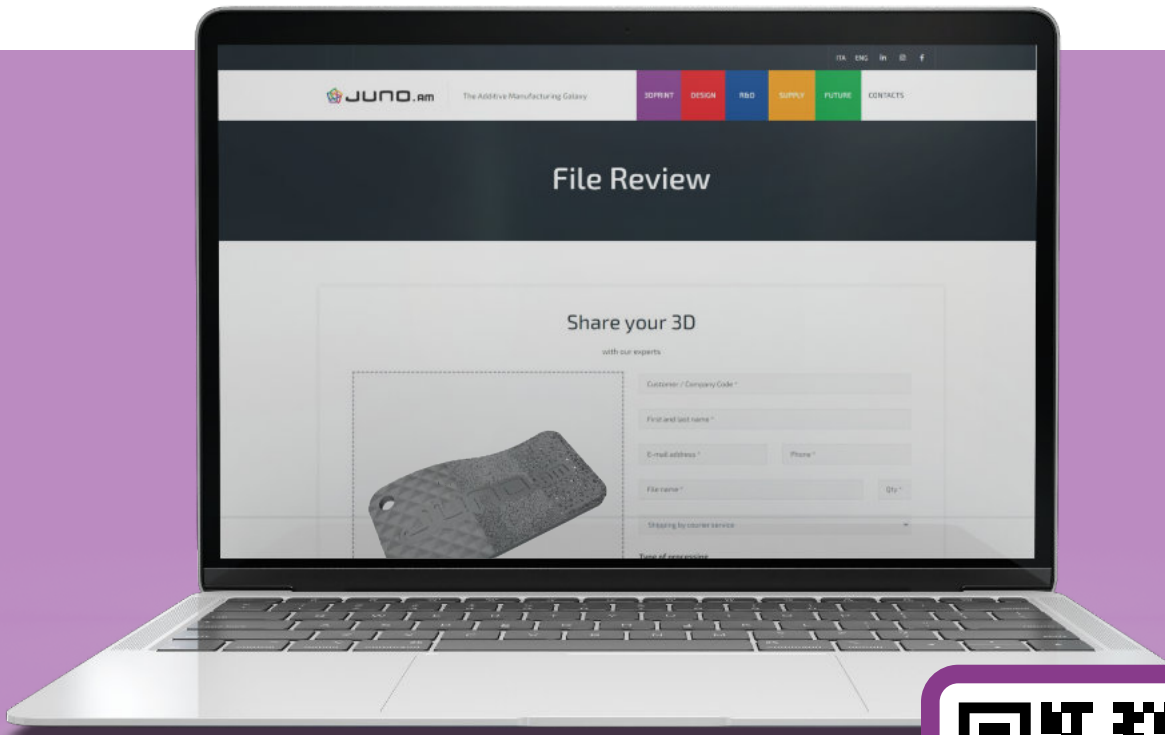
STUDIO PEDRINI
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051 619 2116

REVIEW YOUR 3D FILES!



JUNO.AM/file-review

Additive Manufacturing: 3D@JUNO.AM

Design & Engineering: UT@JUNO.AM



Contattaci per un appuntamento in sede!
Contact us to plan a meeting on site!

V2025/07