RADAR®

TOOLS GROUP

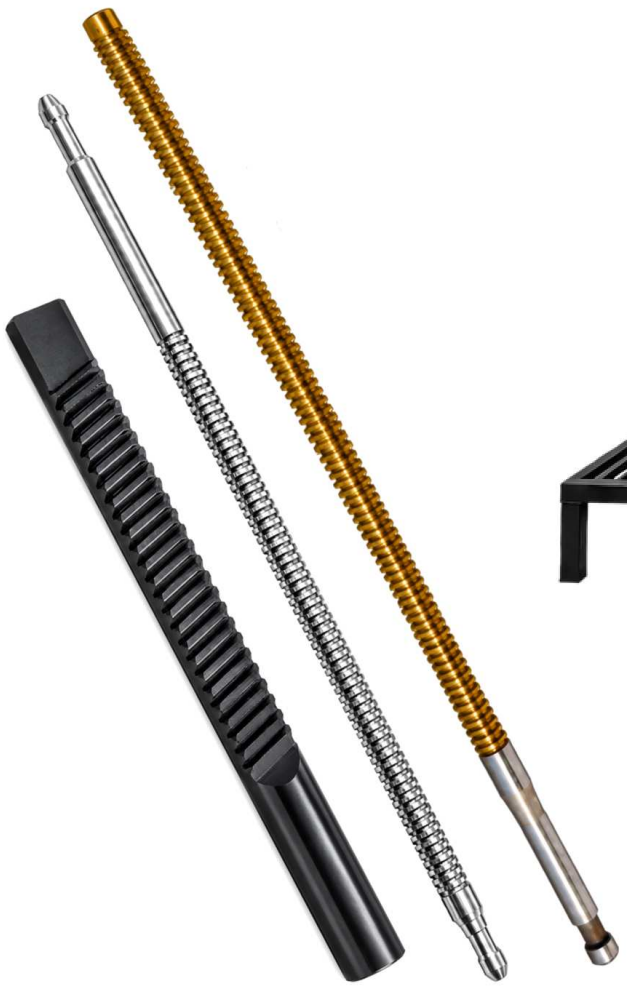
SINCE 1962

A Division of Hindustan Enterprisers Co. (Regd.)

PRODUCT CATALOGUE

Broaching Machines • Broaching Tools • Cutting Tools











OVER 60 YEARS OF EXCELLENCE

COMPANY PROFILE



Radar Tools Group, a division of **Hindustan Enterprisers Co. (Regd.)**, has been engaged in engineering and manufacturing **since 1962**.
For over **six decades**, we have specialized in the manufacturing of **broaching tools and broaching machines**. Today, our range also includes cutting tools, including **gear hobs, milling cutters, end mills, reamers, taps, drills** and special purpose tools for customers in international markets.

Our manufacturing capabilities are supported by modern **CNC machinery** and advanced production equipment, with product development and engineering carried out using modern **CAD/CAM systems**.

We manufacture standard and custom tooling and provide application specific solutions for the automotive, agriculture, gear manufacturing, defence, aerospace, heavy engineering and general manufacturing industries.

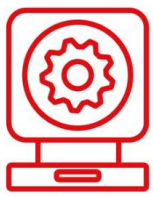
QUALITY & COMMITMENT

OUR MISSION

To manufacture reliable broaching machines and precision cutting tools that meet our customers' production needs, supported by practical engineering and dependable service.

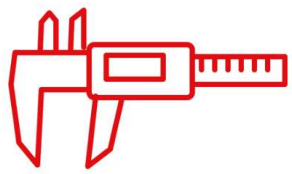
OUR COMMITMENT TO QUALITY

Our commitment centres on appropriate material selection, manufacturing accuracy and inspection against customer drawings and application requirements.



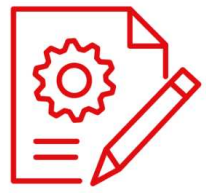
Profile Inspection

Profile projectors for checking cutting profiles and tooth geometry.



Dimensional Inspection

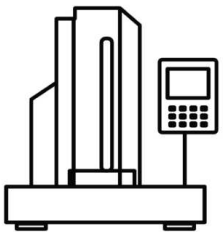
Critical broach dimensions, including diameter over pins (DOP).



Design & Engineering

Tool designs developed to suit component drawings and application requirements.

OUR PRODUCT RANGE



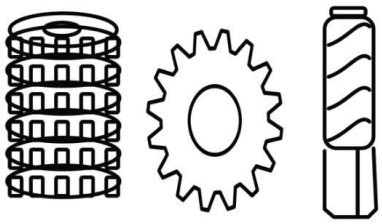
Broaching Machines

Vertical Internal • Surface • Horizontal • Servo-Electric Table-Up



Broaching Tools

Spline • Keyway • Surface • Special Profile Broaches



Cutting Tools

Gear Hobs • Shaper Cutters • Milling Cutters • Reamers • Threading Taps • End Mills • Drills

BROACHING MACHINES



Vertical Internal Broaching Machine

TECHNICAL DATA

PARAMETER	SPECIFICATION
Broaching Force	3–60 Ton
Stroke	400–2500 mm
Cutting Speed	2–15 m/min
Return Speed	15–20 m/min
Drive System	Hydraulic
Broaching Type	Push Type
Control System	PLC Controlled
PLC Options	Siemens / Allen-Bradley / Schneider / Mitsubishi / Delta
Applications	Internal Splines / Serrations / Keyways / Special Profiles
Configuration	Customizable as per Application

STANDARD FEATURE

Automatic Broach Retrieval System

OPTIONAL EQUIPMENT

- Magnetic Chip Conveyor
- Hydraulic Oil Air Cooler

Specifications can be customized to suit component, tooling and application requirements.



Surface Broaching Machine

TECHNICAL DATA

PARAMETER	SPECIFICATION
Machine Type	Surface Broaching Machine
Broaching Force	2–60 Ton
Stroke	200–2500 mm
Drive System	Hydraulic
Control System	PLC Controlled
PLC Options	Siemens / Allen-Bradley / Schneider / Mitsubishi / Delta
Applications	External Surfaces / Flats / Slots / Special Profiles
Configuration	Customizable as per Application

OPTIONAL EQUIPMENT

- Magnetic Chip Conveyor
- Hydraulic Oil Air Cooler

Specifications can be customized to suit component, tooling and application requirements.

Horizontal Broaching Machine

TECHNICAL DATA

PARAMETER	SPECIFICATION
Machine Type	Horizontal Broaching Machine
Broaching Force	5 – 60 Ton
Stroke	500 – 2500 mm
Drive System	Hydraulic
Control System	PLC Controlled
PLC Options	Siemens / Allen-Bradley / Schneider / Mitsubishi / Delta
Applications	Internal Splines / Serrations / Keyways / Special Profiles
Configuration	Customizable as per Application

OPTIONAL EQUIPMENT

- **Magnetic Chip Conveyor**
- **Hydraulic Oil Air Cooler**

Specifications can be customized to suit component, tooling and application requirements.



Table-Up Broaching Machine



TECHNICAL DATA

PARAMETER	SPECIFICATION
Broaching Force	2 – 60 Ton
Stroke	200 – 2500 mm
Drive System	Servo-Electric
Control System	PLC / HMI Controlled
Operation	Table-Up
Tooling	Internal & Special Broaches
Configuration	Customizable as per Application

APPLICATIONS

Internal Splines / Serrations / Keyways / Special Profiles

Spline Broaches



COMPLETE RANGE OF SPLINE BROACHES

- Involute Spline Broaches
- Straight Spline Broaches
- Calibration Spline Broaches
- Serration Broaches
- Serration Drifts
- Parallel & Trapezoidal Spline Broaches
- Ratchet Broaches

TECHNICAL DATA

PARAMETER	MANUFACTURING CAPABILITY
Broach Type	Push & Pull
Major Diameter	10 – 250 mm*
Module	0.5 – 8*
Diametral Pitch (DP)	8 – 40*
Pressure Angle	14.5° – 45°*
Number of Splines	As per Component / Drawing
Broach Length	Up to 2500 mm
Job Length	As Required
Standards	ANSI / DIN 5480 / JIS / Customer Drawing
Manufacture	Standard & Custom

*Specifications vary according to spline type, profile and application.

BROACHING TOOLS

Keyway Broaches & Sets



TECHNICAL DATA

Parameter	Specification
Broach Type	Push or Pull
Cutting Design	Single Pass or Multi Pass
Profiles	Keyway, Square & Hexagon
Size System	Metric & Inch
Standards	American / International / Customer Specifications
Broach Size	Standard or as per customer requirement
Broach Length	As per application and customer drawing
Guide Bushings	Available according to bore and broach size
Shims	Available with applicable broach sets
Broach Sets	Complete Metric & Inch sets available
Custom Manufacturing	As per customer drawing

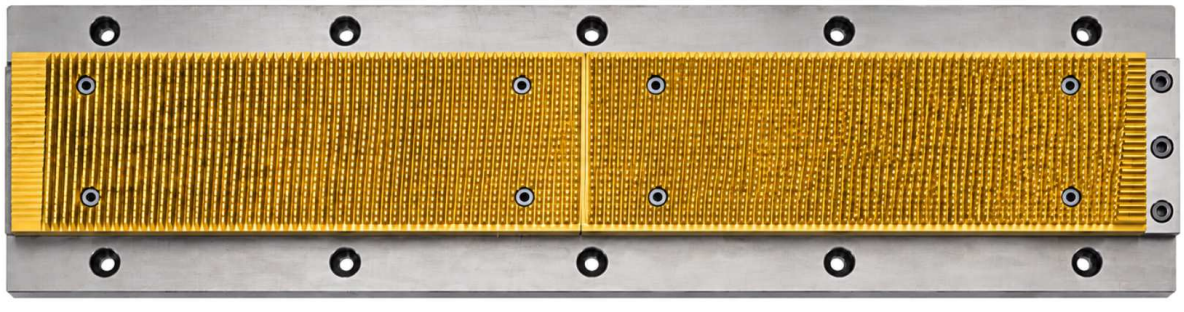
BROACHING TOOLS

Surface Broaches

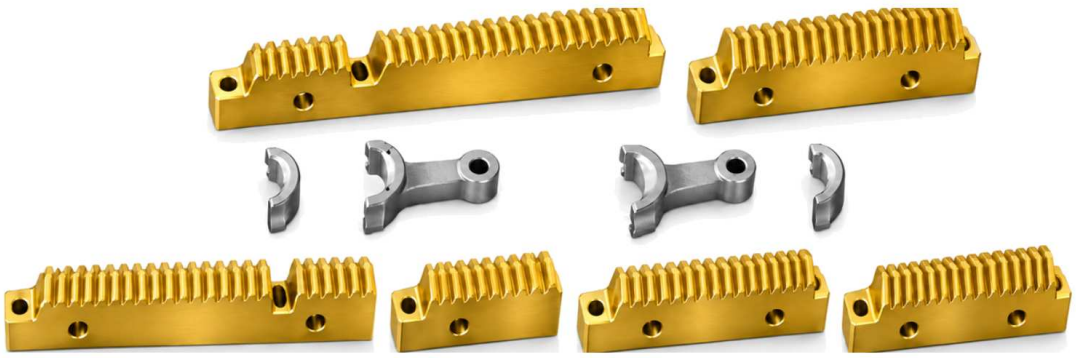
Flat & Contour Broaches



Rack Broaches



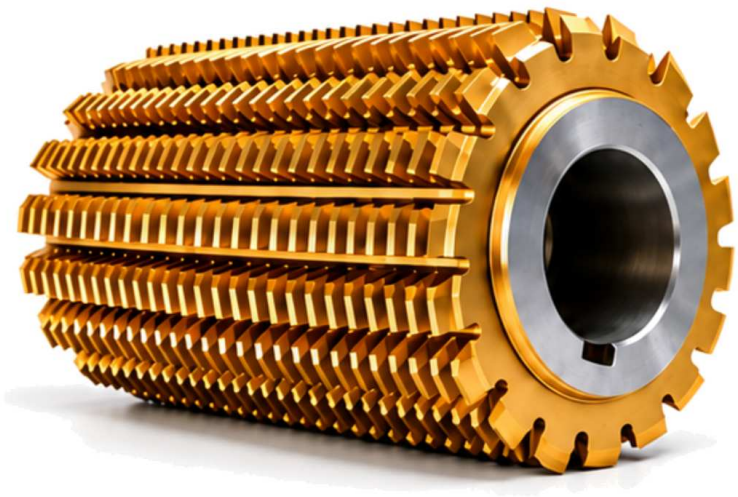
Connecting Rod & Cap Broaches



TECHNICAL DATA

Parameter	Specification
Materials	HSS M2, M35 & M42
Coatings	TiN, TiCN, TiAlN, AlTiN, AlCrN or as per customer requirement
Dimensions	As per customer drawings and requirements
Design & Profile	As per customer drawings and requirements

Gear Cutting Tools



Hobs

- Involute Gear Hobs
- Involute Spline Hobs
- Straight Spline Hobs
- Chain Sprocket Hobs
- Timing Pulley Hobs
- Worm Hobs
- Worm Wheel Hobs
- Serration Hobs
- Special Profile Hobs
- Chamfer Hobs



Milling Cutters

- Side & Face Milling Cutters
- Plain Milling Cutters
- Single Angle Milling Cutters
- Double Angle Milling Cutters
- Unequal Angle Milling Cutters
- T-Slot Cutters
- Woodruff Keyseat Cutters
- Form Milling Cutters
- Concave & Convex Milling Cutters
- Dovetail Cutters
- Staggered Tooth Cutters
- Cylindrical Cutters
- Chain Sprocket Cutters
- Fir Tree Cutters
- Special Profile Cutters



Shaper Cutters

- Disc-Type Cutters
- Shank-Type Cutters
- Hub-Type (Bell-Type) Cutters
- Deep Counterbore-Type Cutters

MATERIALS & COATINGS	
Materials	M35, M42, ASP 2030, ASP 2052, ASP 2060 & Carbide
Coatings / Finishes	Black Oxide, TiN, TiCN, TiAlN & AlTiN
Manufacturing	Standard & custom designs
Dimensions & Profile	As per customer drawing and application

Material and coating availability varies by cutter type and application.

Cutting Tools



END MILLS

- Square End Mills
- Ball Nose End Mills
- Roughing End Mills
- Corner Radius End Mills
- Tapered End Mills
- Micro End Mills

TECHNICAL DATA

Materials	M2, M35, M42, ASP 2030, ASP 2052, ASP 2060 & Carbide or as per customer requirement
Flutes	2, 3, 4 & Multi-Flute
Lengths	Standard, Long, Extra Long & Custom



THREADING TAPS

- Straight Flute
- Spiral Flute
- Spiral Point
- Thread Forming
- Machine Taps
- Nut Taps
- Pipe Taps
- Trapezoidal / ACME
- Screw Thread Insert (STI)

TECHNICAL DATA

Materials	HSS M2, HSS-E, M35, M42 & Solid Carbide or as per customer requirement
Thread Forms	Metric, UNC, UNF, NPT, BSP, BSPT, ACME & Trapezoidal
Thread Direction	Right-Hand & Left-Hand
Coatings / Finishes:	Black Oxide, TiN, TiCN, TiAlN & AlTiN or as per customer requirement

Options vary by tool type and application.

Reamers



REAMER RANGE

- Hand Reamers
- Machine Reamers
- Chucking Reamers
- Taper Shank Reamers
- Taper Pin Reamers
- Bridge Reamers
- Shell Reamers
- Morse Taper Reamers
- Step Reamers
- Adjustable Reamers
- Expansion Reamers

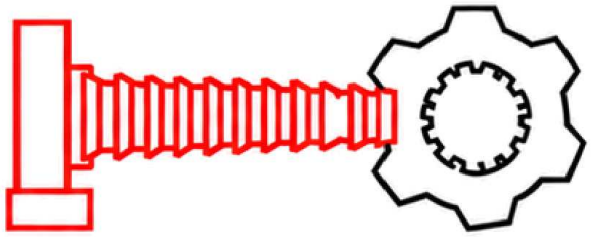
TECHNICAL DATA

PARAMETER	SPECIFICATION
Materials	M2, M35, M42, S390, ASP 2030, ASP 2052, ASP 2060 or as per customer requirement.
Coatings / Finishes	Black Oxide, TiN, TiCN, TiAlN, AlTiN or as per customer requirement.
Flute Style	Straight, Spiral & Application-Specific.
Shank Options	Straight, Taper, Square Drive & Special.
Construction	Solid, Shell, Step & Special.
Sizes & Lengths	Standard or as per customer drawing.

Material and coating selection varies by application.

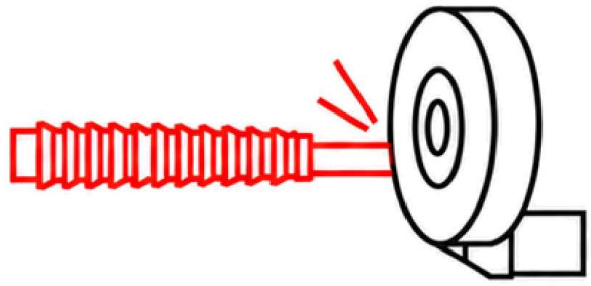
Our Services

Production broaching and tool reconditioning services to support your manufacturing requirements.



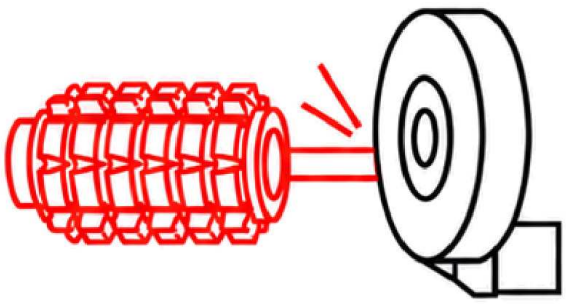
Production & Contract Broaching

Broaching of component profiles to suit customer drawings and production requirements.



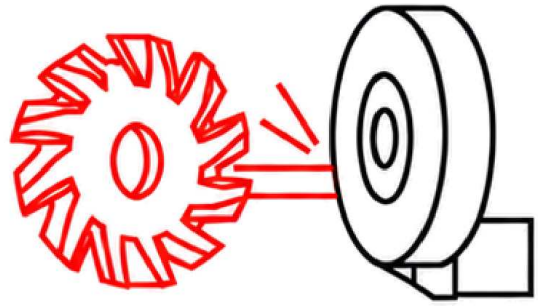
Broach Tool Resharpening

Resharpening of broaching tools to restore cutting edges and support continued use.



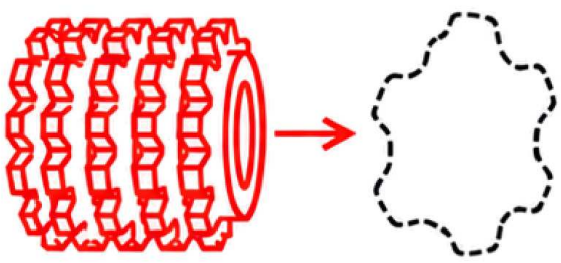
Hob Cutter Resharpening

Resharpening of hob cutting faces to maintain effective cutting performance.



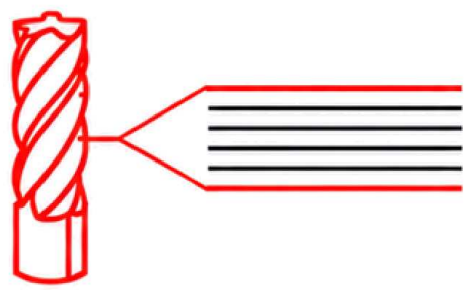
Shaving Cutter Resharpening

Resharpening of shaving cutters for continued gear finishing applications.



Hob Cutter Reprofiling

Profile modification of suitable hobs to meet revised tooling requirements.

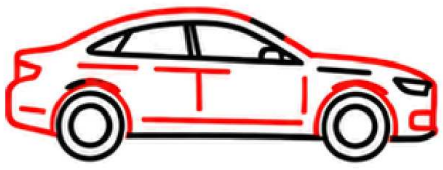


PVD Coating

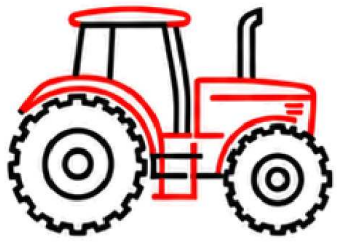
Coating options for cutting tools, selected to suit the material and application.

Industries Served

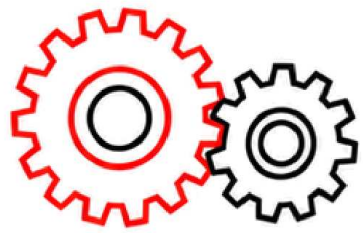
Broaching machines and precision cutting tools for diverse manufacturing industries.



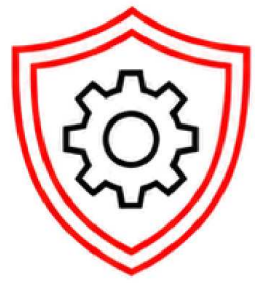
Automotive



Agriculture



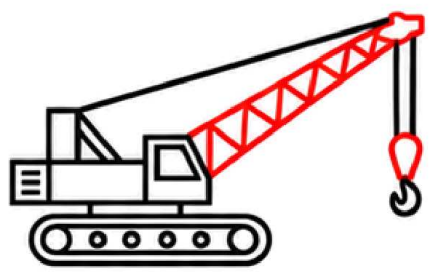
Gear Manufacturing



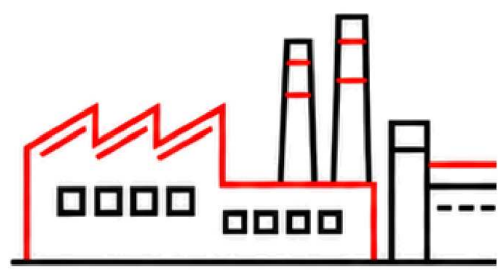
Defence



Aerospace



Heavy Engineering



General Manufacturing

SUPPLYING TO 25+ COUNTRIES



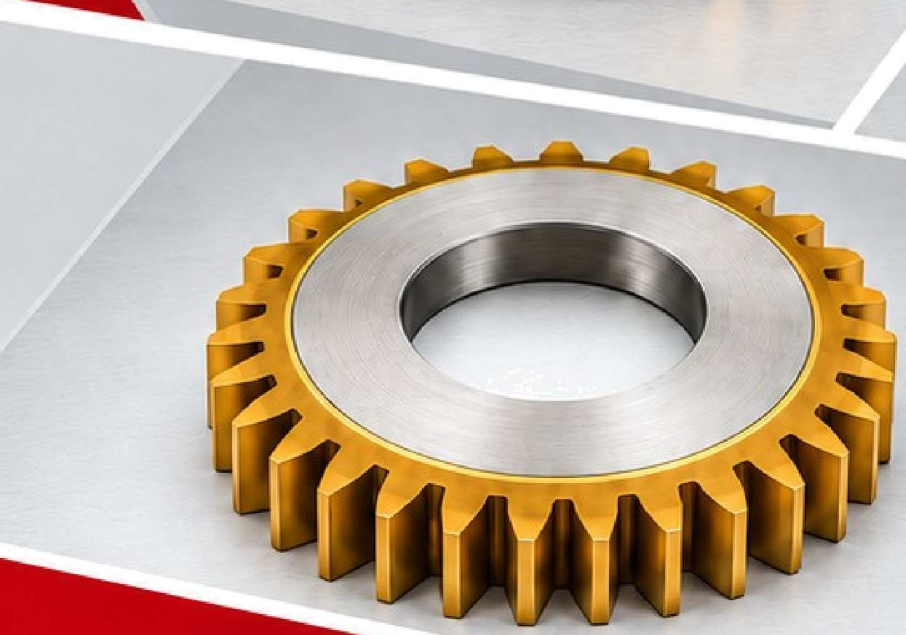
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