



High Performance Cutting Tools

CARBIDE TAPS



Forbes & Company Limited

Forbes & Company Limited is one of the oldest companies of world that is still in business. The company traces its origin to the year 1767. It is part of a well-known Shapoorji Pallonji Group; leaders in Infrastructure, Oil and Gas, Engineering & Construction and Real Estate businesses, amongst many others.

Forbes & Company Limited has three main businesses, namely Engineering, Shipping and Transaction Management Solutions.

Engineering Division of Forbes has two business verticals one is precision cutting tools under the brand name of Totem and other is Coding Business Group and Automation business under brand name Bradma



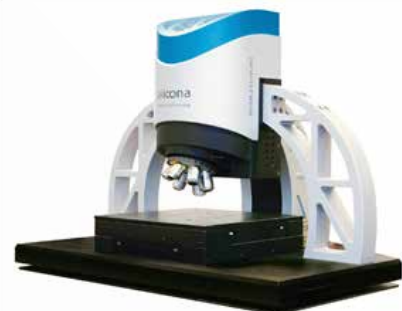
Products and Service Offered

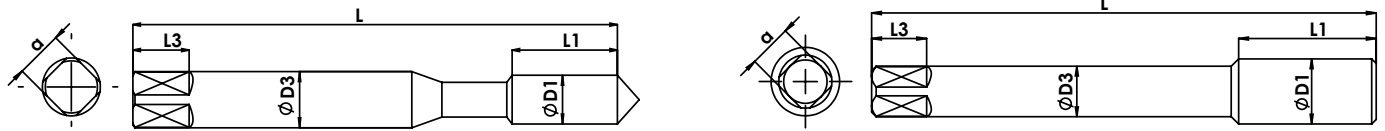
- ✓ Totem product line includes High Performance Threading Taps in HSSE, HSSE-PM material. Solid Carbide End Mills & Drills, Tungsten Carbide Rotary Burrs, Carbon Steel Taps, Dies and Die Nuts, High Speed Steel Drills and Annular Cutters.
- ✓ Bradma product line includes Electric & Pneumatic Pin Marking Machines, Laser Marking Machines and Industry Automation which includes Customized Marking Workstations, Vision & Monitoring System, Conveyor System, Robotic Application, Conventional Marking Machines, etc.

CARBIDE TAPS

TOTEM's new range of Solid Carbide Taps suitable for mass production with high wear resistance and extreme toughness.

- ✓ Special submicron grade carbide with high TRS state of art carbide grades
- ✓ CNC Blank grinder is used to prepare carbide tap blanks to achieve high level of dimensional accuracy as well as surface finish to establish close tolerance control
- ✓ TOTEM Solid carbide taps are manufactured on state of art machines. Special tooling attachments are used to get high accuracy on thread form
- ✓ Tap scanning, critical to quality measurements & surface measurements are being done with 3-D scanning equipment
- ✓ Ideal for mass production with cutting speeds upto 4X higher compared to HSS-E taps
- ✓ Fewer tool changes due to high wear resistance, resulting in optimum machine output and high tool life
- ✓ Internal coolant option with radial or axial coolant outlet for improve swarf management and longer tool life





CARBIDE TAPS STRAIGHT FLUTES DIN STANDARD

- ✓ This cutting edge geometry produces short chips even in long chipping materials
- ✓ High speed & higher productivity results in less CPC
- ✓ Also internal through coolant taps available which enables optimum transportation of swarf
- ✓ Grey Cast Iron & SG Iron

Standard	Size	Pitch	OAL (L) mm	Thread Length (L1) mm	Recess Length mm	Shank Dia (D3) mm	Square (a) mm	Square Length (L3) mm	No. of Flutes	Tapping Drill Dia mm
DIN 371	M 3	0.5	56.0	8.0	18.0	3.5	2.7	6.0	3	2.5
	M 4	0.7	63.0	10.0	21.0	4.5	3.4	6.0	3	3.3
	M 5	0.8	70.0	10.0	25.0	6.0	4.9	8.0	3	4.2
	M 6	1	80.0	12.0	30.0	6.0	4.9	8.0	4	5
	M 8	1.25	90.0	16.0	35.0	8.0	6.2	9.0	4	6.8
	M 10	1.5	100.0	18.0	39.0	10.0	8.0	11.0	4	8.5
DIN 376	M 12	1.75	110.0	18.0	---	9.0	7.0	12.0	4	10.2
	M 14	2	110.0	20.0	---	11.0	9.0	12.0	4	12
	M 16	2	110.0	20.0	---	12.0	9.0	12.0	4	14



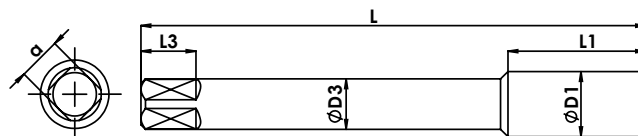
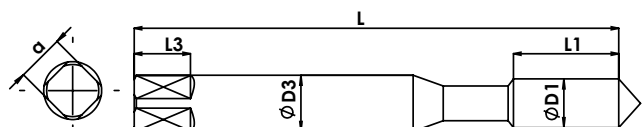
CARBIDE TAPS 15° SPIRAL FLUTES DIN STANDARD

- ✓ Low helix (15°) and new geometry suitable for short and long chipping materials
- ✓ Special flute geometry for excellent chip evacuation
- ✓ Edge polishing done on cutting edges which avoids chipping off
- ✓ Steel - 700 N/mm² to 1100N/mm²

Standard	Size	Pitch	OAL (L) mm	Thread Length (L1) mm	Recess Length mm	Shank Dia (D3) mm	Square (a) mm	Square Length (L3) mm	No. of Flutes	Tapping Drill Dia mm
DIN 371	M 3	0.5	56.0	8.0	18.0	3.5	2.7	6.0	3	2.5
	M 4	0.7	63.0	10.0	21.0	4.5	3.4	6.0	3	3.3
	M 5	0.8	70.0	10.0	25.0	6.0	4.9	8.0	3	4.2
	M 6	1	80.0	12.0	30.0	6.0	4.9	8.0	3	5
	M 8	1.25	90.0	16.0	35.0	8.0	6.2	9.0	3	6.8
	M 10	1.5	100.0	18.0	39.0	10.0	8.0	11.0	3	8.5
DIN 376	M 12	1.75	110.0	18.0	---	9.0	7.0	12.0	4	10.2
	M 14	2	110.0	20.0	---	11.0	9.0	12.0	4	12
	M 16	2	110.0	20.0	---	12.0	9.0	12.0	4	14



CARBIDE TAPS



CARBIDE TAPS FORMING DIN STANDARD

- ✓ New chamfer geometry for uniform load distribution
- ✓ Optimised lobe form reduces friction and increases tool life
- ✓ High parameters and higher productivity for optimum output
- ✓ Aluminium & Aluminium Alloys

Standard	Size	Pitch	OAL (L) mm	Thread Length (L1) mm	Recess Length mm	Shank Dia (D3) mm	Square (a) mm	Square Length (L3) mm	Tapping Drill Dia mm
DIN 371	M 3	0.5	56.0	6.0	18.0	3.5	2.7	6.0	2.8
	M 4	0.7	63.0	7.5	21.0	4.5	3.4	6.0	3.7
	M 5	0.8	70.0	8.5	25.0	6.0	4.9	8.0	4.7
	M 6	1	80.0	11.0	30.0	6.0	4.9	8.0	5.5
	M 8	1.25	90.0	14.0	35.0	8.0	6.2	9.0	7.4
	M 10	1.5	100.0	16.0	39.0	10.0	8.0	11.0	9.3



6HX



CARBIDE TAPS FORMING DIN STD - WITH INTERNAL COOLANT

- ✓ Forming taps available in Axial and Radial internal coolant

Standard	Size	Pitch	OAL (L) mm	Thread Length (L1) mm	Recess Length mm	Shank Dia (D3) mm	Square (a) mm	Square Length (L3) mm	Tapping Drill Dia mm
DIN 371	M 3	0.5	56.0	6.0	18.0	3.5	2.7	6.0	2.8
	M 4	0.7	63.0	7.5	21.0	4.5	3.4	6.0	3.7
	M 5	0.8	70.0	8.5	25.0	6.0	4.9	8.0	4.7
	M 6	1	80.0	11.0	30.0	6.0	4.9	8.0	5.5
	M 8	1.25	90.0	14.0	35.0	8.0	6.2	9.0	7.4
	M 10	1.5	100.0	16.0	39.0	10.0	8.0	11.0	9.3



CASE STUDY FOR FORMING TAP

Industry Segment	Automotive
Tap series	SDK1 (Carbide Roll Tap)
Size	M6 X 1 SDK1 DIN 371
Component	Crank Case (Motorbike)
Work material	ADC12 (upto 12% Silicon)
Type of hole	Blind hole / Through hole
Hole dia	5.50 mm
Drill depth	18.0 mm
Tapping depth	14.0 mm
Machine	Vertical Machining Centre
Tapping direction	Vertical
Speed (Vc)	50 m/min
Coolant	Water Soluble Oil (external flood coolant)
Tool Life	8.1 km
Competitor tool life	4.0 km



FOR BEST RESULTS USE TOTEM SHRINK FIT ADAPTORS



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