



HONPE



HONPE PROTOTYPING MEXICO

ABOUT US

At Honpe Prototyping Mexico, we believe in the power of prototyping to drive innovation and revolutionize industries. With our cutting-edge technologies, we offer a game-changing solution to bring your ideas to life.



What is a prototype?

A prototype is the first model, It's main purpose is to verify that the design accomplishes all the requirements and characteristics established by the designer.



Types of prototypes

- Appearance prototypes
- Functional prototypes
- Pre-series prototypes





Details:

REAL-LIFE SCALED OF A CAR.

Appearance prototypes

These prototypes allow us to show the final finishing of the desired product before it hits the market.

Details:

MATERIAL: ALUMINIUM

MACHINED



Functional prototypes

These prototypes don't always show the final finishing of the product, they are used to doing tests and validate factibility before production

Pre-series prototypes

These already show
the materials and
correct processes
that will be used in
the final production of
the desired product.

Details:

MATERIAL: PC TRANSPARENT

INJECTION MOLDING



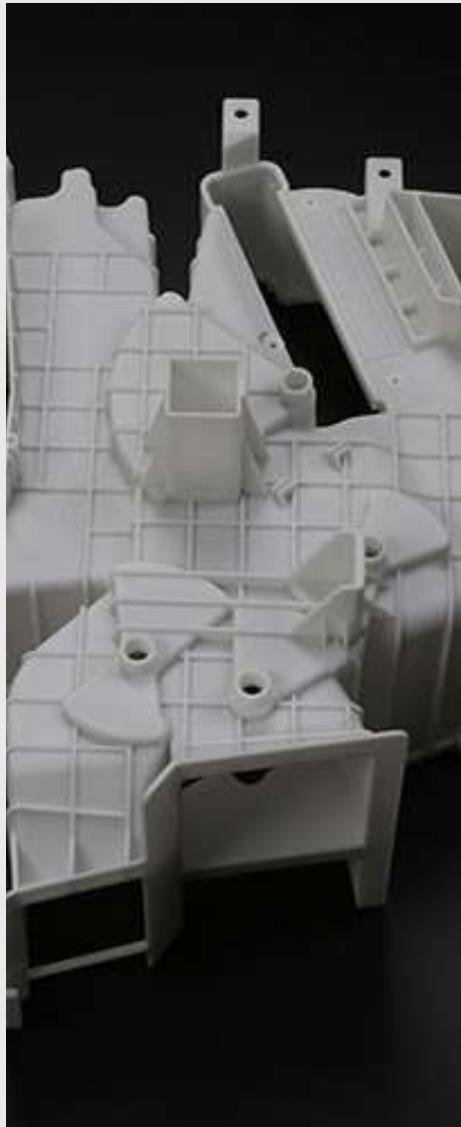
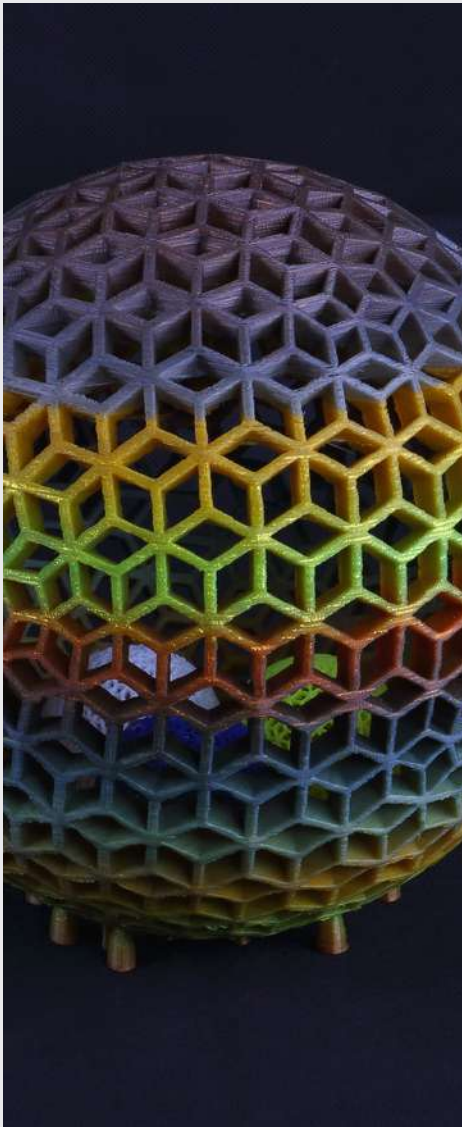
TYPES OF TECHNOLOGIES



3D PRINTING

RAPID PROTOTYPING

3d printing is an additive manufacturing fabrication method that allows us to create physical tridimensional products, starting from a digital model. It is also known as additive manufacturing because the objects are added layer by layer.



SLA STEREOLITHOGRAPHY

This process uses the principle of photopolymerization from resins sensitive to UV rays. This is solidified by passing a laser, layer by layer.



Details:

MATERIAL: PC LIKE

SLS

SELECTIVE LASER SINTERING

This process is where powdered material is heated to near-melting temperatures, causing particles to bond together to form a solid.



VACUUM CASTING

This process is used to create pieces from silicone molds. Vacuum Casting technology is based on curing the liquid silicone rubber compound as a mold and casting thermosetting polymers such as polyurethane and urethane to produce functional parts.



SHEET METAL

This fabrication is where a thin layer of metal can be cut, bent or shaped for various purposes. It can be worked using a variety of techniques, including laser cutting, bending, die-cutting, drawing, welding, and stamping. These processes allow sheet metal to be shaped to suit the specific needs.



INJECTION MOULDING

This process is used to produce plastic parts in big quantities. This is one of the most popular and complete processes in the plastic industry. The process begins in the creation of a mold or tool that contains a masterpiece with the desired geometry.



CNC MACHINED

CNC technology or Computer Numerical Control machines is an automated process of fabrication in that uses controlled machined tools by computer to perform different operations of precise machining, cutting layer by layer the raw material. It is widely used in industry for its ability to produce precise and reproducible parts, as well as its versatility to work with a wide variety of materials.



CNC MACHINED



Our factory counts with **more than 400** numerical controlled machines of first class of 3 and 4 axes and with **50 machines of 5 axes.**

3D PRINTING
















	Metric specifications (mm)	US specifications (in)
SLA	800*800*450mm	31.4* 31.4*17.7
SLS	350*350*420mm	13.7*13.7*16.5
SLM	280*280*350mm	11*11*13.7
MJF	380*358*380mm	14.9 *14*14.9

CNC MILLING

	Metric specifications (mm)	US specifications (in)
3 Axis	600*400*350	23.6* 15.7*13.7
3 Axis	800*500*600	31.4*19.6*23.6
3 Axis	1500*1200*650	59*47.2*25.5
3Axis	800*500*400	31.4*19.6*15.7
3Axis	800*500*600	31.4* 19.6*23.6
4Axis	800*500*400	31.4*19.6* 15.7
5 axis	500*600*550	19.6* 23.6* 21.6
Wire cutting machine	700*700*400	27.5*v27.5 *15.7

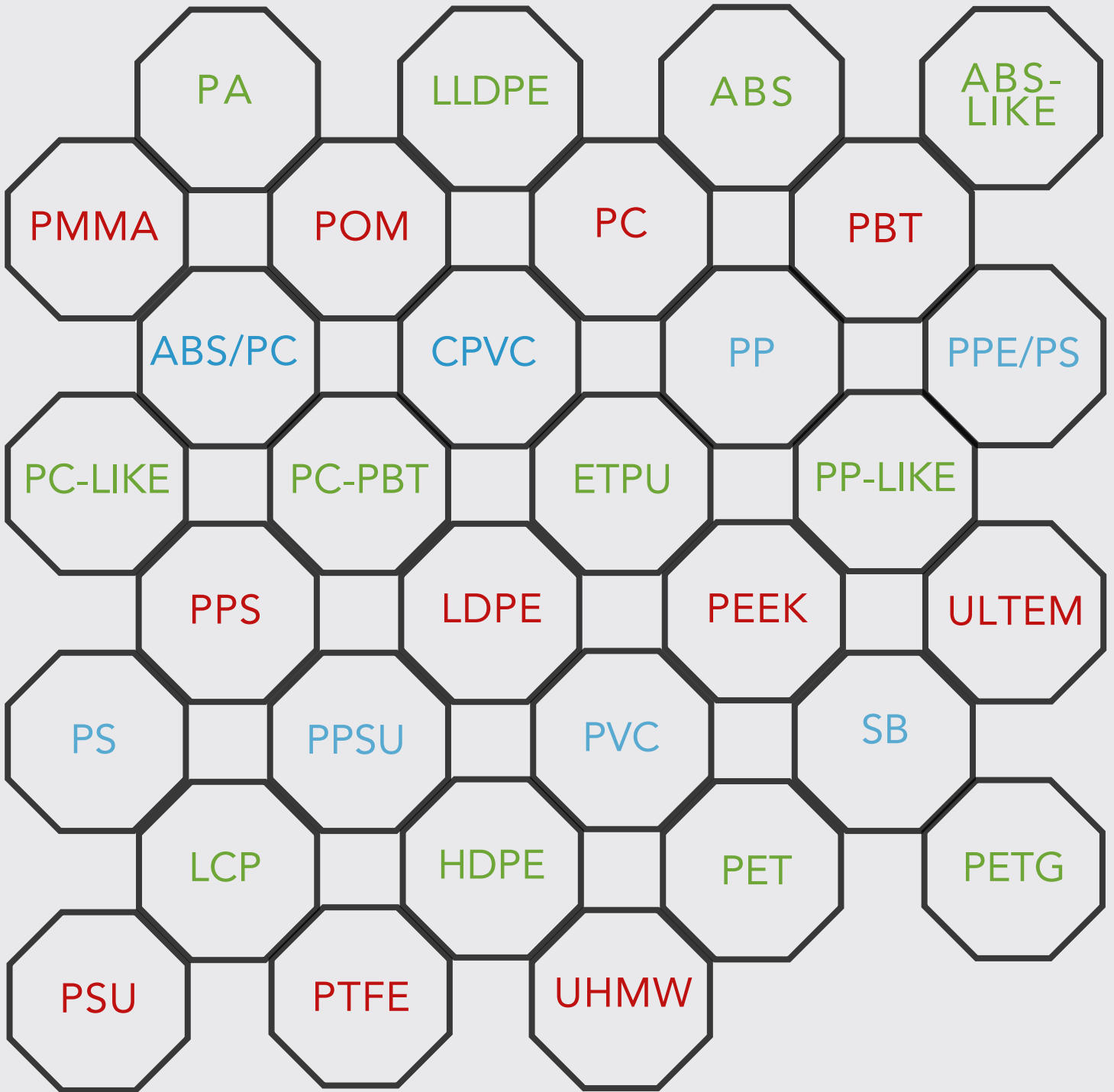
Type of machine	Metric specifications (mm)	US specifications (in)
5 axis	7000*2500*4250	275.5* 98.4* 167.3
5 axis	6000*2450*2500	236.2* 96.4* 98.4
Industrial sewing machine	1200*800*700	47.2* 31.4* 27.5
Sewing machine	1200*800*700	47.2* 31.4* 27.5

COMPARATIVE TABLE OF TECHNOLOGIES

Characteristics of different prototypes	CNC	Vacuum Casting	Injection Moulding	Sheet Metal	3D Printing
Functional prototype					
Functional + appearance prototype					
Appearance prototype					
Pre-series prototype					
Low volume					
Machined					

TYPES OF MATERIALS

PLASTICS



TYPES OF MATERIALS

PLASTICS

PA (NYLON) SEMICRYSTALLINE THERMOPLASTIC WITH LOW DENSITY AND GOOD THERMAL STABILITY.

LLDPE LINEAR LOW-DENSITY THERMOPLASTIC POLYETHYLENE. IT IS COMMONLY USED AS INSULATION AND COATING FOR POWER CABLES OR TELECOMMUNICATION CABLES.

ABS ACRYLONITRILE BUTADIENE STYRENE (ABS), A PLASTIC WITH HIGH IMPACT RESISTANCE AND HARDNESS.

ABS-LIKE HIGH-PERFORMANCE RESIN, THIS RESIN IS SPECIFICALLY FORMULATED TO REPLICATE THE MECHANICAL STRENGTH, HARDNESS, AND DURABILITY OF ABS IN THE CONTEXT OF 3D PRINTING.

PMMA (ACRYLIC) HIGHLY TRANSPARENT THERMOPLASTIC POLYMER POLYMERIZED FROM METHYL METHACRYLATE MONOMER. GENERALLY USED FOR OPTICAL PURPOSES

POM (ACETAL/ DELRIN) POLYACETAL (POM) IS A THERMOPLASTIC MATERIAL WITH PROPERTIES SUCH AS REDUCED WEAR, DIMENSIONAL STABILITY, AND HIGH HARDNESS.

PC IT IS AN AMORPHOUS THERMOPLASTIC WITH GREAT TRANSPARENCY DUE TO ITS LOW CRYSTALLINITY.

PPE/PS AN ALLOY CHARACTERIZED BY EXCEPTIONAL THERMAL, MECHANICAL, AND CHEMICAL RESISTANCE.

PC-LIKE USED IN 3D PRINTING, THIS PLASTIC HAS PROPERTIES SIMILAR TO POLYCARBONATE.

PC/PBT MECHANICAL BLEND THAT RESISTS IMPACT AT LOW TEMPERATURES AND THE ATTACK OF CERTAIN CHEMICAL AGENTS.



TYPES OF MATERIALS

PLASTICS

ETPU

(ENGINEERING THERMOPLASTIC POLYURETHANE) IT IS KNOWN FOR ITS HIGH CLARITY, HIGH IMPACT, HIGH RIGIDITY, GOOD ABRASION RESISTANCE, AND GOOD CHEMICAL RESISTANCE.

PP-LIKE

PP-LIKE RESINS HAVE MECHANICAL PROPERTIES VERY SIMILAR TO POLYPROPYLENE WITH THE ADVANTAGES OF RESIN PRECISION AND SMOOTHNESS.

PPS

PPS PLASTIC IS RESISTANT TO CHEMICALS AND CORROSION AND HAS HIGH MECHANICAL STRENGTH.

LDPE

LOW-DENSITY POLYETHYLENE, CHARACTERIZED BY ITS FLEXIBILITY.

PEEK

SEMICRYSTALLINE ENGINEERING THERMOPLASTIC WITH EXCELLENT CHEMICAL RESISTANCE.

ULTEM

HIGH-PERFORMANCE POLYETHERIMIDE (PEI) THERMOPLASTIC, A STRONG 3D PRINTING MATERIAL WITH HIGH HEAT RESISTANCE.

PS

POLYSTYRENE (PS) IS A THERMOPLASTIC POLYMER OBTAINED FROM THE POLYMERIZATION OF STYRENE. IT IS A HARD AND TRANSPARENT PLASTIC.

PPSU

HIGH-PERFORMANCE THERMOPLASTIC MATERIAL, ITS MOST NOTABLE CHARACTERISTICS INCLUDE THERMAL AND CHEMICAL RESISTANCE.

PVC

POLYVINYL CHLORIDE (PVC) IS A CHEMICAL COMBINATION OF CARBON, HYDROGEN, AND CHLORINE. THIS MATERIAL IS HIGHLY VALUED FOR ITS INSULATING PROPERTIES, AS IT IS NOT AN ELECTRICAL OR THERMAL CONDUCTOR.

SB

STYRENE-BUTADIENE IS A HARD RUBBER USED FOR PARTS WHERE DURABILITY IS IMPORTANT.



TYPES OF MATERIALS

PLASTICS

LCP

LIQUID CRYSTAL POLYMERS PERFORM VERY WELL IN HOSTILE ENVIRONMENTS, INCLUDING HIGH HEAT RESISTANCE, HIGH ELECTRICAL RESISTANCE, AND HIGH CHEMICAL RESISTANCE.

HDPE

THERMOPLASTIC POLYMER, AMONG ITS CHARACTERISTICS ARE ITS LIGHTWEIGHT, FLEXIBILITY EVEN AT LOW TEMPERATURES, AND HIGH IMPACT RESISTANCE.

PET

POLYETHYLENE TEREPHTHALATE (PET) IS A TYPE OF 100% RECYCLABLE PLASTIC COMMONLY USED IN PACKAGING, BOTTLES, AMONG OTHERS.

PETG

IT IS USED IN 3D PRINTING, A VERSATILE MATERIAL WITH HIGH TRANSPARENCY AND IMPACT RESISTANCE.

PSU

POLYSULFONE IS A PLASTIC MATERIAL RESISTANT TO HIGH TEMPERATURES, WITH EXCELLENT RIGIDITY, AND GOOD MECHANICAL STRENGTH.

PTFE

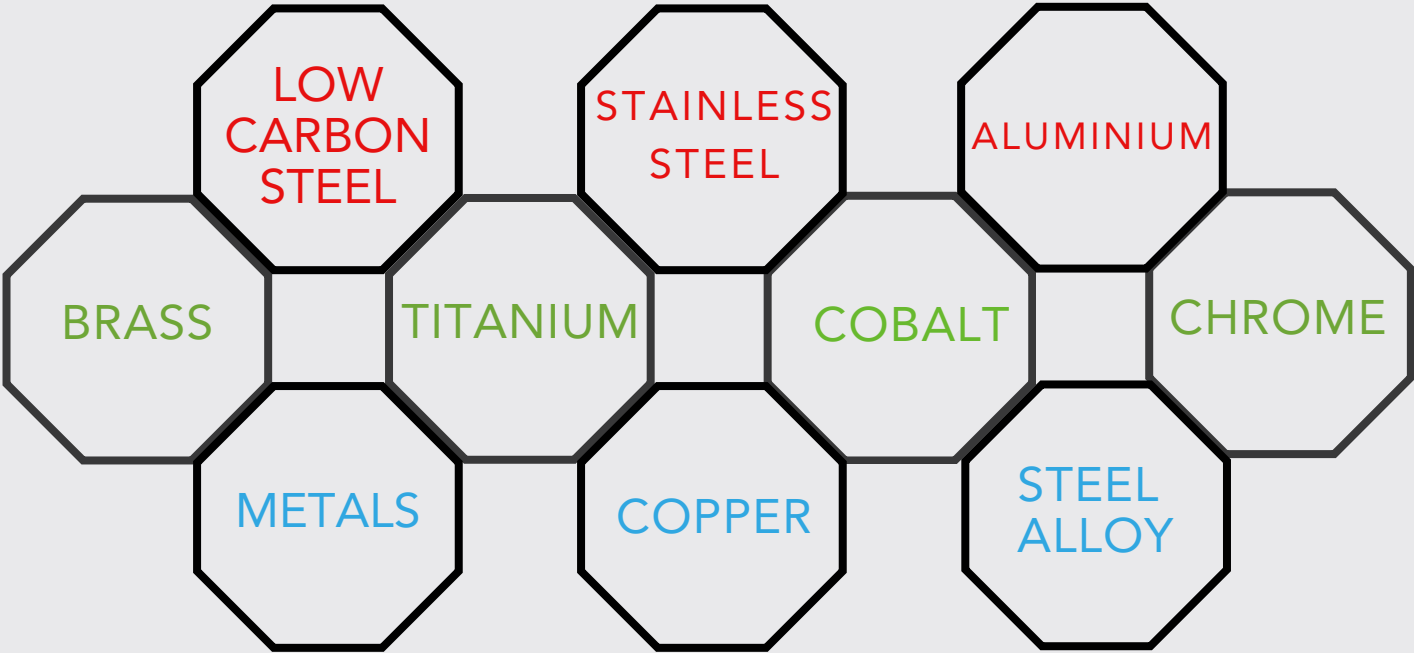
FLUOROPOLYMER, A SEMICRYSTALLINE MATERIAL, WITH PROPERTIES INCLUDING EXTREMELY HIGH CHEMICAL RESISTANCE, VERY GOOD THERMAL RESISTANCE, FIRE RESISTANCE, AMONG OTHERS.

UHMW

IT IS A THERMOPLASTIC THAT HAS GREATER WEAR RESISTANCE AND IS USED IN APPLICATIONS DUE TO ITS DURABILITY AGAINST ABRASIVE ELEMENTS. THIS MATERIAL HAS THE ABILITY TO REPLACE THE USE OF METALS LIKE STAINLESS STEEL.

TYPES OF MATERIALS

METALS



TYPES OF MATERIALS

METALS

LOW CARBON STEEL

IT IS A TYPE OF METAL THAT HAS AN ALLOYING ELEMENT COMPOSED OF A RELATIVELY LOW AMOUNT OF CARBON.

STAINLESS STEEL

IT IS AN IRON ALLOY RESISTANT TO OXIDATION AND CORROSION.

ALUMINIUM

METAL WITH LOW DENSITY AND EXTREMELY LIGHTWEIGHT, SOFT, AND MALLEABLE.

BRASS

IT IS AN ALLOY MAINLY COMPOSED OF COPPER AND ZINC.

TITANIUM

TITANIUM IS A TRANSITION METAL; IT IS MUCH LIGHTER THAN STEEL. IT HAS HIGH CORROSION RESISTANCE AND GREAT MECHANICAL STRENGTH.

COBALT

COBALT IS A FERROMAGNETIC METAL; AMONG ITS PROPERTIES ARE ITS HARDNESS AND TENSILE STRENGTH.

METALS

METALS ARE USUALLY HARD, OPAQUE, AND SHINY MATERIALS THAT EXHIBIT GOOD ELECTRICAL AND THERMAL CONDUCTIVITY. THEY ARE GENERALLY MALLEABLE AND FUSIBLE.

COPPER

COPPER IS A METAL WITH GREAT MALLEABILITY, ELECTRICAL CONDUCTIVITY, AND DUCTILITY.

STEEL ALLOY

ALLOYED STEEL IS KNOWN FOR ITS PROPERTIES SUCH AS CORROSION RESISTANCE, HARDNESS, WEAR RESISTANCE, AND TOUGHNESS.

CHROME

CHROMIUM IS A HARD AND SHINY TRANSITION METAL. IT IS HIGHLY RESISTANT TO CORROSION.

OUR CERTIFICATIONS

ISO 9001 QUALITY MANAGEMENT

The objective of this norm is to guarantee the quality of the product and services that we offer in Honpe Prototyping Mexico through a quality management system (QMS).

ISO 14001 ENVIRONMENTAL MANAGEMENT

This norm is an international standard for management systems EMS. It helps us control environmental aspects, reduce impacts and ensure legal compliance.

ISO 27001 INFORMATION SECURITY

This ISO has the objective of establishing information security management policies, ensuring the confidentiality and integrity of data as well as processes.





KEEP EVOLVING

In our team, we have experts in engineering and design to carry out your projects.

Contact us to find out how we can help you.



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Honpe Prototyping Mexico



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