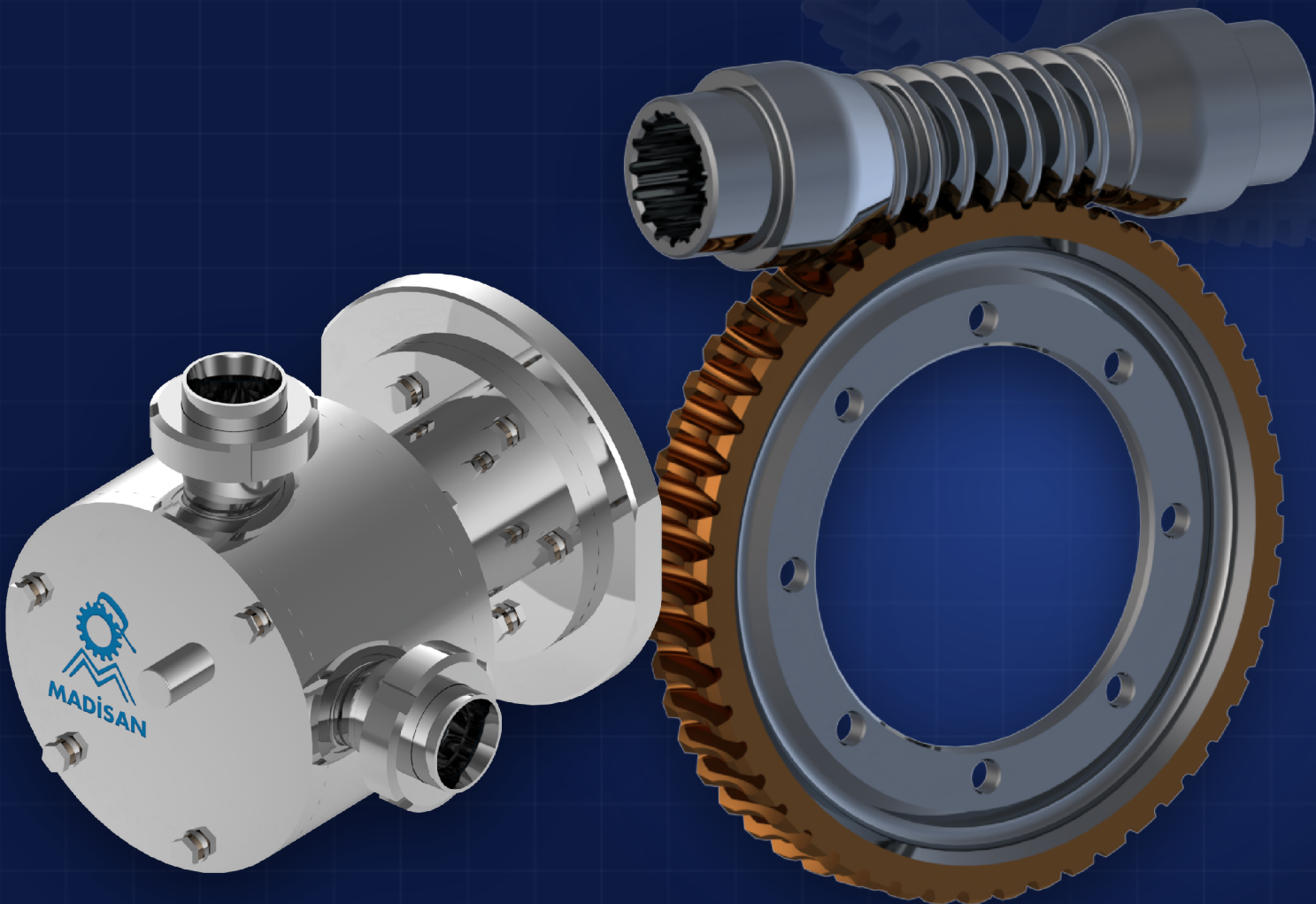


MADISAN

PRODUCT CATALOGUE 2026

Gears, Power Transmission & Pump Systems

Precision components engineered and
manufactured to your requirements.



GEARS

GEARBOXES

CAMS & SCREWS

PUMPS

MOULDS & DIES

CNC MACHINING

ABOUT MADISAN

Precision in every tooth.

Madisan manufactures gears, power transmission components, pump systems and precision tooling for industrial customers.

Our portfolio spans spur, helical, bevel and worm gears, complete gearboxes, cam mechanisms, gear, lobe, centrifugal and vacuum pumps, moulds and dies. Parts are produced to customer drawings, samples or 3D models — in metals and high-performance engineering plastics.



30+

PRODUCT GROUPS

5

PUMP SERIES

7

MATERIAL FAMILIES

WHAT WE DO

01

Gear Manufacturing

Spur, helical, bevel, worm, internal and special-profile gears.

02

Power Transmission

Gearboxes, planetary sets, cams, lead screws and augers.

03

Pump Systems

MDP-C, MIP, MLP, MSP-C and MSHVP-P pump series.

04

Moulds & Dies

Pattern moulds, extrusion dies and press tooling.

05

Precision Machining

CNC-turned and milled parts made to drawing.

06

Repair & Overhaul

Gearbox repair and re-manufacture of worn parts.

MATERIALS

Carbon & alloy steels

Stainless steel

Aluminium

Bronze & brass

Cast polyamide (PA6)

POM (acetal)

PEEK

HOW WE WORK

01

Your input

Drawing, sample or 3D model

02

Engineering

Design review & 3D CAD

03

Manufacturing

Machining, gear cutting & assembly

04

Delivery

Inspection & shipment

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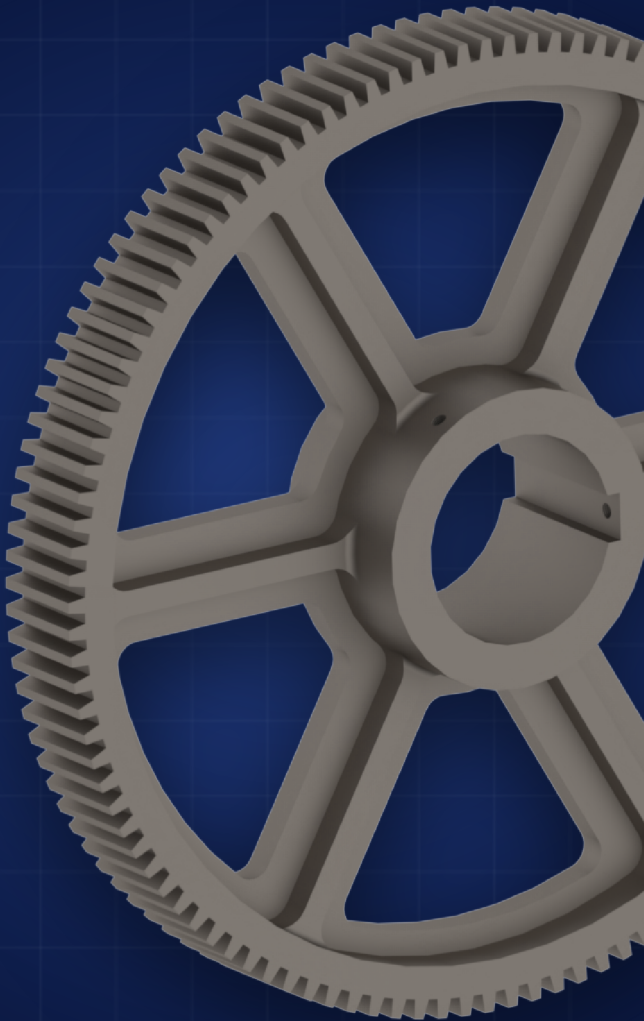
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SECTION 01

Gears

From small-module pinions to large ring gears — spur, helical, bevel, worm and special-profile gears in steel, stainless steel, bronze and engineering plastics, produced to drawing, sample or 3D model.

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01 GEARS Spur Gears

Straight-cut gears for parallel shafts — the most widely used gear type for efficient, reliable power transmission. Supplied as pinions, hubbed gears, large ring gears and lightweight designs with lightening holes, in steel, stainless steel and engineering plastics.

TYPICAL APPLICATIONS

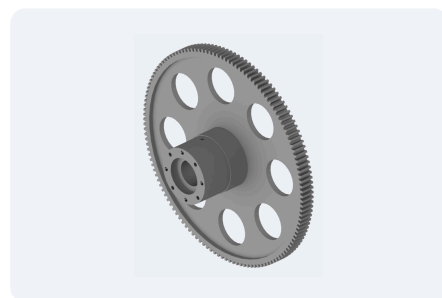
- Conveyors & material handling
- Machine tools
- Agricultural machinery
- Packaging machinery



Spur Gear with Lightening Holes



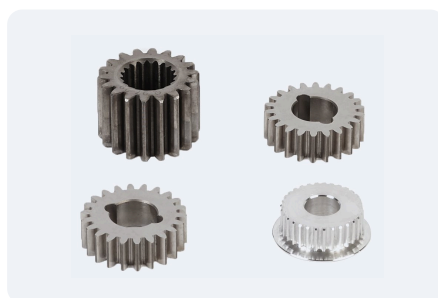
Spoked Spur Gear



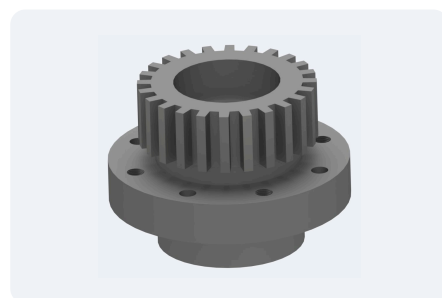
Large Spur Gear with Hub



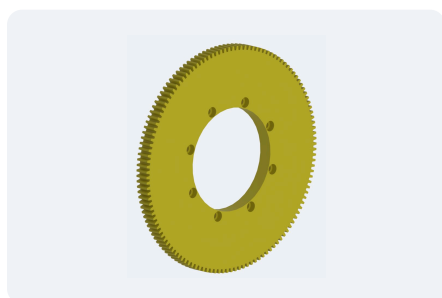
Steel Spur Pinion



Small-Module Spur Gears

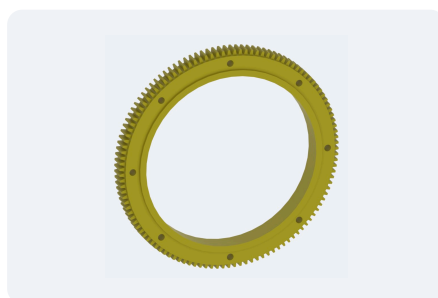


Flanged Spur Gear Hub



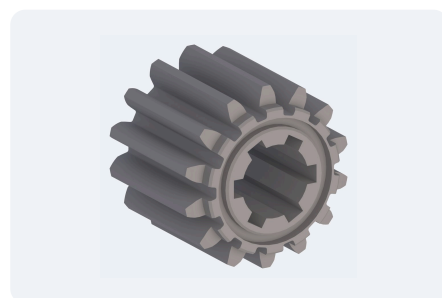
Large Ring Gear

PA6



Thin-Section Ring Gear

PA6



Gear with Splined Bore

PEEK

02

GEARS

Helical Gears

Angled teeth engage gradually, giving smoother, quieter running and a higher load capacity than spur gears — ideal for high-speed drives.



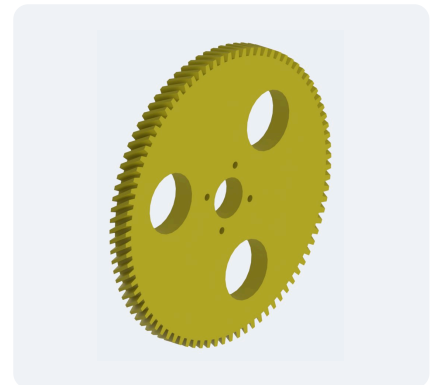
Helical Pinion, Splined Bore



Helical Gear



Integral Gear Shaft



Large Gear with Cut-Outs

PA6

TYPICAL APPLICATIONS

- Gearboxes & speed reducers
- Pumps & compressors
- High-speed drives

03

GEARS

Herringbone Gears

Double-helical gears whose opposing tooth angles cancel axial thrust — carrying high loads at speed without the need for thrust bearings.

TYPICAL APPLICATIONS

- Heavy-duty gearboxes
- Rolling mills & crushers
- High-torque drives



Herringbone (Double Helical) Gear

04

GEARS

Straight Bevel Gears

Cone-shaped gears that transmit motion between intersecting shafts, typically at 90° — a robust, economical solution for right-angle drives.



Straight Bevel Gear Pair



Straight Bevel Gears

TYPICAL APPLICATIONS

- Differentials
- Right-angle drives
- Agricultural equipment

05

GEARS

Spiral Bevel Gears

Crown Wheel & Pinion

Curved-tooth bevel gear sets with a higher contact ratio, for quieter operation and greater torque capacity in right-angle drives.



Crown Wheel & Pinion Set



Spiral Bevel Set — Rear View

TYPICAL APPLICATIONS

- Axle & final drives
- Tractors & off-road vehicles
- Right-angle gearboxes

06

GEARS

Worm Gear Sets

A worm and wheel pair achieves a high reduction ratio in a single compact stage, with smooth, quiet running and self-locking capability in suitable ratios.

TYPICAL APPLICATIONS

- Lifting & hoisting
- Slewing drives & positioners
- Conveyors
- Valve actuators



Worm & Worm Wheel Set



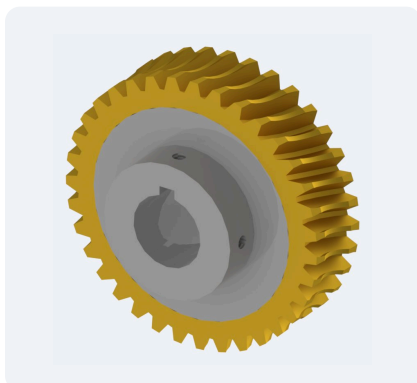
Hollow Worm & Wheel



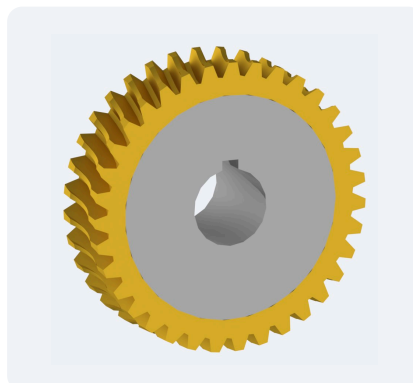
Worm Shaft & Wheel



Lightweight Bevel Ring Gear



Polymer Gear, Steel Hub



Hybrid Gear — Face View

07

GEARS

Composite Gears

Hybrid gears that combine a metal hub with a polymer or lightweight toothed body — reducing weight, noise and wear while keeping a strong, precise shaft connection.

TYPICAL APPLICATIONS

- Food & packaging machinery
- Automation equipment
- Low-noise drives

08 GEARS Sprockets

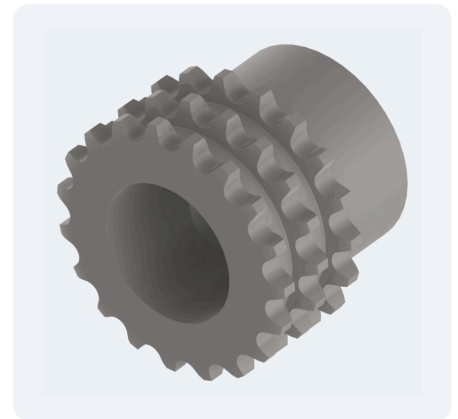
Roller-chain sprockets in simplex, duplex and triplex designs — plate, hubbed and bolt-on types, machined to standard chain pitches or custom tooth profiles.

TYPICAL APPLICATIONS

- Chain conveyors
- Agricultural machinery
- Food processing lines
- Drive systems



Duplex Sprocket



Triplex Sprocket

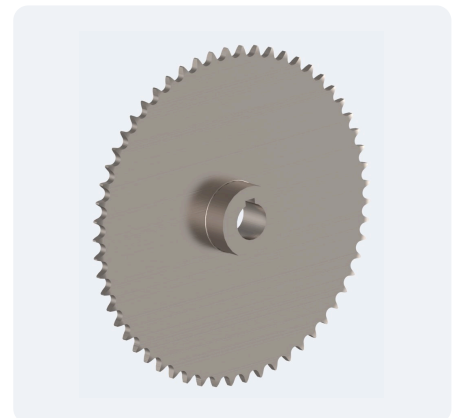
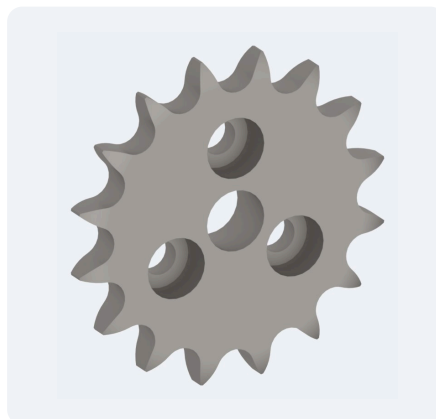


Plate Sprocket with Hub



Hubbed Sprocket



Bolt-On Plate Sprocket



Simplex Sprocket

09

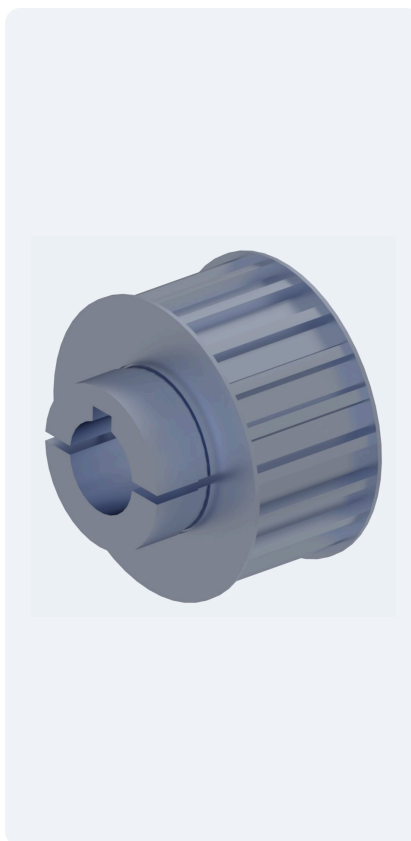
GEARS

Timing Pulleys

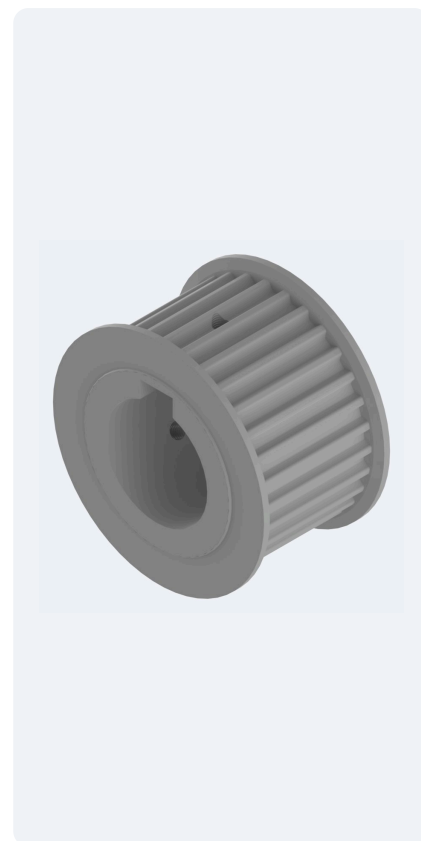
Toothed pulleys for synchronous belt drives — slip-free, precisely timed power transmission with low noise and no lubrication.

TYPICAL APPLICATIONS

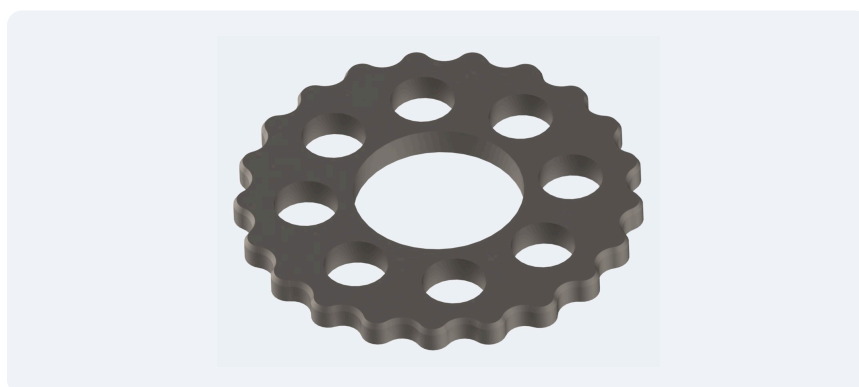
- Automation & robotics
- CNC machines
- Printing & packaging



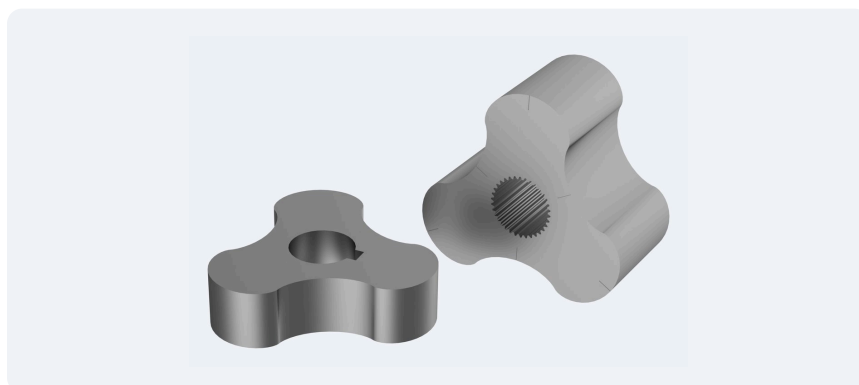
Timing Pulley with Keyway



Flanged Timing Pulley



Round-Tooth Drive Wheel



Tri-Lobe Rotors

10

GEARS

Point-Contact Drive Mechanisms

Special drive elements with rounded tooth and lobe profiles that roll against their mating part at a single contact point — for smooth indexing and low-wear transmission.

TYPICAL APPLICATIONS

- Indexing drives
- Rotary lobe pumps
- Special machinery

11

GEARS

Internal Ring Gears

Ring gears with teeth cut on the inside diameter, forming compact coaxial drives together with pinions and planet gears.



Internal Ring Gear



Internal Gear Ring



Ring Gear & Pinion Shaft

TYPICAL APPLICATIONS

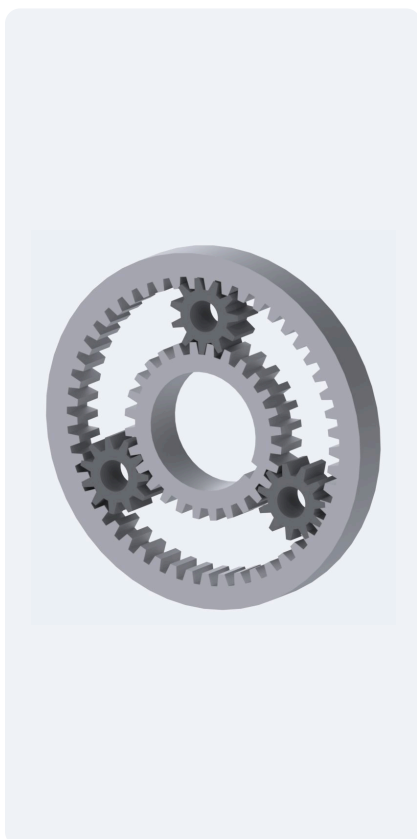
- Planetary gearboxes
- Slewing rings
- Hydraulic motors & pumps

12

GEARS

Planetary Gear Sets

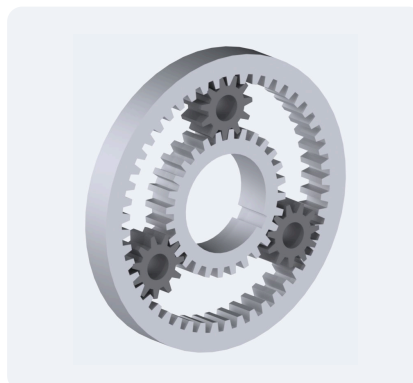
Sun, planet and ring gear assemblies delivering high torque density and high reduction ratios in a compact, coaxial package.



Planetary Gear Set



Five-Planet Gear Set



Planetary Set — Angled

TYPICAL APPLICATIONS

- Servo & precision gearboxes
- Winches & track drives
- Mixers & agitators

13

GEARS

Spline & Drive Shafts

Splined shafts, hubs and bushings that transmit torque while allowing axial movement — along with PTO shafts and cardan shafts with universal joints.



Spline Shaft & Hub



Splined PTO Shaft



Splined Bushing



Cardan Shaft

TYPICAL APPLICATIONS

- Power take-off (PTO) drives
- Agricultural implements
- Gearbox input & output shafts



Differential Spider Gear Kit



Torque-Sensing Differential Parts

14

GEARS

Differential Gear Sets

Bevel and worm-type differential gear sets that split torque between two outputs while allowing them to turn at different speeds.

TYPICAL APPLICATIONS

- Automotive & motorsport
- Off-road & agricultural vehicles
- Industrial drives

15

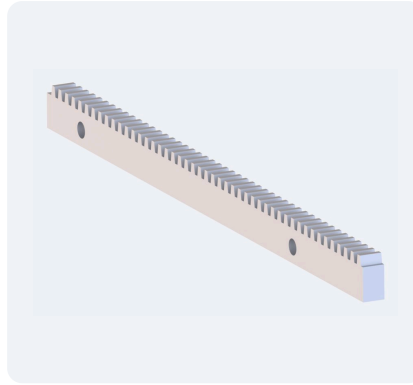
GEARS

Gear Racks

Straight and round racks that turn the rotation of a pinion into linear motion — in standard lengths or custom profiles with mounting holes.

TYPICAL APPLICATIONS

- Linear axes & gantries
- Sliding gates & doors
- Lifting tables



Precision Gear Rack



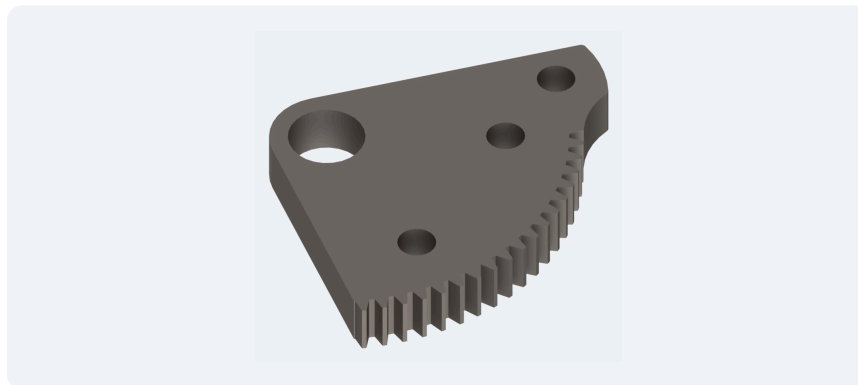
Heavy-Duty Rack Segment



Round Rack



Long Linear Rack



Sector Gear



Toothed Lever Segment

16

GEARS

Sector Gears

Partial gears and toothed levers for limited-angle rotation, where a full gear is not required — saving both space and weight.

TYPICAL APPLICATIONS

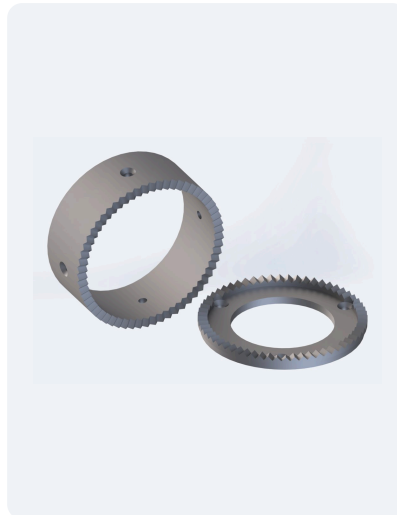
- Steering & tilting mechanisms
- Agricultural implements
- Levers & linkages

17 GEARS Clutch Gears

Toothed clutch rings and face gears that engage and disengage drives positively, transmitting torque without slip.

TYPICAL APPLICATIONS

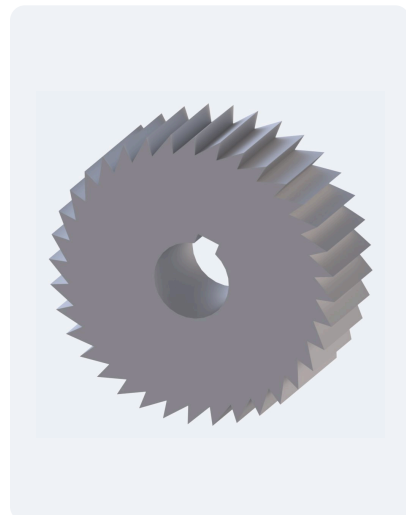
- Shiftable gearboxes
- Machine tool drives
- Couplings



Toothed Clutch Rings



Face Clutch Gears



Ratchet Gear



Ratchet Disc

18 GEARS Ratchet Gears

Ratchet wheels that allow rotation in one direction only, locking reliably against reverse motion when engaged with a pawl.

TYPICAL APPLICATIONS

- Winches & hoists
- Tensioners
- Indexing mechanisms

19 GEARS Anti-Backlash Gears

Spring-preloaded split gears that take up tooth clearance, eliminating backlash for precise, repeatable positioning.

TYPICAL APPLICATIONS

- Precision instruments
- Positioning systems
- Robotics



Anti-Backlash Gear



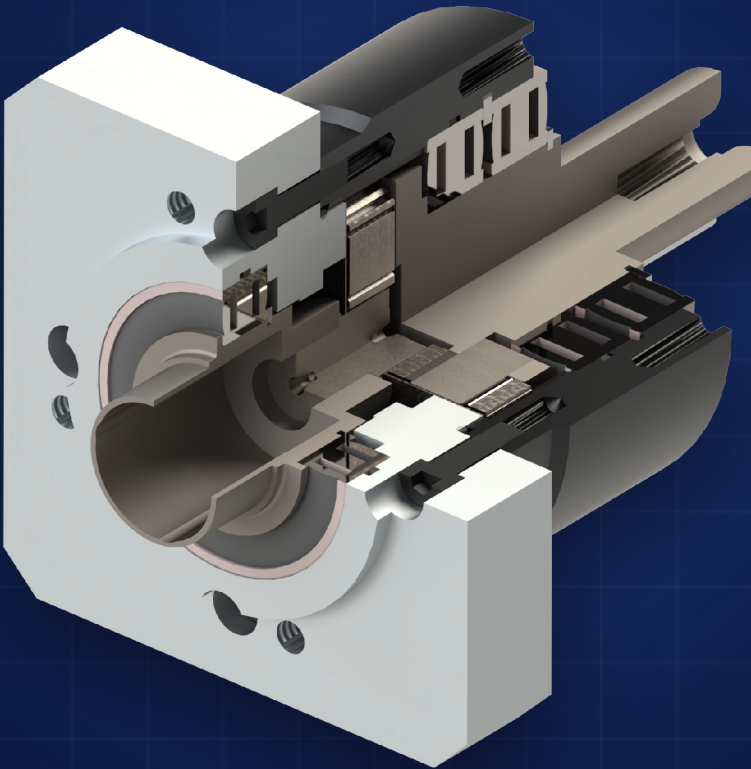
Exploded View

SECTION 02

Power Transmission & Motion

Gearboxes, cams, lead screws and augers that convert and control motion — together with repair and overhaul services that bring industrial gearboxes back into operation.

20	Gearboxes & Transmissions	16
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22	Lead Screws	18
23	Cam Mechanisms	18
24	Cylindrical Cams	19
25	Augers & Screw Components	20



20 POWER TRANSMISSION & MOTION

Gearboxes & Transmissions

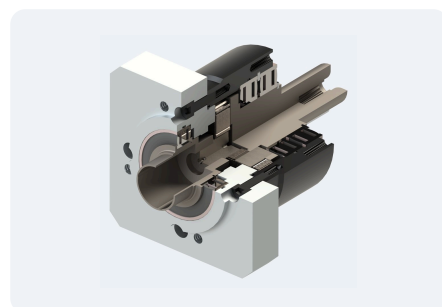
Speed reducers and transmissions — from precision planetary gearboxes to multi-stage industrial units — complete with their gears, shafts and housings.

TYPICAL APPLICATIONS

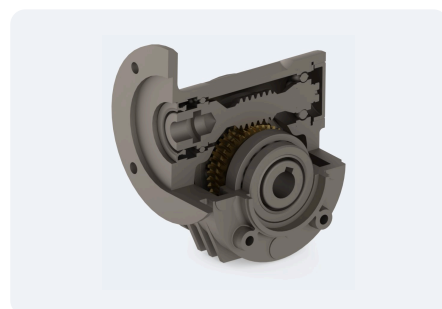
- Industrial drives
- Servo & automation systems
- Mixers & conveyors



Precision Planetary Gearbox



Planetary Gearbox — Section View



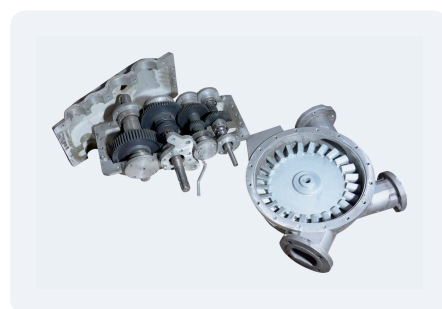
Gearbox — Section View



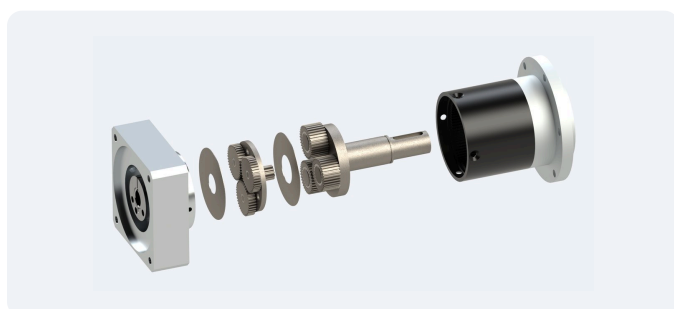
Multi-Stage Transmission



Planetary Gearbox Components



Transmission Housing & Gear Train



Planetary Gearbox — Exploded View



Gearbox Housing, Gears & Shafts

21 POWER TRANSMISSION & MOTION

Gearbox Repair & Overhaul

Inspection, repair and overhaul of industrial gearboxes and reducers. Worn or damaged gears, shafts and components are measured and re-manufactured, and units are rebuilt for a return to service.

SERVICE SCOPE

- Inspection & fault diagnosis
- Disassembly & cleaning
- Re-manufacture of worn gears & shafts
- Reassembly & final checks



Gearboxes received for overhaul



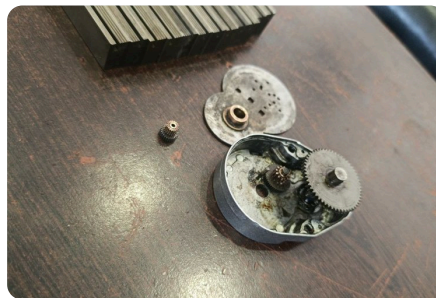
Planetary stage opened for inspection



Disassembled gear train



Vertical reducer



Planet carrier & housing



Units awaiting repair



Housing inspection



Planetary gearboxes

22

POWER TRANSMISSION & MOTION

Lead Screws

Threaded screw shafts with flanged nuts that convert rotation into precise linear motion for positioning and lifting.

TYPICAL APPLICATIONS

- Linear actuators
- Lifting & adjustment systems
- CNC & 3D printer axes



Lead Screw with Flanged Nut



Lead Screw — Reverse View



Grooved Plate Cam

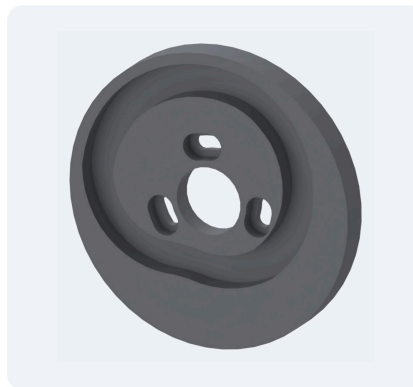
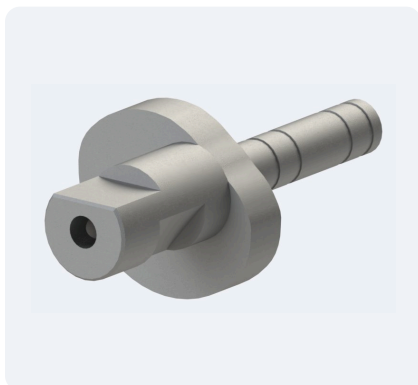
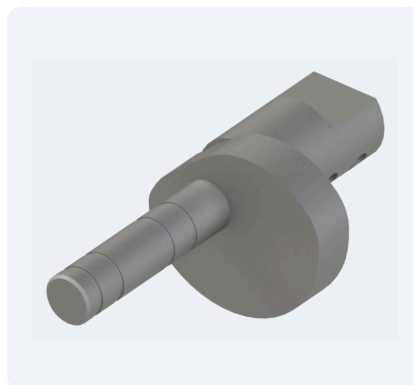


Plate Cam Disc



Eccentric Shaft



Eccentric Cam Shaft

23

POWER TRANSMISSION & MOTION

Cam Mechanisms

Plate cams, grooved cams and eccentric shafts that generate precisely defined motion profiles for followers and linkages.

TYPICAL APPLICATIONS

- Packaging & assembly machines
- Presses & feeders
- Engines & compressors

24 Cylindrical Cams

POWER TRANSMISSION & MOTION

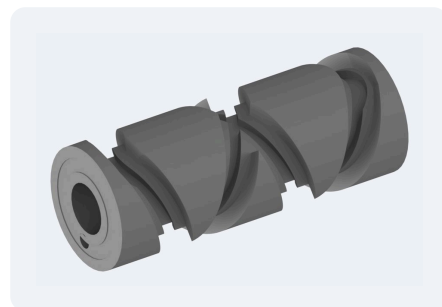
Barrel cams with helical and cross-over grooves that convert rotation into reciprocating linear motion — in steel and engineering plastics such as POM and cast polyamide.

TYPICAL APPLICATIONS

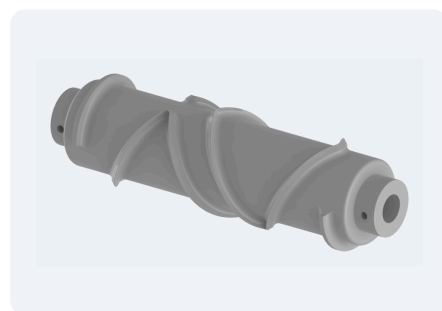
- Traverse & winding units
- Textile machinery
- Pick-and-place systems



Cross-Groove Traverse Cam

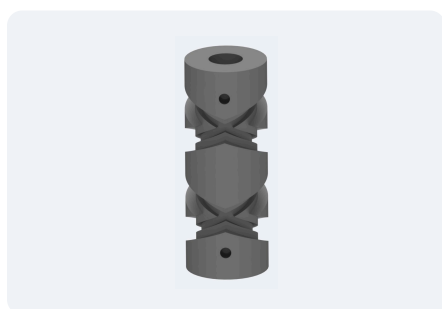


Double-Track Cylindrical Cam

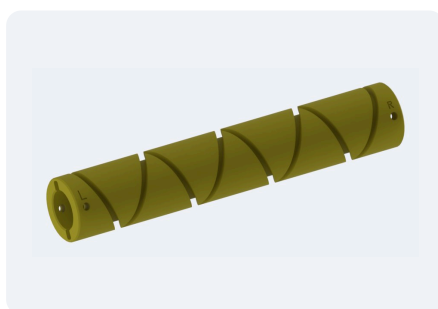


Large Barrel Cam

POM



Short Cross-Groove Cam



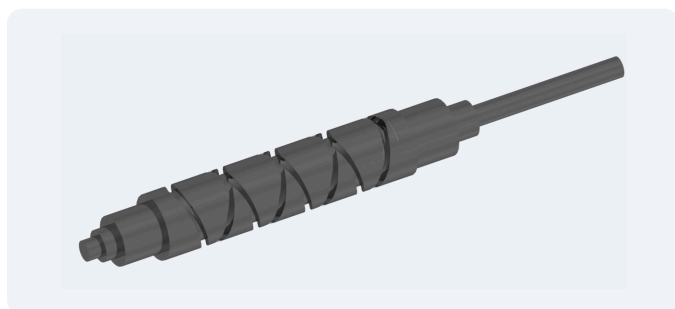
Barrel Cam

PA6



Traverse Cam

POM



Traverse Cam with Shaft



Helical Groove Cam

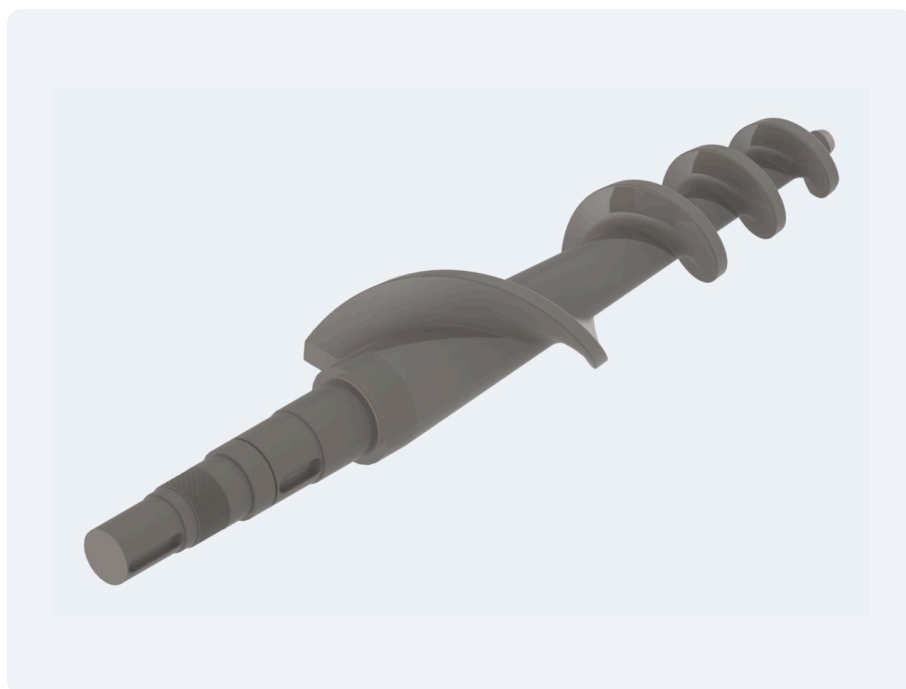
POM

25 POWER TRANSMISSION & MOTION Augers & Screw Components

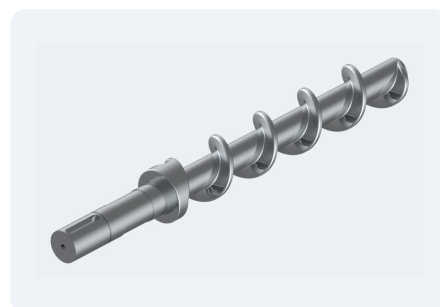
Auger flights, feed screws and extruder screws for conveying, dosing and plasticising — together with related threaded housings and screw assemblies.

TYPICAL APPLICATIONS

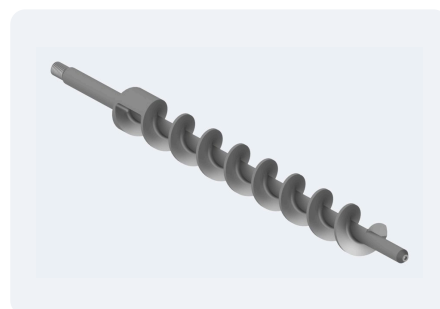
- Screw conveyors
- Dosing & filling
- Plastic extrusion



Tapered Auger



Auger Flight Shaft



Screw Conveyor Auger



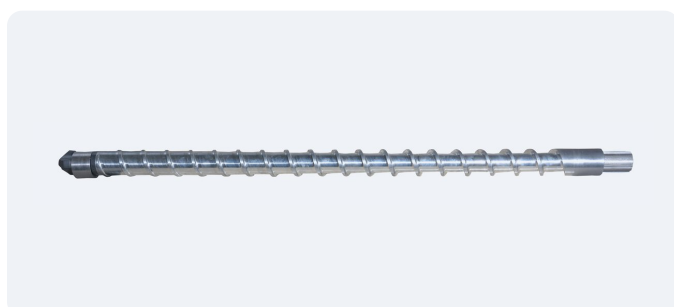
Threaded Screw Housing



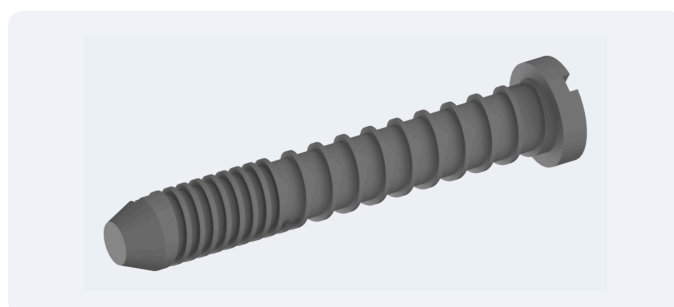
Helical Screw Element



Screw & Housing Assembly



Extruder Screw



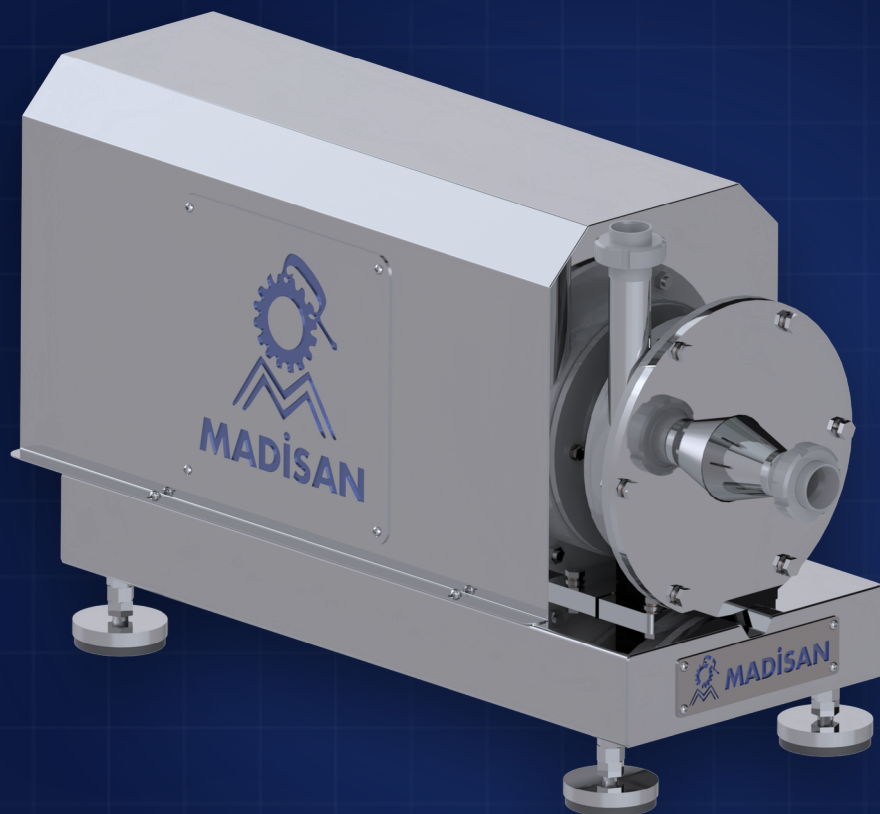
Coarse-Thread Feed Screw

SECTION 03

Pump Systems

Gear, lobe, centrifugal and liquid ring vacuum pump series for transfer, dosing and vacuum duties across the process industries.

26	External Gear Pumps	22
27	Internal Gear Pumps	23
28	Rotary Lobe Pumps	24
29	Centrifugal Pumps	25
30	Liquid Ring Vacuum Pumps	26



26

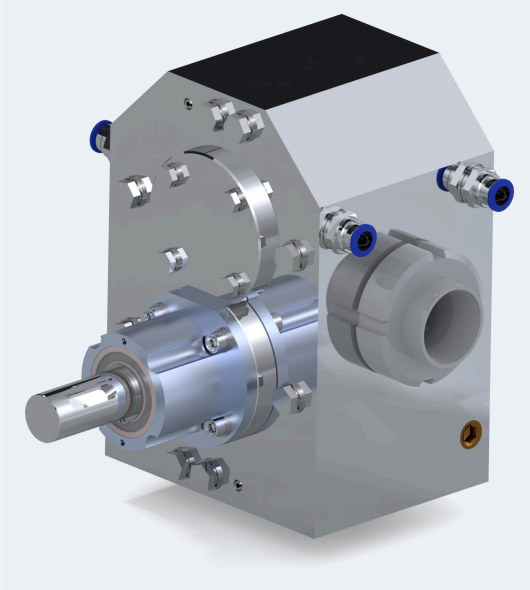
PUMP SYSTEMS MDP-C SERIES

External Gear Pumps

Positive-displacement pumps with two meshing external gears for smooth, even flow. Available in compact block design, as foot-mounted versions and as servo-driven dosing units.

TYPICAL APPLICATIONS

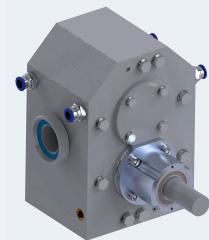
- Oil & lubricant transfer
- Chemical dosing
- Viscous fluids



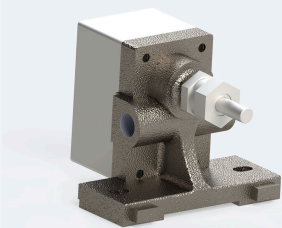
MDP-C External Gear Pump



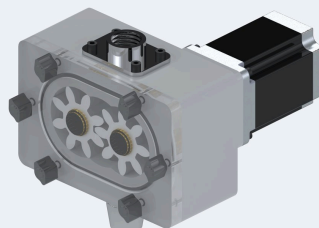
MDP-C — Drive Side



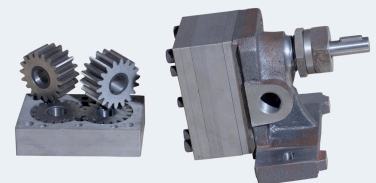
MDP-C — Rear View



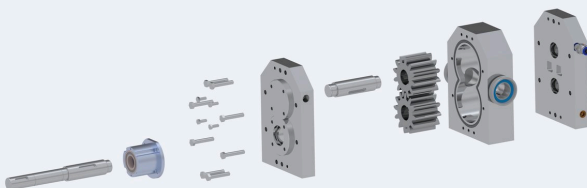
Foot-Mounted Gear Pump



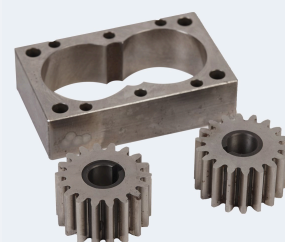
Servo-Driven Gear Pump



Gear Pump Components



MDP-C — Exploded View



Pump Body & Gear Set

27

PUMP SYSTEMS MIP SERIES

Internal Gear Pumps

Rotor-and-idler internal gear pumps in stainless steel construction for gentle, self-priming transfer of thin to highly viscous liquids.

TYPICAL APPLICATIONS

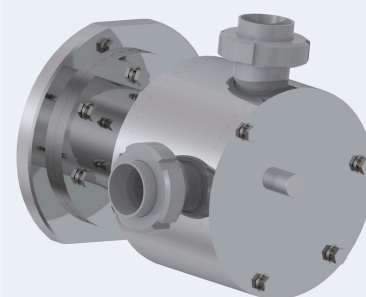
- Food & beverage
- Chemicals & solvents
- Syrups, oils & resins



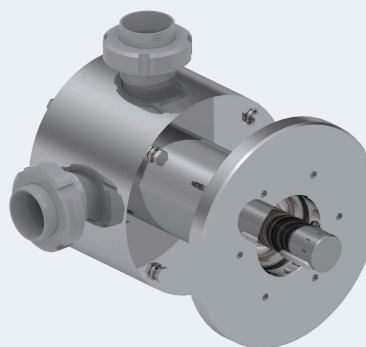
MIP Internal Gear Pump



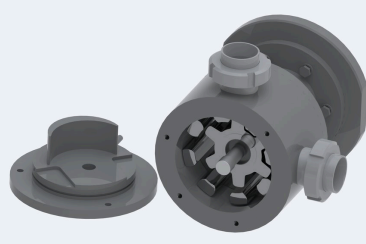
MIP — Side View



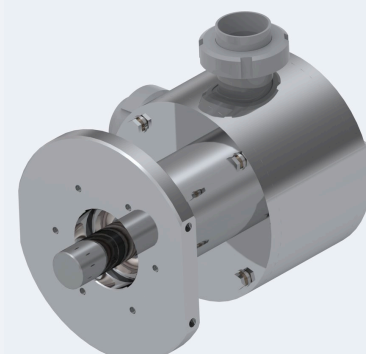
MIP — Threaded Connections



MIP — Drive End



Rotor & Idler Gear



Compact MIP Pump

28

PUMP SYSTEMS MLP SERIES

Rotary Lobe Pumps

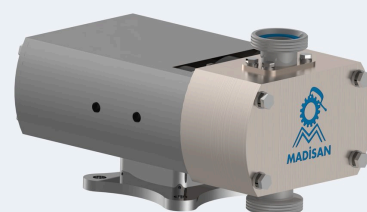
Lobe pumps with non-contacting rotors for low-shear handling of viscous and particle-laden products — MLP-C motor-driven units and compact, servo-driven MLP-E models.

TYPICAL APPLICATIONS

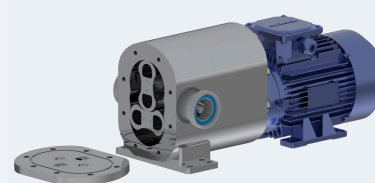
- Dairy & food processing
- Cosmetics & pharmaceuticals
- Sludges & slurries



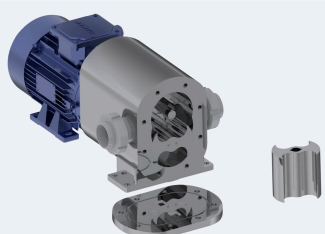
MLP-C Rotary Lobe Pump



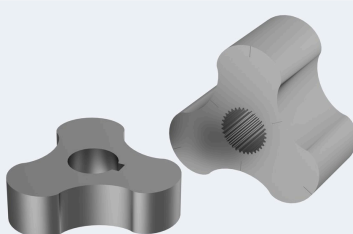
MLP-C — Side View



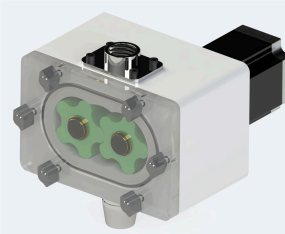
MLP-C — Motor-Driven Unit



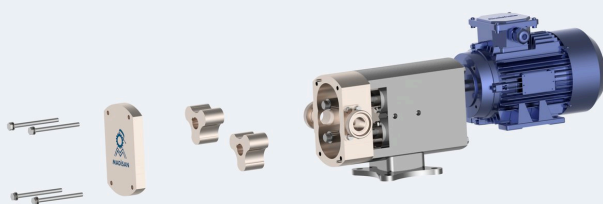
Rotor Chamber, Cover Removed



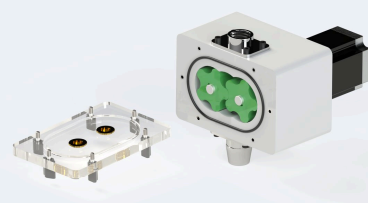
Tri-Lobe Rotors



MLP-E Compact Servo Lobe Pump



MLP-C — Exploded View



MLP-E — Front Cover Open

29

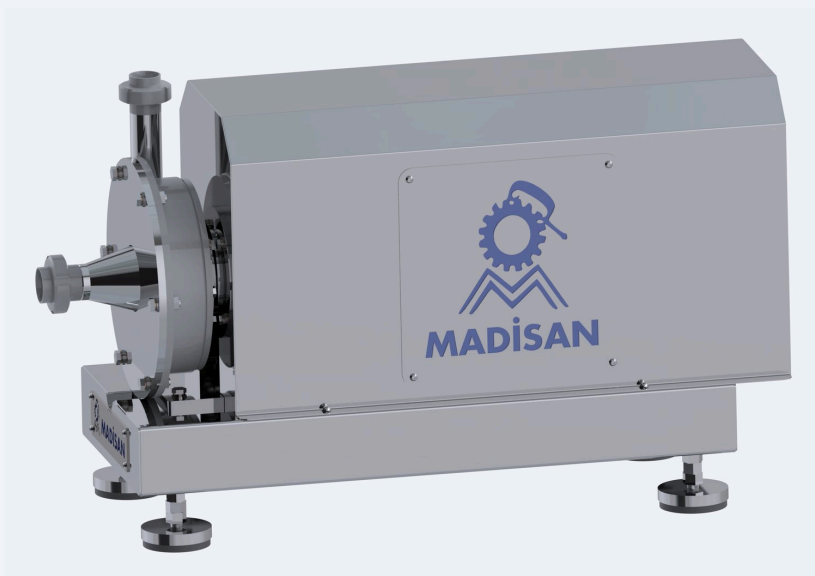
PUMP SYSTEMS MSP-C SERIES

Centrifugal Pumps

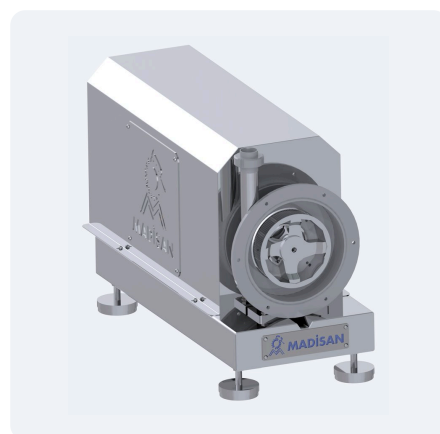
Stainless steel centrifugal pumps on a covered base frame with motor shroud, for efficient transfer of low-viscosity liquids in process and cleaning lines.

TYPICAL APPLICATIONS

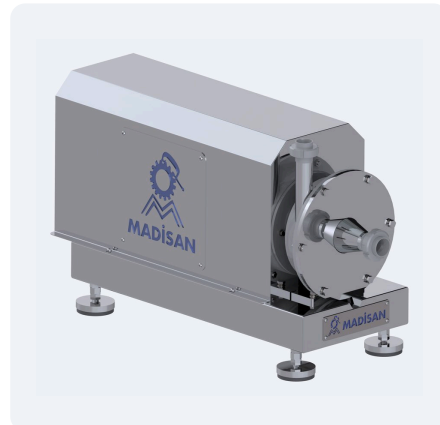
- Beverage & dairy
- CIP cleaning systems
- Water & process liquids



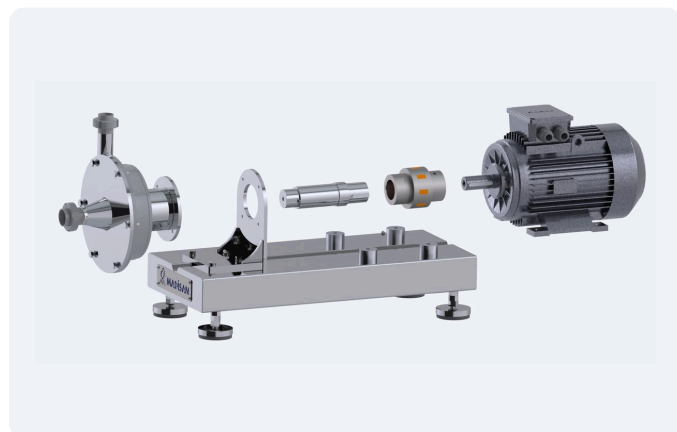
MSP-C Centrifugal Pump



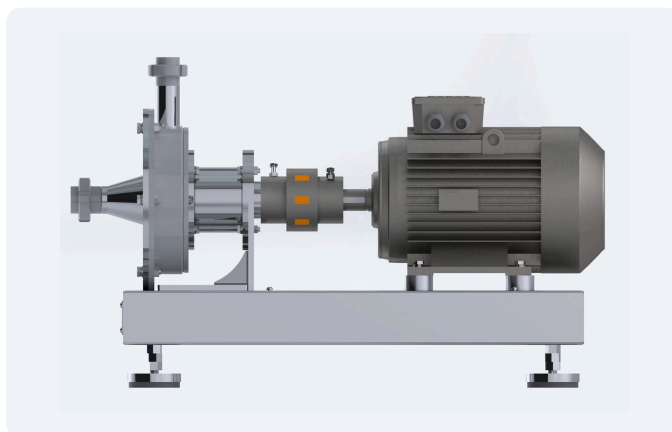
MSP-C — Front View



MSP-C — Angled View



MSP-C — Exploded View



Pump & Motor Assembly

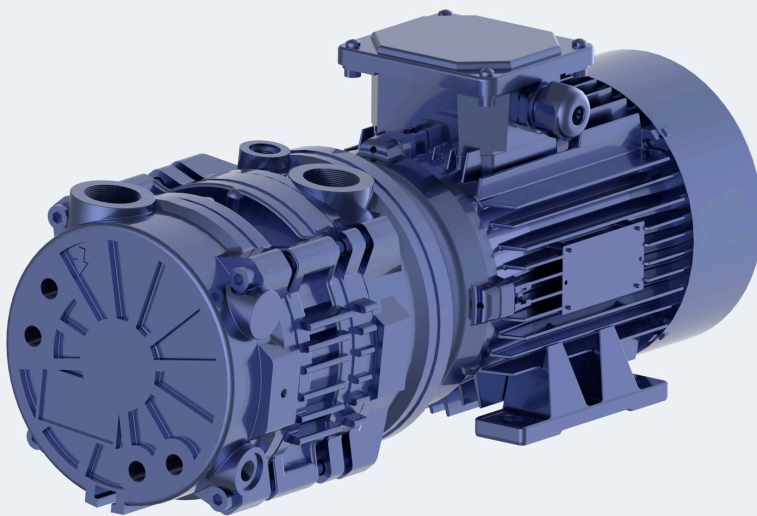
30 PUMP SYSTEMS MSHVP-P SERIES

Liquid Ring Vacuum Pumps

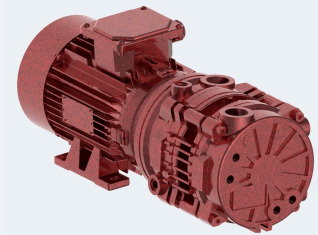
Liquid ring vacuum pumps with near-isothermal compression and high tolerance to vapour and condensate — supplied as bare-shaft pumps or close-coupled motor units.

TYPICAL APPLICATIONS

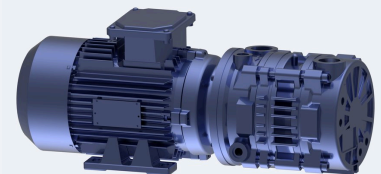
- Vacuum filtration & drying
- Degassing
- Chemical & plastics processes



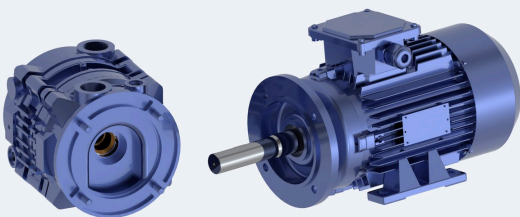
MSHVP-P Liquid Ring Vacuum Pump



MSHVP-P — Red Finish



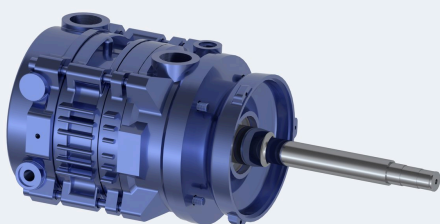
MSHVP-P — Side View



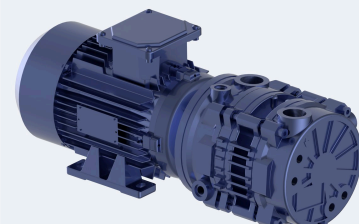
Pump & Motor, Separated



MSHVP-P — Exploded View



Bare-Shaft Pump



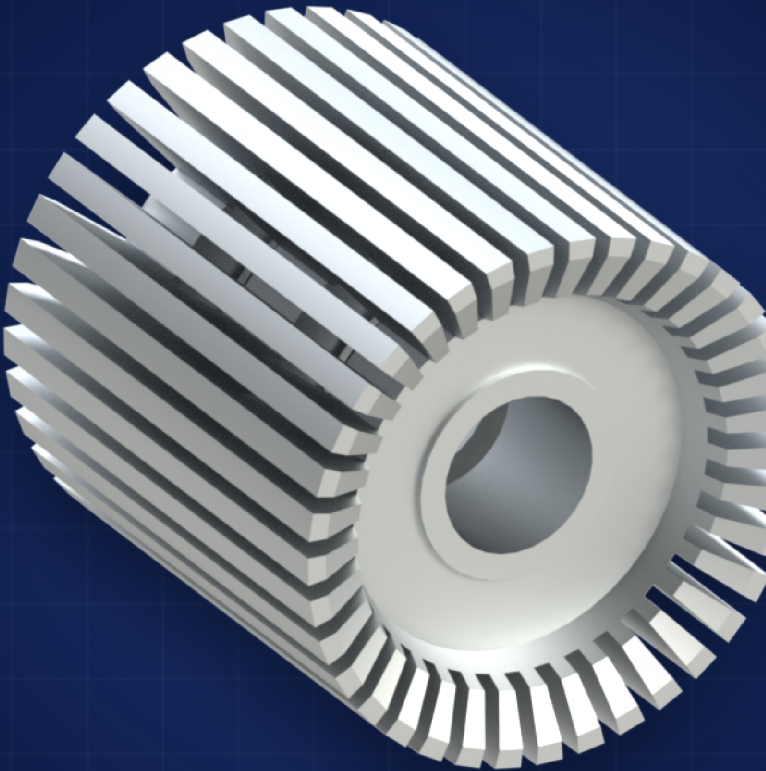
Close-Coupled Motor Unit

SECTION 04

Tooling & Machining

Pattern moulds, extrusion and press dies, and custom CNC-machined components made to customer drawings — from single parts to series production.

31	Pattern Moulds	28
32	Extrusion Dies	29
33	Press Dies	29
34	Custom Machined Parts	30
35	Housings, Brackets & Assemblies	31



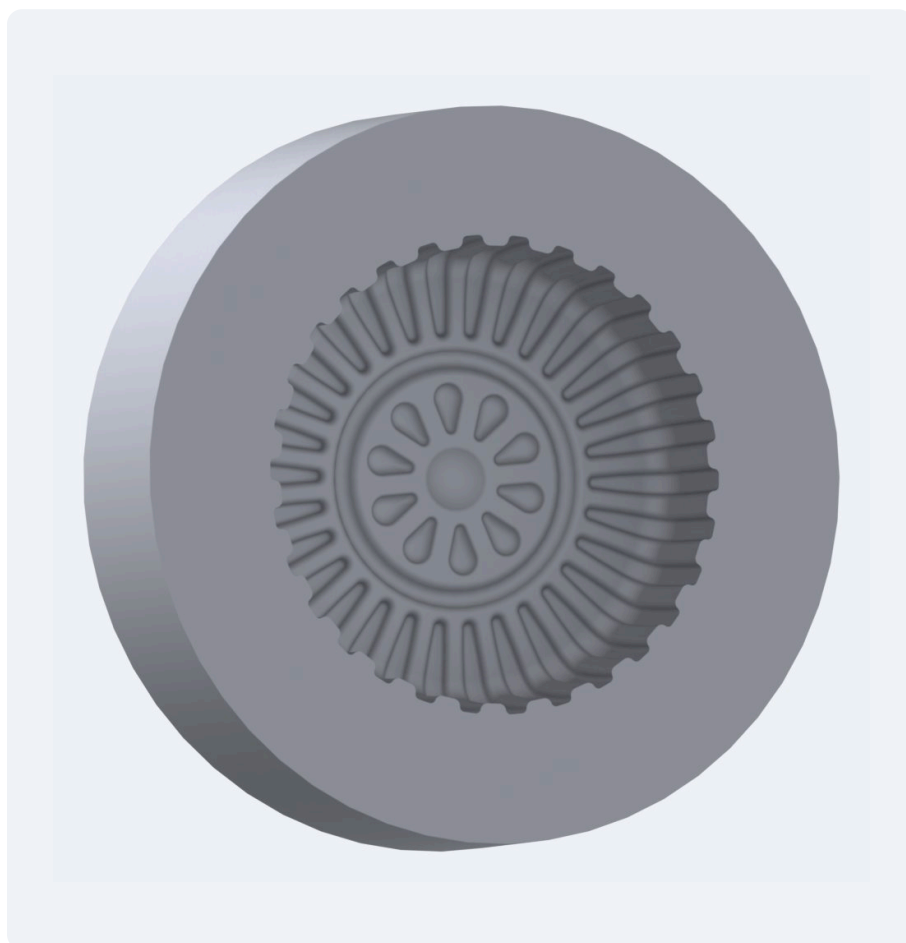
31 TOOLING & MACHINING

Pattern Moulds

Pattern and embossing moulds, master models and toothed profile tools, machined for moulding, forming and casting processes.

TYPICAL APPLICATIONS

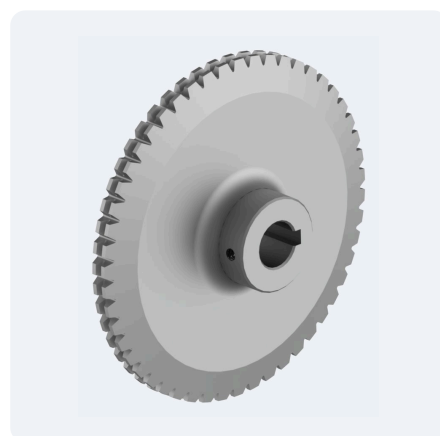
- Rubber & polyurethane moulding
- Embossing
- Foundry patterns



Embossing Pattern Die



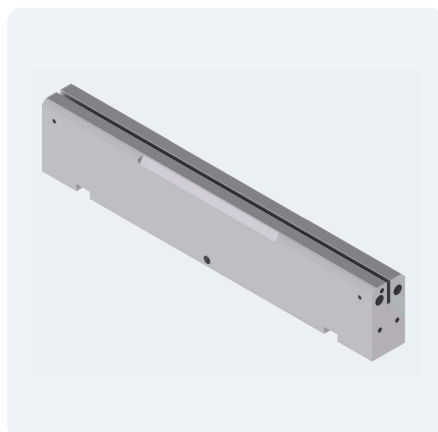
Coupling Spider Pattern



Sprocket Pattern



Toothed Pattern Plate



Profile Pattern Bar



Slotted Pattern Bar

32

TOOLING & MACHINING

Extrusion Dies

Extrusion die plates and die blocks machined for consistent, repeatable profile geometry.



Extrusion Die Plates

TYPICAL APPLICATIONS

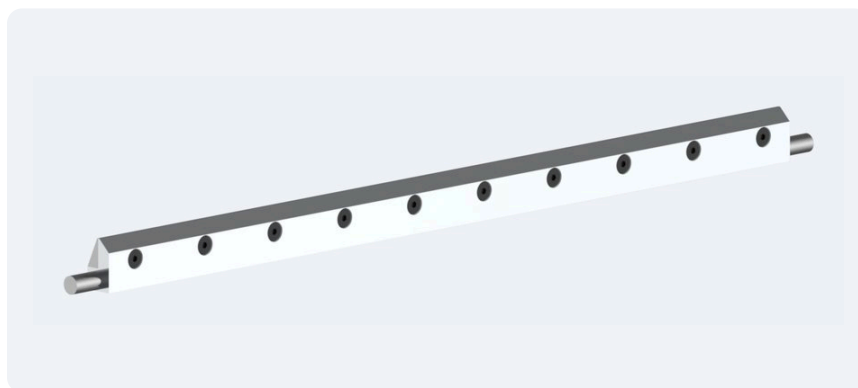
- Plastic & rubber profiles
- Food extrusion
- Pelletising



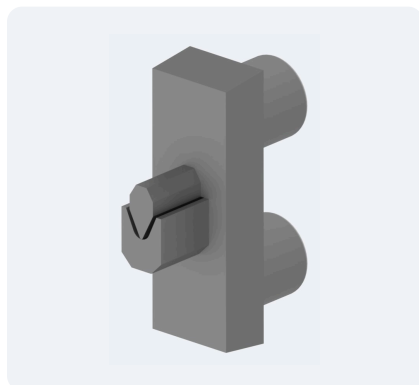
Extrusion Die Block



Die Block — Front View



Perforating Die Bar



Forming Punch Block



Punch Bar

33

TOOLING & MACHINING

Press Dies

Punches, die bars and forming tools for stamping, piercing and bending sheet metal parts.

TYPICAL APPLICATIONS

- Sheet metal stamping
- Piercing & perforating
- Bending & forming

34 TOOLING & MACHINING Custom Machined Parts

Precision turned and milled parts made to customer drawings — in aluminium, steel, stainless steel, brass and engineering plastics, from single pieces to series production.

TYPICAL APPLICATIONS

- Machine building
- Automation
- Automotive & agriculture
- Spare parts



Machined Coupling Housing



Helical Beam Coupling



Aluminium Clevis Block



Stepped Precision Shafts



Manifold Blocks with Bushings



Aluminium Flange Plate



Turned Steel Discs



Finned Aluminium Block



Aluminium Housing Block

35 TOOLING & MACHINING

Housings, Brackets & Assemblies

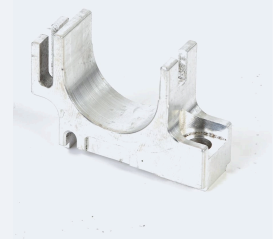
Bearing housings, hubs, brackets and complete sub-assemblies — engineered in 3D CAD and manufactured to specification.

TYPICAL APPLICATIONS

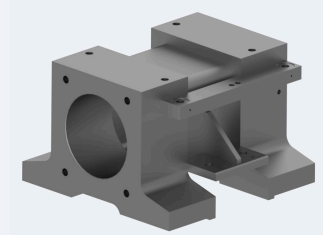
- Machine frames & housings
- Motion assemblies
- Sealing systems
- Prototypes



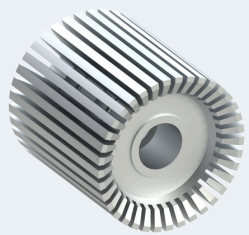
Steel Roller Hub



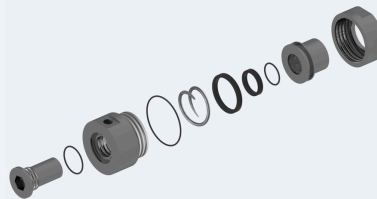
Machined U-Bracket



Bearing Block Housing



Radial Fin Heat Sink



Seal Cartridge Assembly



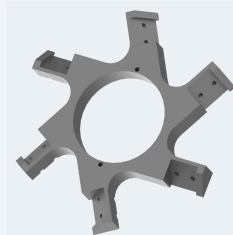
Steel Cam Segment



Sheet Metal Bracket



Split Polymer Guide Ring



Star Mounting Plate



MADİSAN

GEARS · POWER TRANSMISSION · PUMP SYSTEMS · TOOLING

GEARS

POWER TRANSMISSION & MOTION

PUMP SYSTEMS

TOOLING & MACHINING