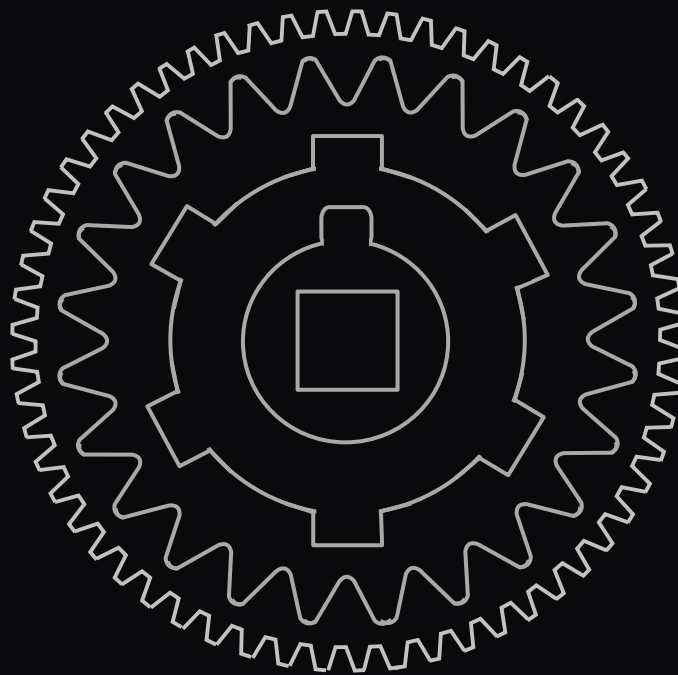
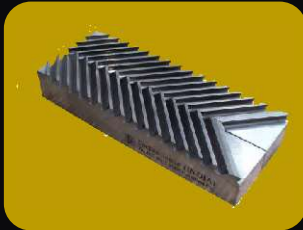
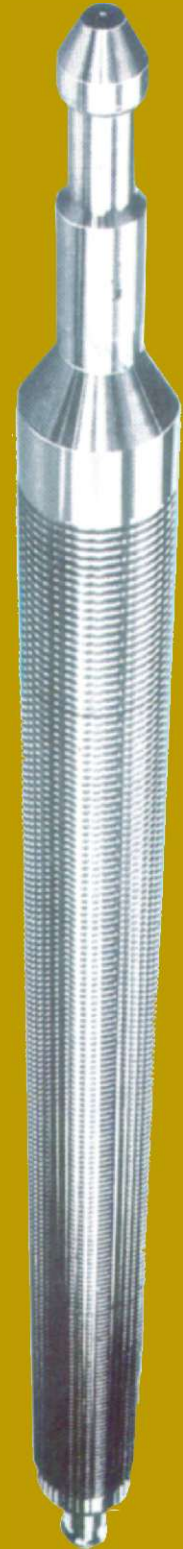




# Techcellence (INDIA)

MFG. OF ALL TYPES OF BROACHES, SPLINE PLUG GAUGES, BROACHING M/C, BROACH RE-SHARPENING M/C, FORM MILLING CUTTERS, HOBS & SPECIAL TOOLS.



COMMITTED TO QUALITY WITH FINEST CUTS OF TECHNOLOGY

# PRODUCT RANGE : SERVING THE NATION SINCE 1960

## BROACHES

- Round Broach
- Involute Spline Broach
- Straight Spline Broach
- Straight Serration Broach
- Rectangular / Poly Flats Broach
- Keyway Broach with or without Chamfer
- Surface Broach
- Special Profile Broach
- Interspace Broach
- Calibration Broach



## GAUGES

- Involute Spline (Go & No Go Gauges)
- Straight Spline (Go & No Go Gauges)
- Straight Serration (Go & No Go Gauges)
- Special Profile (Go & No Go Gauges)



## MANDRELS, DRIFT & PUNCHES

- Taper Hobbing, Run Out Checking Mandrels Etc.
- Straight & Tapered Drifts.
- Die Punches & Blind Hole Form Punches



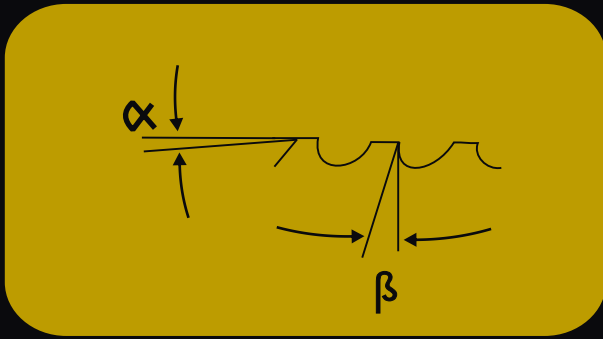
## OTHER PRODUCTS WE DEAL IN

- Broach Puller & Lifter
- Broach Re-Sharpening Machine
- Broaching Machine
- Hob Cutters
- Segmental Saws
- Special Form Cutters
- Milling Cutters



**We also under take the Re-Sharpening & Broaching Job Work**

## Recommended Cutting and rake angles



$\alpha$  = Back off Angles       $\beta$  = Rake Angle

Material	Max. Tensile Strength in Kg/mm <sup>2</sup>	Rake Angle	Broaching speed in m/min.
Steel	40-60	15°-20°	3
Steel	60-85	15°	3
Steel	85-110	15°	2 to 3
Steel-Casting	50-70	12°-15°	3
Tool-Steel, H.S.S.	70-90	12°-15°	2
Malleable C.I.	-	10°-12°	3 to 5
Cast Iron	15-50	7°-10°	3 to 5
Brass, Bronze white Metal	-	15°-18°	3 to 5
Light Metal (Aluminium)	-	15°-18°	5 to 7 or Max. Available

These are just the broad outlines.

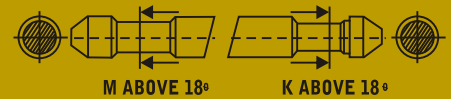
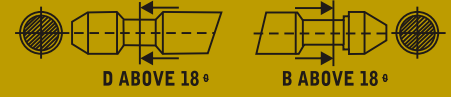
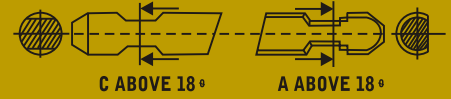
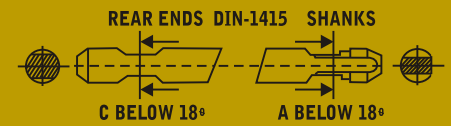
Note : Max Back-off Angle for Cutting Teeth is 2° and for finishing Teeth is 0° - 30°

### Ordering Information

- Detailed component drawings showing all dimensions with tolerances, components material and its condition i.e. forged, normalised etc with hardness at broaching stage and pre-broaching dimensions.
- Specifications of broaching machine : Tonnage, Stroke length, Vertical/Horizontal, make, First tooth length and holders & retrievers available.
- Any problem with existing broach.
- In case of broach already in use, please give us drawing or sketch of the same.

## Shanks and Rear ends

### CIRCULAR BROACHES



### KEY-WAY BROACHES



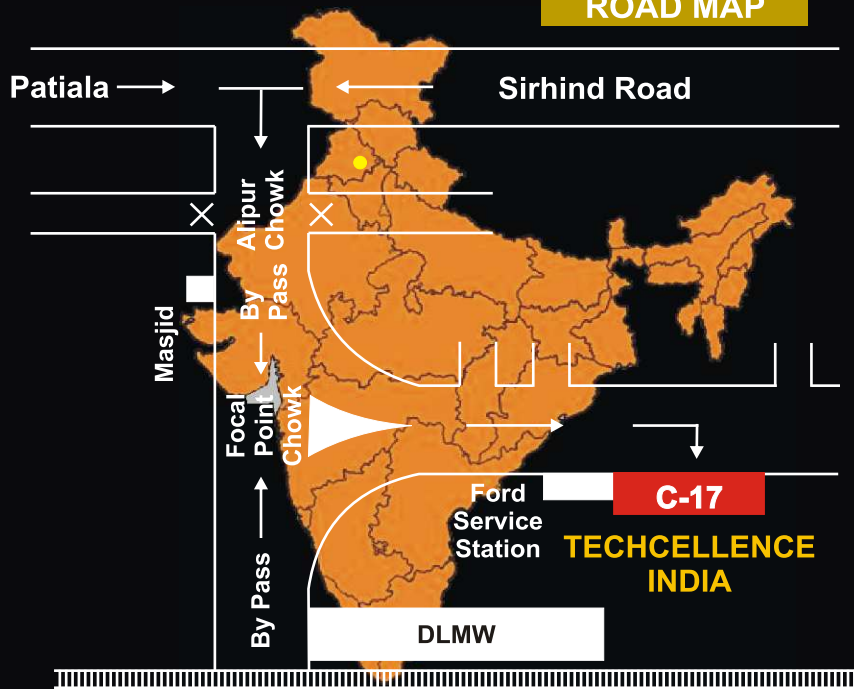
### RECTANGULAR BROACHES



BROACH RE-SHARPENING MACHINE



### ROAD MAP



## Techcellence (INDIA)

Mfg. of All types of Broaches, Spline Plug Gauges, Broaching M/c, Broach Re-Sharpening M/c, Form Milling Cutters, Hobs & Special Tools.

C-17, Focal Point, Patiala-147003 (Punjab) INDIA

Tele : 0175-2232100, Fax : 0175-2232700,

Mobile : +91-98153-61100, +91-92161-80000, +91-92163-62100, +91-98140-46100

web:www.broachindia.com

e-mail : broach@broachindia.com

broachindia@gmail.com

