GIU INDUSTRIAL MACHINETY

The art of creating the world in detail.

GIU INDUSTRIAL MACHINETY
26-34, Nakdong-daero 841beon-gil, Sasang-gu,
Busan, Republic of Korea
TEL. 051)303-6790
051)303-6780
FAX. 051)303-6791

GIU INDUSTRIAL MACHINETY

There is no history of great things without passion.

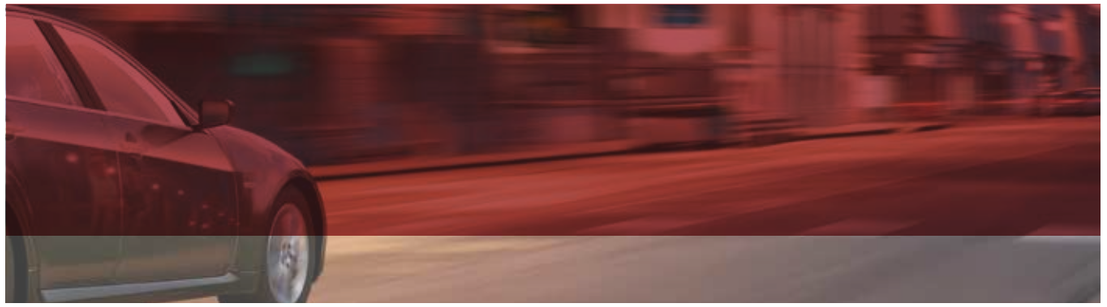
Enterprise specializing in precision processing

GIU INDUSTRIAL MACHINETY

CONTENTS

CEO's Greeting

Like a flame
that won't go out.
It's always passionate.
A company that gives long-standing trust.



Based on the technology accumulated since you started your business in 1990, our company includes C.N.CLATHE & M.C.T.
As a company with precision machinery and advanced technology, the best products you require are the best.
We are doing our best to ensure quality, optimal amount, and accurate delivery. I'm confident that it's a company that can continue to develop indefinitely in the future. We're committed to improving the quality of our form for continuous technology development, and we're committed to any of our customers' We promise to be an active company that can respond immediately to demands.
All of a sudden.

GIU INDUSTRIAL MACHINETY
CEO. Park Hyun-chul

Management Ideology

- Best Reliability
- Best Delivery
- Best Quality

Organization chart

CEO

Control department	production department	Department of Technology Development
Management team, Accounting team. General Affairs Accounting, Material Management Purchasing and Trading Affairs	**Fabrication Repair** Fabrication, installation, test drive Machine Control Management	**Dedicated to technical sales** Hydraulic Parts Industrial Machinery Parts Research and development of high-speed operating technology.

OVER VIEW

Mindful of customers
All of us are united.
I do my job faithfully thinking only about customers.

The manufacturing innovation company that makes new things possible for your business

WHY WORK WITH **GIU INDUSTRIAL?**

End-to-end partnership

When you work with GIU INDUSTRIAL, you're getting a true manufacturing partner. We offer multiple production solutions and a technology-agnostic approach, which means that we connect you to the right process for your project's needs.

Powered by digital technology

Using our proprietary software, we've created a digital thread that unlocks efficiency at every step. This technology helped us earn recognition from the World Economic Forum as a Manufacturing Lighthouse.

Advanced manufacturing and supply chain solutions

We help you implement new manufacturing and supply chain models while lowering operational risk for your business.
We have advanced on-site technology, manufacturing infrastructure, and industry expertise. By partnering with us, you get access to all three.

At the forefront of Industry 4.0

We don't just make your parts. We future-proof your business. GIU INDUSTRIAL offers advisory services to help you embrace the latest in product design and development, digital manufacturing, and digital warehousing.

WHAT WILL YOU MAKE POSSIBLE WITH **GIU INDUSTRIAL?**

Explore all the ways we can support your business.

PROTOTYPE OR VOLUME PRODUCTION

Manufacture a single prototype or 1 million end-use parts. Get an instant quote or talk to one of our experts.

PRODUCT AND ENTERPRISE INNOVATION

Transform the way you design, make, and fulfill products with our additive manufacturing for enterprise services.

OFFSHORE PRICING, **LOCAL EXPERTISE**

Our networked, global infrastructure removes all the risk typically associated with outsourcing manufacturing projects internationally

HIGH QUALITY PRODUCTION PARTNERS

Our global and domestic production partners go through an extensive qualification process so we can guarantee your parts will be made to your specifications.

EXPERT PROJECT MANAGEMENT

Our Manufacturing Services Team handles every detail of offshore production from delivering design files to customs paperwork. We have team members located in Asia to support operations and project managers who work within our entire network to implement quality programs and ensure you get perfect parts.

A PARTNER THAT SCALES WITH YOU

Flexible production capacity and full-service support

Our expansive global network means you always have the production capacity you need. We can make your production-grade prototypes into thousands of end-use parts in a matter of weeks.

VISION

Machined prototypes and production parts in as fast as 1 day.
Request an online quote today.

Looking for a reliable, quick-turn supplier of machined plastic and metal components?

With hundreds of CNC machines, our unmatched in-house capacity ensures your parts are shipped on-time, every single time. At Protolabs, our AS9100-certified CNC machining facilities are designed for both rapid prototyping and low-volume production of end-use components.

Technology and innovation make a better future.

GIU INDUSTRIAL MACHINETY, which is innovating the global manufacturing industry, is now challenging to a higher place.

Key History

1990.08	Establishment of Elevation Machine
2000.07	Relocation of Samrak-dong
2004. 04	Mitsubishi Heavy Industries (Nagasaki Marine) Export
2004. 04	Registration as a member of the Korea International Trade Association
2004. 12	Recognition of CLEAN workplaces
2007. 06	ISO 9001:2000 certification
2007. 07	Before Current Location Extension
2008. 06	Busan National University, Shilla University Institute of Industrial Technology Development, Industry-Academic Power
2008. 12	Ministry of Knowledge Economy Certified Parts and Materials Company (Inovis Certified)
2009. 02	Industrial-Academic Cooperation of Dong-Won University Institute for Industrial

Production facilities

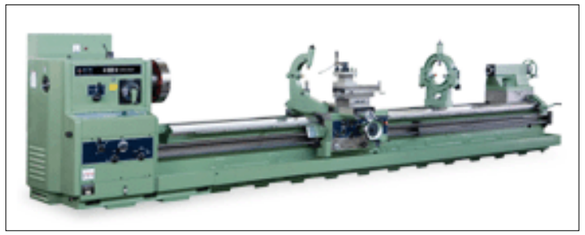
Delicate techniques of precision processing Variety of choices **GIU INDUSTRIAL MACHINETY**

Choose from hundreds of commercial-grade plastics, metals, and elastomers suitable for both prototyping and production.

With hundreds of CNC machines, our unmatched in-house capacity ensures your parts are shipped on-time, every single time. At Protolabs, our AS9100-certified CNC machining facilities are designed for both rapid prototyping and low-volume production of end-use components.

S&T CNC LATHE - TVL-160

RADIAL DRILLING M/C



LATHE - ϕ 720 x 2000

Large Crank

Name	Model	Standard	Quantity	Relative Height
CNC LATHE	TVL-160	ϕ 2000 X 900	1	S&T
CNC LATHE	SKT 28	ϕ 430 X 680	1	WIA Heavy Industries
CNC LATHE	SKT 28	ϕ 430 X 680	1	WIA Heavy Industries
CNC TURNING M/C	V550	ϕ 600 X 600	1	Daewoo Machinery
CNC MILLING M/C	KV45	400 X 800 X 500	1	Wea Heavy Industries
LATHE		ϕ J900 X 3000	1	Ilsan
LATHE		ϕ 720 X 2000	1	Hwacheon Technology Corporation
LATHE		ϕ 680 X 1500	1	Hwacheon Technology Corporation
MILLING M/C		No.5	1	Gihong Machine
MILLING M/C		No.2	1	Shizuoka
RADIAL DRILLING M/C		D110 D	1	Doosan Heavy Industries

Main mass production item

- HYDRAULIC PRESSING M/C
- SCREW BENDING M/C
- SHAFT
- ROLLER
- COUPLING
- SHEAVE
- BUSHING
- WHEEL
- ROD
- LINER
- PULLEY
- LABYRINTH

Certificate

Production facilities

Delicate techniques
of precision processing
Variety of choices
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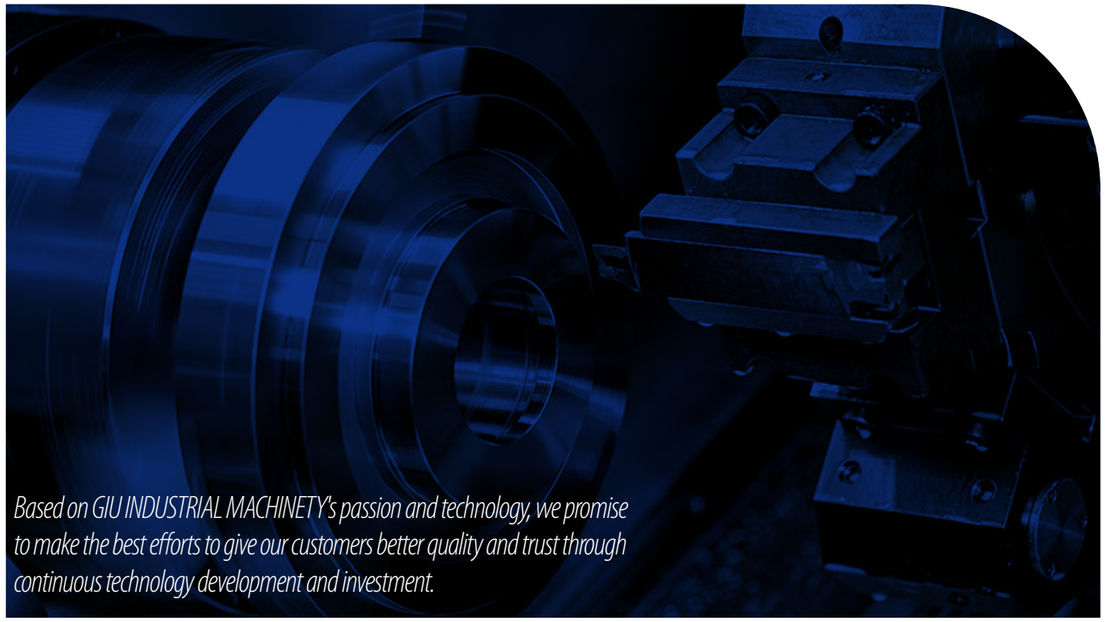

Based on GIU INDUSTRIAL MACHINETY's passion and technology, we promise to make the best efforts to give our customers better quality and trust through continuous technology development and investment.

GIU INDUSTRIAL MACHINETY will strengthen the capabilities of technology and c reate a company that is responsible for principles and belief quality through basic importance and human resources development.

High Volume CNC Lathe Machining

GIU Industrial MachineTY has a long experience and know-how in providing high-quality precision CNC processing parts for a wide range of industries and applications.

GIU INDUSTRIAL MACHINETY specializes in the production of "Precision Parts" manufactured to our customer's specifications using our expertise gained over 50 years with Automatic Screw Machines. With a complete tooling facility on the premises, we can ensure uninterrupted and efficient production of your parts.

Capabilities

At GIU INDUSTRIAL MACHINETY, we are capable of producing large quantities of precision lathed components with exceptionally tight tolerances through the use of highly automated equipment. Our capabilities include:

- Automated computer numerical control (CNC) machining
- Live tooling capabilities
- Quality machined products to rigorous specifications
- Exceptional tolerances within 0.0002"
- Wide production volume capacity of 1-100,000 pieces
- 2-4 weeks lead time

Industries

At GIU INDUSTRIAL MACHINETY, we offer superior CNC lathe machining for a wide range of industries and applications, including:

- Aerospace
- Agricultural
- Automotive
- Construction
- Hose and fluid
- Cone seat fittings
- Manufacturing
- Medical
- Mining
- Oil and gas

Production facilities

Delicate techniques of precision processing Variety of choices **GIU INDUSTRIAL MACHINETY**

Choose from hundreds of commercial-grade plastics, metals, and elastomers suitable for both prototyping and production.

CNC Lathe KIA SKT-28 LM

Technical parameters

Maximum turning length (Z-axis)	42 in
Turning diameter over bed (max)	25.6 in
Turning diameter over cross slide (max)	11.8 in
Maximum travel length in the X-axis	8.7 in
Maximum feed rate in X-axis	787.4 in/min
Maximum feed rate in Z-axis	944.9 in/min
Maximum power of the main spindle	40.2 hp
Maximum rotary speed of the main spindle	3500 rpm
Total number of tools in the turret	12 pcs
Number of CNC controlled axles	3 pcs

Control system	FANUC 21i-TB
Machine's weight	8,0 t
Tool holder	Direktaufn. 25x25 mm
spindel speed	max. 3.000 U/min
Swing over saddle	375 mm
Total power requirement	25 kVA
Spindle lock	A2-8
Cutting diameter	410 mm
Main spindle drive	22 kW
Sleeve travel	120 mm
Turning length	1070 mm
Chip removal device	4,25 x 1,10 x 1,40 m
Bar diameter	76 mm
Overall dimensions	3,65 (4,65) x 1,85 x 1,9 m
Fast feed (speed)	20 / 24 m/min
Traverse X-axis	220 mm
Traverse Z-axis	1100 mm
Operating voltage	400 V
Turret	10 Pos.
Tailstock sleeve taper	MK 5
Three-jaw chuck	254 mm
Swing over casing	590 mm
Spindle opening	95 mm

Production facilities

Delicate techniques of precision processing Variety of choices **GIU INDUSTRIAL MACHINETY**

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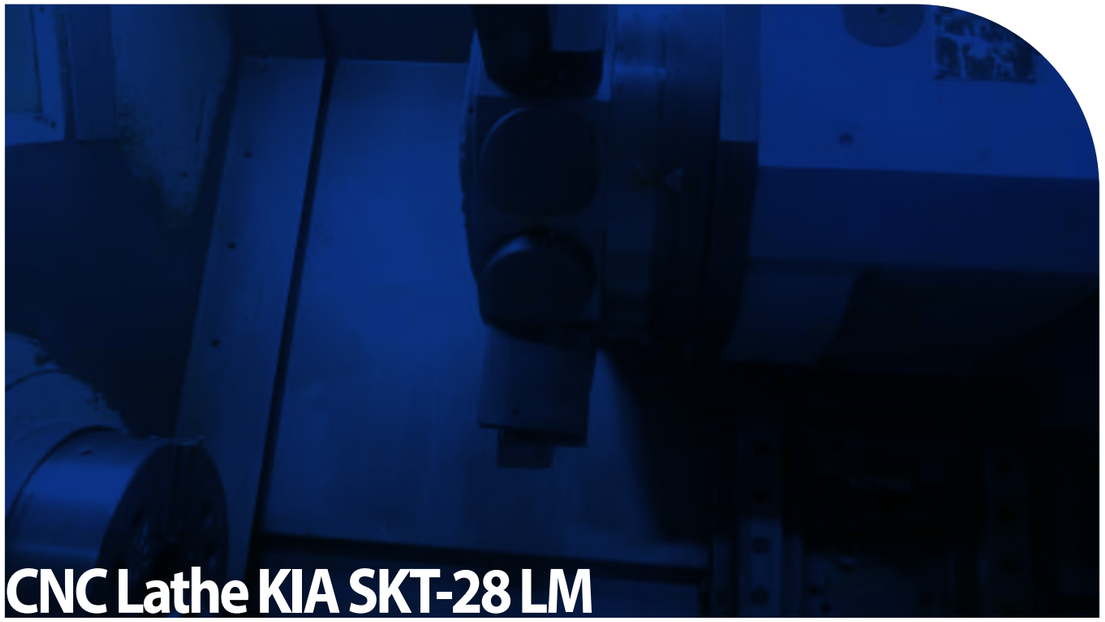

CNC Lathe KIA SKT-28 LM

RADIAL DRILLING M/C

Drilling in M.S	40
Drilling in C.I	45
Tapping in M.S	20
Rough Boring in M.S	75
Spindle Hole Taper	MT-4
Spindle Travel	250
Spindle Speeds (RPM x steps)	88-2600 x B
Diameter of RAM	78
Spindle Autofeed Ranges	0.05 & 0.09
Max/Min Dist. Spindle nose to the base	850 / 250
Max/Min Dist. Spindle Center to Column	920 / 385
Max. Drilling Radius	1005
Machine Measurement (L X B X H)	1350 x 850 x 1825

Technical parameters

The Radial Arm Drill Press or Radial Arm became the standard throughout the world since it's inception, with literally 100,000 radial drills of all sizes working Globally in the field today. Our historical data and information is based on researched history, in conjunction with public information. Together with the historical data provided, our technical staff also listed and described some of the functions the radial drill press does both "in and on" the shop floor. Many of the feature benefits and common operations of the Radial Drill Press are listed here on our Radial Drill Site for your review. Please take your time enjoy our website. We ask that you share your knowledge on Radial Drills with us.

Most common and widely designed radial drilling machine or radial arm press Our presses have an geared head, which is specifically mounted on an arm assembly so that it can be easily moved in either direction to the full reach of the radial arms designated capacity. Key components are the Arm, Column, Motor, Overall machine weight, Spindle speeds, Drill feed rates, Hole drilling diameter, Boring hole requirements and Tapping capacity all these items are associated with the size of drill head. The work piece normally rests on the radial base, or depending on part size- actual application, use of either an radial drill box table or radial drill press tilt head table as an optional accessory.

Salient Features

– Oil bath Lifting Assembly
– Steel worm supported through ball bearing at both sides
– Screw supported through taper roller bearings
– Wide supports of column, column bracket & arm
– Heavy duty lifting screw of 35 dia.
– Long bottom for greater rigidity to reduce vibration
– Heavy duty column with Heavily ribbed base plate
– 250 mm long spindle travel
– 78 mm steel RAM with 2.5 module Heavy Teeth
– Greater Support through closed V-Guideways and wider drilling head
– Better design of arm for higher rigidity and wide support

Production facilities

Delicate techniques of precision processing Variety of choices **GIU INDUSTRIAL MACHINETY**

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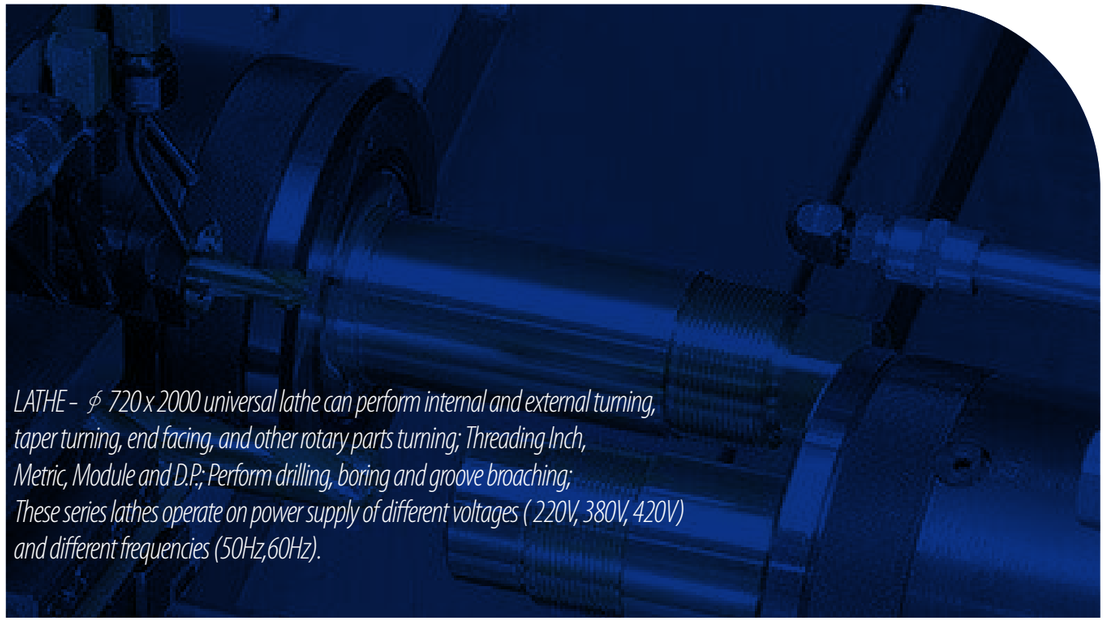

LATHE - ϕ 720 x 2000 universal lathe can perform internal and external turning, taper turning, end facing, and other rotary parts turning; Threading Inch, Metric, Module and D.P.; Perform drilling, boring and groove broaching; These series lathes operate on power supply of different voltages (220V, 380V, 420V) and different frequencies (50Hz,60Hz).

LATHE - ϕ 720 x 2000

Item		Unit	Parameter
Capacity	Max swing over bed	mm	φ630
	Max swing over slide	mm	φ400
	Max workpiece length	mm	1500/3000
	Bed way width	mm	560
Spindle	Spindle thru-hole	mm	φ105
	Spindle hole taper		1:20
	Spindle nose		A1-11
	Spindle speed	r/min	14 step 12.5-1120
Feed and thread	Max travel of upper tool rest	mm	200
	Max travel of lower tool rest	mm	480
	Tool section	mm	32×32
	X-axis feed	mm/r	56 sorts 0.031-3.5
	Z-axis feed	mm/r	56 sorts 0.062-7.0
	Metric thread	mm	31 sorts 0.5-28
	Inch thread	t.p.i	38 sorts 56-1
	Module thread	πmm	21 sorts 0.25-7
	D.P. thread	DP	27 sors 56-4
Tailstock	Quill dia.	mm	φ100
	Max quill travel	mm	250
	Taper hole (morse)		Morse No.5
Motor	Main motor	kW	11
	Coolant pump motor	kW	0.12
Others	Machine length	mm	3500/5000
	Machine width	mm	1260
	Machine weight	mm	1390
	Total weight	kg	5000/6500

PRODUCT

METAL PART

Material Comparison Guide

Choose from hundreds of manufacturing materials including various grades of thermoplastics, metals, and elastomers.

When selecting a material, consider the material properties, manufacturability characteristics, cosmetic appearance, and cost. For milling and turning dimensions by material, please see maximum part extents for machining.

Type	Material	Service	Process	More Info
Aluminum	Aluminum 6061-T651	Sheet Metal Fabrication CNC Machining	Sheet Metal Fabrication CNC Milling CNC Turning	Data Sheet
Aluminum	Aluminum 7075-T651	CNC Machining	CNC Milling CNC Turning	Data Sheet
Aluminum	Aluminum AlSi10Mg	3D Printing	Direct Metal Laser Sintering	Data Sheet
Aluminum	Aluminum 5052-H32	Sheet Metal Fabrication	Sheet Metal Fabrication	Data Sheet
Brass	Brass C260	Sheet Metal Fabrication CNC Machining	Sheet Metal Fabrication CNC Milling	Data Sheet (Sheet Metal) Data Sheet (CNC Milling)
Brass	Brass C360	CNC Machining	CNC Turning	Data Sheet
Cobalt Chrome	Cobalt Chrome	3D Printing	Direct Metal Laser Sintering	Data Sheet
Copper	Copper C101	Sheet Metal Fabrication CNC Machining	Sheet Metal Fabrication CNC Milling	Data Sheet (Sheet Metal) Data Sheet (CNC Milling)
Copper	Copper C110	Sheet Metal Fabrication	Sheet Metal Fabrication	Data Sheet (Sheet Metal)
Copper	Copper CuNi2SiCr	3D Printing	Direct Metal Laser Sintering	Data Sheet
Inconel	Inconel 718	3D Printing	Direct Metal Laser Sintering	Data Sheet
Low Carbon Steel	Steel CR 1018	CNC Machining	CNC Milling CNC Turning	Data Sheet
Low Carbon Steel	Low Carbon Steel CR 1008	Sheet Metal Fabrication	Sheet Metal Fabrication	Data Sheet
Low Carbon Steel	CR Galvanized	Sheet Metal Fabrication	Sheet Metal Fabrication	Data Sheet
Low Carbon Steel	CR Galvannealed	Sheet Metal Fabrication	Sheet Metal Fabrication	Data Sheet
Stainless Steel	Stainless Steel 17-4 PH	CNC Machining 3D Printing	CNC Milling CNC Turning Direct Metal Laser Sintering	Data Sheet (CNC Milling) Data Sheet (CNC Turning) Data Sheet (DMLS)
Stainless Steel	Stainless Steel 304/304L	Sheet Metal Fabrication CNC Machining	Sheet Metal Fabrication CNC Milling CNC Turning	Data Sheet (Sheet Metal) Data Sheet (CNC Machining)
Stainless Steel	Stainless Steel 316	CNC Machining	CNC Milling CNC Turning	Data Sheet
Stainless Steel	Stainless Steel 316L	Sheet Metal Fabrication 3D Printing	Sheet Metal Fabrication Direct Metal Laser Sintering	Data Sheet (Sheet Metal) Data Sheet (DMLS)
Stainless Steel	Stainless Steel 303	CNC Machining	CNC Milling CNC Turning	Data Sheet
Steel Alloy	Steel Alloy 4140	CNC Machining	CNC Milling CNC Turning	Data Sheet
Titanium	Titanium Ti 6Al-4V	3D Printing	Direct Metal Laser Sintering	Data Sheet
Titanium	Titanium Grade 5 6Al-4V	CNC Machining	CNC Milling CNC Turning	Data Sheet

Additional Links

- Color Options
- Supply Your Own Resin
- Custom Color Matching

ALLOY DESCRIPTION

Generally selected where welding or brazing is required or for its high corrosion resistance in all tempers. Formability is excellent in O temper and good in the T4 temper. Machining is more difficult when compared to the other machining alloys. Corrosion resistance and appearance after anodizing are superior to all other screw machine alloys while strength is the lowest.

TYPICAL MECHANICAL PROPERTIES

Temper	Tensile (.500" Dia. Specimen)					Hardness	Shear		Fatigue*		Modulus	
	Ultimate		Yield		Elongation/4D	Brinell 500kg 10 mm	Ultimate Shearing Strength		Endurance Limit - R.R. Moore Type		Modulus of Elasticity	
	KSI	MPa	KSI	MPa	%		KSI	MPa	KSI	MPa	KSI x 10^3	Gpa
T451	35	241	21	145	25	65	24	165	14	97	10.0	68.3
T6, T651	45	310	40	276	17	95	30	207	14	97	10.0	68.3

*5 x 10E8 cycles of reversed stress

COMPARATIVE CHARACTERISTICS

Temper	Corrosion Resistance		Cold Workability[3]	Machinability[3]	Anodize Response[3]	Brazeability[4]	Weldability[4]		
	General[1]	Stress[2]					Gas	Arc	Spot
0	B	A	A	D	A	A	A	A	B
T451	B	B	B	C	A	A	A	A	A
T6,T651	B	A	C	C	A	A	A	A	A

1. Ratings A through E are relative ratings in decreasing order of merit, based on exposures to sodium chloride solution by intermittent spraying or immersion. Alloys with A and B ratings can be used in industrial and sea coast atmospheres without protection. Alloys with C, D and E ratings generally should be protected at least on faying surfaces.

2. Stress-corrosion cracking ratings are based on service experience and laboratory tests of specimens exposed to the 3.5% sodium chloride alternate immersion test.
A= No known instance of failure in service or in laboratory tests.
B= No known instance of failure in service; limited failures in laboratory tests of short transverse specimens.
C= Service failures with sustained tension stress acting in short transverse direction relative to grain structure; limited failures in laboratory tests of long transverse specimens.
D=Limited service failures with sustained longitudinal or long transverse

3. Ratings A through D for Workability(cold), Al though E for Machinability and A through for Anodize Response,are relative ratings in decreasing order of merit.

4. Ratings A through D for Weldability and Brazeability are relative rating defined as follows:
A=Generally weldable by all commercial procedures and methods.
B=Weldable with special techniques or for specific applications that justify preliminary trials or testing to develop welding procedures and weld performance.
C= Limited weldability because of crack

PRODUCT

Elastomer & Silicone Rubber

Material Comparison Guide

Choose from hundreds of manufacturing materials including various grades of thermoplastics, metals, and elastomers.

When selecting a material, consider the material properties, manufacturability characteristics, cosmetic appearance, and cost. For milling and turning dimensions by material, please see maximum part extents for machining.

Type	Material	Service	Process	More Info
Digital Photopolymer	Digital Clear / Translucent	3D Printing	Polyjet	Data Sheet
Digital Photopolymer	Digital White	3D Printing	Polyjet	Data Sheet
Digital Photopolymer	Digital Black	3D Printing	Polyjet	Data Sheet
LSR	Elastosil 3003/30 A/B	Injection Molding	Injection Molding	Data Sheet
LSR	Elastosil 3003/40 A/B	Injection Molding	Injection Molding	Data Sheet
LSR	Elastosil 3003/50 A/B	Injection Molding	Injection Molding	Data Sheet
LSR	Elastosil 3003/60 A/B	Injection Molding	Injection Molding	Data Sheet
LSR	Elastosil 3003/70 A/B	Injection Molding	Injection Molding	Data Sheet
LSR	Elastosil 3003/80 A/B	Injection Molding	Injection Molding	Data Sheet
LSR (Fluorosilicone)	Silastic FL 60-9201	Injection Molding	Injection Molding	Data Sheet
LSR (Medical)	Dow Corning QP1-250	Injection Molding	Injection Molding	Data Sheet
LSR (Optical)	Dow Corning MS-1002	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 111-45	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 101-64	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 211-45	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 251-70W232	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 101-87	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 111-35	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 101-55	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 101-73	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 201-87	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Hytrel 3078	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Versaflex 6240-1	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Versaflex 6258-1	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Versaflex 1040X-1	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Santoprene 201-64	Injection Molding	Injection Molding	Data Sheet
TPE/TPV	Versaflex OM 1060X-1	Injection Molding	Injection Molding	Data Sheet
TPU	TPU-70A	3D Printing	Selective Laser Sintering	Data Sheet
TPU	Texin 245	Injection Molding	Injection Molding	Data Sheet
TPU	Texin 983	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	Delrin 500P	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	Acetal 20% GF (Delrin 570)	CNC Machining	CNC Milling	Data Sheet
POM (Acetal/Delrin)	Acetal Copolymer	CNC Machining	CNC Milling	Data Sheet
POM (Acetal/Delrin)	Acetal Static Dissipative (Tecaform SD)	CNC Machining	CNC Milling	Data Sheet

Additional Links

- Color Options
- Supply Your Own Resin
- Custom Color Matching

DIGITAL PHOTOPOLYMER

PRODUCT SPECIFICATIONS

PRODUCT DESCRIPTION

Protolabs' PolyJet process builds parts comprised of digital photopolymer. The material is available in multiple Shore A hardnesses and colors: clear/translucent, white, and black. It supports complex geometries and can take on a range of mechanical properties.

APPLICATIONS

Digital photopolymer can be leveraged in a variety of 3D printing applications that incorporate flexible features. It's routinely used to prototype overmolded and liquid silicone rubber parts such as: gaskets, seals, covers, and straps.

KEY PRODUCT BENEFITS

- Two-toned coloring aesthetics
- Soft touch and flexible features
- Improved grip and impact resistance

PROPERTIES / Shore A

Digital Material Properties	ASTM Standard	Unit of Measure	30	40	50	60	70	85	95	Rigid
Tensile Tear Strength	D-624	Kg/cm	5.0-7.0	6.0-8.0	7.0-9.0	7.0-10.0	12.0-14.0	22.0-26.0	26.0-30.0	-
Elongation at Break	D-412	%	220-270	190-210	170-210	150-170	120-140	70-90	50-70	10.0-25.0
Shore Hardness	D-2240	Scale A	30-35	40-50	50-55	55-60	60-70	80-85	85-90	83-86 (D)
Tensile Strengnth	D-412	MPa	2.4-3.1	3.0-4.0	3.0-4.0	3.5-4.5	4.0-6.0	6.0-10.0	10.0-14.0	50-65

PRODUCT
Comparison Guide

Material Comparison Guide

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Additional Links

- Color Options
- Supply Your Own Resin
- Custom Color Matching

Type	Material	Service	Process	More Info
PA (Nylon)	PA12 40% Glass-Filled (PA614-GS)	3D Printing	Selective Laser Sintering	Data Sheet
PA (Nylon)	PA11 Black (PA850)	3D Printing	Selective Laser Sintering	Data Sheet
PA (Nylon)	RTP 200 200 UV (Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	RTP 200 203 FR (20% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Stanyl TW341 (Nylon 46)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Vydyne R533H (33% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel HTN 51G35HSL (35% GF PPA)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel ST-801 (Impact Modifier, Rubber Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel 101 L (Nylon 66)	Injection Molding	Injection Molding	
PA (Nylon)	Zytel 103 HSL (Nylon 66)	Injection Molding	Injection Molding	
PA (Nylon)	Zytel 70G13 (13% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel 70G33 (33% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel 73G15L (15% GF Nylon 6)	Injection Molding	Injection Molding	
PA (Nylon)	Zytel 77G33L (33% GF Nylon 6/12)	Injection Molding	Injection Molding	
PA (Nylon)	Zytel 80G14AHS (14% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Zytel 8018 HS (14% GF Nylon 66)	Injection Molding	Injection Molding	Data Sheet
PA (Nylon)	Nylon 6 Black	CNC Machining	CNC Milling	Data Sheet
PA (Nylon)	PA 12 40% Glass-Filled Black	3D Printing	Multi Jet Fusion	Data Sheet
PBT	Valox 357	Injection Molding	Injection Molding	Data Sheet
PBT	Valox 420SEO (30% GF)	Injection Molding	Injection Molding	Data Sheet
PBT	Crastin S600F20	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Hylex P1025L	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Lexan 940	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Lexan 3412R-131 (20% GF)	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Lexan HP1-1H112	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Lexan 121 S-80362	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Lexan 925U-701	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 2405	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 2407	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 2458	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 6455	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 6485	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon 6555	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Makrolon RX1805	Injection Molding	Injection Molding	
Polycarbonate (PC)	Makrolon RX2530	Injection Molding	Injection Molding	Data Sheet
Polycarbonate (PC)	Polycarbonate (20% GF)	CNC Machining	CNC Milling	Data Sheet
Polycarbonate (PC)	Polycarbonate - Black	CNC Machining	CNC Milling	Data Sheet
Polycarbonate (PC)	Polycarbonate - Clear	CNC Machining	CNC Milling	Data Sheet
Polycarbonate (PC)	Polycarbonate - Translucent	CNC Machining	CNC Milling	Data Sheet
Polycarbonate (PC)	RTP 399X71833	Injection Molding	Injection Molding	
Polycarbonate (PC)	RTP 301 (10% GF)	Injection Molding	Injection Molding	Data Sheet
PC-Like	PC-Like Advanced High Temp (Accura 5530)	3D Printing	Stereolithography	Data Sheet
PC-Like	PC-Like Translucent/Clear (Accura 60)	3D Printing	Stereolithography	Data Sheet
PC-Like	Ceramic-Like (Advanced HighTemp PerFORM)	3D Printing	Stereolithography	Data Sheet
PC-Like	Metal Plating	3D Printing	Stereolithography	Data Sheet
PC/PBT	Xenoy 6620	Injection Molding	Injection Molding	Data Sheet
PEEK	PEEK	CNC Machining	CNC Milling	Data Sheet
PEEK	Victrex 450G	Injection Molding	Injection Molding	Data Sheet
PEI (Ultem)	RTP 2100 LF	Injection Molding	Injection Molding	Data Sheet
PEI (Ultem)	Ultem 2200 (20% GF)	Injection Molding	Injection Molding	Data Sheet
PMMA (Acrylic)	PMMA (Acrylic)	CNC Machining	CNC Milling	Data Sheet
PMMA (Acrylic)	Plexiglas V825	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	RTP 800 GB 10 (10% glass-bead acetal)	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	RTP 800 GB 20 (20% glass-bead acetal)	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	Celcon M90	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	Acetal Homopolymer (Delrin 150)	CNC Machining	CNC Milling	Data Sheet
POM (Acetal/Delrin)	Delrin 500P	Injection Molding	Injection Molding	Data Sheet
POM (Acetal/Delrin)	Acetal 20% GF (Delrin 570)	CNC Machining	CNC Milling	Data Sheet
POM (Acetal/Delrin)	Acetal Copolymer	CNC Machining	CNC Milling	Data Sheet
POM (Acetal/Delrin)	Acetal Static Dissipative (Tecaform SD)	CNC Machining	CNC Milling	Data Sheet
PP	RTP Anti-static Permastat 100	Injection Molding	Injection Molding	Data Sheet
PP	Maxxam FR PP 301	Injection Molding	Injection Molding	
PP	Profax 6323	Injection Molding	Injection Molding	Data Sheet
PP	Profax 6523	Injection Molding	Injection Molding	Data Sheet
PP	Profax PD702	Injection Molding	Injection Molding	Data Sheet
PP	Profax SG-702	Injection Molding	Injection Molding	Data Sheet
PP	FHR PP P5M6K-048	Injection Molding	Injection Molding	Data Sheet
PP	PP (Polypropylene Homopolymer)	CNC Machining	CNC Milling	Data Sheet
PP	PP (Polypropylene Copolymer)	CNC Machining	CNC Milling	Data Sheet
PP	Polypropylene Natural	3D Printing	Selective Laser Sintering	Data Sheet
PPE/PS	PPE/PS	CNC Machining	CNC Milling	
PPE/PS	Noryl 265	CNC Machining	CNC Milling	Data Sheet
PPE/PS	Noryl 731-701	Injection Molding	Injection Molding	Data Sheet
PP-Like	PP-Like Translucent White (Somos 9120)	3D Printing	Stereolithography	Data Sheet
PP-Like	Carbon FPU 50	3D Printing	Carbon DLS	Data Sheet

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What GIU INDUSTRIAL can say to you sincerely and promise you to keep.

New Digital Quoting Platform

Our all-new platform for quoting, design analysis, and ordering is faster and more intuitive than ever before—engineered with customers like you in mind. Curious to see how this can help you get parts fas?

Our Digital Quoting Platform

Ready for a more intuitive way to get custom parts fast? Welcome to our best-in-class digital manufacturing platform for quoting and ordering. Modern interface. Seamless navigation. Interactive manufacturing analysis. Real-time pricing.

The Fastest Just Got Faster

From quoting to production to quality control, we've built our entire manufacturing system around speed to help transform ideas to products and optimize manufacturing throughout the product life cycle— from prototyping to on-demand production.
At the heart of the system is our digital manufacturing platform for quoting, manufacturing analysis, and ordering. Have a look.

Investor Home

Protolabs is the world's fastest digital manufacturing source for prototypes and low-volume production parts. We use industrial 3D printing, CNC machining, sheet metal fabrication, and injection molding technologies to produce parts within days.

It's driven by a complex digital thread that moves from pre-production to manufacturing to inspection. Product developers can upload a 3D CAD model online any time and receive an automated quote with design feedback and pricing information in matter of hours. The interactive analysis helps eliminate potential manufacturability issues before any actual production happens. Once a design is ready, digital instructions are sent to the production floor where manufacturing begins shortly thereafter. Finished parts can then be digitally inspected before being shipped out to customers. The best part? It's all possible in 15 days or less.

The result is an unprecedented speed-to-market value for designers and engineers and an on-demand resource throughout a product's life cycle.

Service and Support

After-sales & Service

After-sales service is considered with utmost importance and priority. Immediate attention is therefore given to all requests for service and spare parts. With our network of logistics partners located all around the globe, the parts will be delivered in the shortest time possible. If service is needed, our service engineers are sent out on request to operating sites around the globe. All inquiries will be responded within 24 hours and a schedule will be made for needed service.