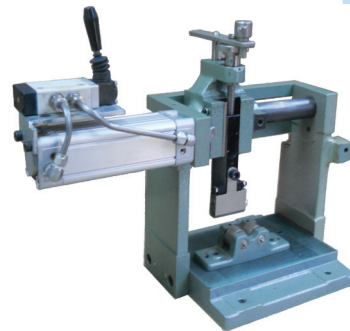
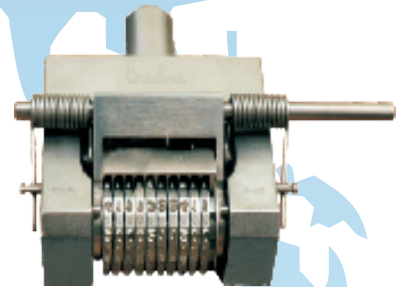


Bradma[®]

Leader in Marking Solutions



**Because High Quality Products
Must Have
High Quality Markings.**



World Class Marking Products from **Bradma**

CONVENTIONAL MARKING SOLUTIONS

www.totem-forbes.com

Overview

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 when John Forbes of Scotland started his business in India. Over the years, the management of the company moved from the Forbes Family to the Campbells to the Tata Group and now finally to the well known Shapoorji Pallonji Group; leaders in infrastructure, construction and real estate businesses, amongst many others. For more details about Shapoorji Pallonji & Co.Ltd. please visit: www.shapoorji.in

Forbes & Company Limited has three main businesses, namely Engineering, Shipping and Transaction Management Solutions. Many of these businesses have joint ventures with world leaders and are present throughout India and in many other countries across the globe.

Forbes & Company Limited has a tradition of excellence and total customer delight as its singular aim. Engineering Division of Forbes, began its journey with the manufacturing of Spring Lock Washers and expanded its capabilities to manufacture a range of precision cutting tools under the brand name of **TOTEM** & *Bradma*.

Bradma of India Ltd. was into manufacturing of marking tools and marking machines and was amalgamated with Forbes Group in 2004 - 05. Thus "Bradma" became part of Forbes Group since then.

Along with "*Bradma*" conventional marking solutions, we offer the following range of products:

Threading Tools

HSS Taps
High Performance Taps
HSS Drills
HSS Dies and Die Nuts
Carbon Steel Taps, Dies
& Die Nuts

Carbide Tools

Square and Ball Nose
End Mills & Drills
Tungsten Carbide
Rotary Burrs

Energy Solutions

Drive steam turbine
API / Non API
Power steam turbines
from 200 to 3000 KW

For more details on the products, Please visit :

www.forbes.co.in www.bradma.com

www.forbesenergysolutions.com

All our products are sold to many of the esteemed clients in India and abroad. Export to more than 32 countries with presence in Middle East, South East Asia, Europe, Latin and Central America.

With strong distribution network of more than 350 dealers in India with 7 Branch offices across the country, we strive to achieve customer satisfaction and maintaining global market presence through development, manufacturing and marketing of excellent products.

BRADMA DIE HARD INTERCHANGEABLE STEEL TYPES (ISTs)

Number Sets



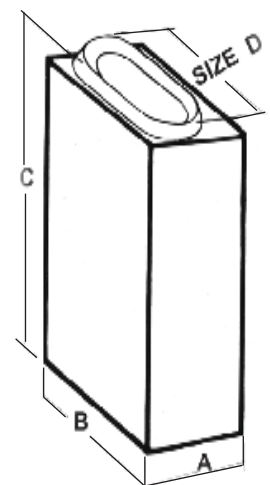
Alpha - Numeric Sets



STANDARD FOUNT SETS:

❖ Alpha-Numeric Set - With OR Without Holder

BRAD-MA TYPE CODE NO.	CHARACTER SIZE D MM	Type Size			BRADMA FOUNT SET CODE NO.		NUMBER OF TYPES IN SET	NUMBER OF SPACERS S SET	BRADMA HAND HOLDER CODE	BRADMA HAND HOLDER CAPACITY
		A MM	B MM	C MM	WITH HAND HOLDER	WITHOUT HAND HOLDER				
T 010	1.00	1.00	8.00	25.00	112BH010	112B010	100	12	8 H 20	20
T 062	1.59 (1/16")	1.59	3.18	15.88	112BH062	112B062	100	12	125H750	12
T 020	2.00	2.00	8.00	25.00	112BH020	112B020	100	12	8 H 25	12
T 093	2.40 (3/32")	2.40	6.35	19.05	112BH093	112B093	100	12	250H1000	10
T 030	3.00	3.00	8.00	25.00	112BH030	112B030	100	12	8H25	8
T 125	3.18 (1/8")	3.18	6.35	19.05	112BH125	112B125	100	12	250H1250	10
T 040	4.00	4.00	8.00	25.00	112BH040	112B040	100	12	8H40	10
T 187	4.76 (3/16")	4.76	7.94	19.05	112BH187	112B187	100	12	312H1250	6
T 050	5.00	5.00	8.00	25.00	112BH050	112B050	100	12	8H40	8
T 060	6.00	6.00	8.00	25.00	112BH060	112B060	100	12	8H40	6
T 250*	6.35 (1/4")	6.35	9.53	19.05	112BH250	112B250	100	12	375H1500	6
T 080*	8.00	8.00	14.00	25.00	66BH080	66B080	60	6	14H60	7
T 375*	9.53(3/8")	9.53	15.88	25.40	66BH375	66B375	60	6	625H2250	6
T 100*	10.00	10.00	14.00	25.00	66BH100	66B100	60	6	14H60	6
T160*	16.00	12.00	20.00	30.00	-	-	-	-	-	-



🔴 Items with codes marked as * are made to order

❖ Number Set Without Holder

BRADMA TYPE CODE NO.	CHARACTER SIZE D MM	TYPE SIZE			BRADMA FOUNT SET CODE NO.	NUMBER OF TYPES IN SET	NUMBER OF SPACERS SET
		A MM	B MM	C MM			
T 062	1.59 (1/16")	1.59	3.18	15.88	56 BN 062	50	6
T 020	2.00	2.00	8.00	25.00	56 BN 020	50	6
T 093	2.40 (3/32)	2.40	6.35	19.05	56 BN 093	50	6
T 030	3.00	3.00	8.00	25.00	56 BN 030	50	6
T 125	3.18 (1/18")	3.18	6.35	19.05	56 BN 125	50	6

Composition of 112 Types Set (for UPTO 6.35 or 1/4")

A	A	A	B	B	C	C	D	D	E	E	E	E	F	F	G	G	H	H	I
I	I	J	J	K	K	L	L	L	M	M	N	N	N	O	O	O	P	P	Q
R	R	R	S	S	S	T	T	U	U	U	V	W	W	X	X	Y	Z	&	/
/	_	_	.	.	.	.	1	1	1	1	2	2	2	2	3	3	3	4	4
4	4	5	5	5	6	6	6	7	7	7	8	8	8	9	9	9	0	0	0
SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP	SP								

Composition of 66 Types Set (for ABOVE 6.35 MM or 1/4")

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
P	Q	R	S	T	U	V	W	X	Y	Z	1	1	1	2
2	2	3	3	3	4	4	4	5	5	5	6	6	6	7
7	7	8	8	8	9	9	9	0	0	0	/	_	.	.
SP	SP	SP	SP	SP	SP									



Composition of 56 Types Number set without Holder

0	0	0	0	0	0	0	0	0	0	0	1
1	1	1	1	2	U	2	2	2	2	2	3
3	3	3	3	4	4	4	4	4	4	4	5
5	5	5	5	6	9	6	6	6	6	7	7
7	7	8	8	8	8	9	9	9	9	9	9
SP	SP	SP	SP	SP	SP	SP					

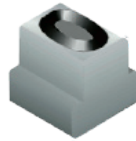
- Suitable for part numbering, batch & date Coding, etc. on Steels, Castings, Forgings, Aluminum, Brass, Plastics, Paper.
- Types made from High Quality Tool Steel
- Letters and Numbers formed by unique Cold forming process for longer tool life
- Dull Nickel plated for rust free longer shelf life.
- Bevel Angles, Character Depth & "Bradma" Calligraphy to maximize type life
- Sets are available with or without Holder.
- All dimensions are to very close tolerances, for the clearest uniform impression in perfect alignment when Types are assembled in Holder

Bradma Special Interchangeable Types

- Segmental, Radial, Grooved and Stepped Types for special applications
- Low Stress Types
- Concave or Convex Types
- Types with Special Calligraphy design
- Types for Hot Stamping applications
- Special Types for Blister Packing, Cartonators, Collapsible Tubes, Crimping, Sachets, Tetra packs etc.



Rectangular
Through Holed



T - Shape



I - Shape



L - Shape



Grooved



L - Shape Segmental



Grooved Crimping



Round



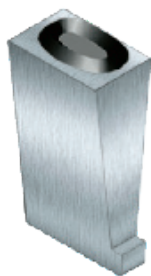
L - Shape



Z - Shape



Rectangular
Grooved



L - Shape
Segmental



Grooved



Double
Grooved



Extra Long
Round



Extra Long
Grooved



Concave



Extra Long

Bradma

BRADMA DIE HARD TYPE HOLDERS

Hand Holder



Machine Holder



HOLDER CAPACITY-NUMBER OF TYPES TYPE SIZE MM

Hand Holder Bradma Code No.	1.00	1.59 (1/6")	2.00	2.40 (3/32")	3.00	3.18 (1/8")	4.00	4.76 (3/16")	5.00	6.00	6.35 (1/4")	8.00	9.53 (3/8")	10.00
8 H 20	20		10		6		5							
8 H 25			12		8		6		5	4				
8 H 40					13		10		8	6				
14 H 60												7		6
125 H 750		12												
250 H 1000				10										
250 H 1250				13		10								
312 H 1250								6						
375 H 1500											6			
625 H 1500													6	
250 H 2L 1000		24*												

MACHINE HOLDER CAPACITY-NUMBER OF TYPES TYPE SIZE MM

Machine Holder Bradma Code No.	1.00	1.59 (1/6")	2.00	2.40 (3/32")	3.00	3.18 (1/8")	4.00	4.76 (3/16")	5.00	6.00	6.35 (1/4")
8 M 20	20		10		6		5				
8 M 40	40		20		13		10		8	6	
8 M 60			30		20		15		12	10	
8 M 80					26		20		16	13	
125 M 1000		16									
125 M 2000		32									
250 M 1000				10		8					
250 M 2000				21		16		10			
250 M 3000				32		24					
312 M 3000											
375 M 2000											8
375 M 3000											12

- SPECIAL 2-LINE, 3-LINE, 4-LINE & HOLDERS with Special Slot Sizes available on request.

Salient features of Bradma Type Holders

- Designed for accurate Type location and Type alignment
- Positive locking of Types
- Enable Quick change of Types & high Interchangeability.
- Long Lasting

Bradma

BRADMA DIE HARD HAND PUNCHES

Loose Hand Punches



HAND PUNCH SETS

CHARACTER SIZE mm	ALPHA SET A TO Z Bradma Code No.	NUMBER SET 0 TO Bradma Code no.
1.6	26HHP 062	9HHP 062
2	26 HHP 020	9 HHP 020
2.4 (3/32")*	26HHP093*	9 HHP093*
3	26HHP030	9 HHP 030
3.18 (1/8")*	26HHP125*	9 HHP125*
4	26HHP040	9 HHP 040
5	26HHP050	9HHP 050
6	26HHP060	9 HHP 060
6.35 (1/4")*	26 HHP250*	9 HHP 250*
8	26 HHP 080	9HHP 080
9.53 (3/8")*	26 HHP375*	9 HHP375*
10	26HHP100	9HHP100
12	26HHP120	9HHP120
12.7 (1/2")*	26HHP500*	9HHP500*
16*	26HHP160*	9HHP160*
20*	26HHP200*	9HHP200*

Alpha Set A - Z



Number Set 0 - 8

- Items marked as (*) are Made to Order
- Alpha Sets of 27HHP are also available on request for all the sizes with Character "&" included in the set

Bradma

BRADMA DIE HARD HAND PUNCHES

- Made from high Quality, heat treated tool steel. Finely balanced with liberal overall shank size.
- Ensures deep, clear and legible stamped impression. Safeguards against mushrooming, chipping and splitting of hammering end.
- Each punch is clearly marked with character designation and size
- Dull Nickel Plated for rust free longer shelf life.

BRADMA SPECIAL HAND PUNCHES

- Low Stress hand Punches.
- Special Calligraphy on request
- Extra Long hand punches
- Convex/Concave faces
- Reverse Alphabets & Numbers for forging and die casting dies and for rubber moulds
- Hand punches with Logos
- Butt-Welded stamps: for marking red-hot (upto 1000°C) Railway Axles, steel billets etc.



Low Stress



Reverse



Concave

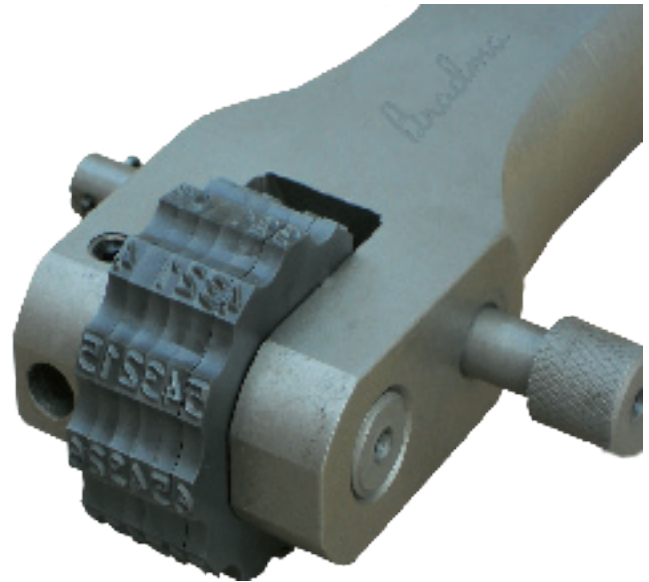


Extra Long

BRADMA DIE HARD ROTARY TYPE NUMERATOR



Standard RTN



High performance RTN

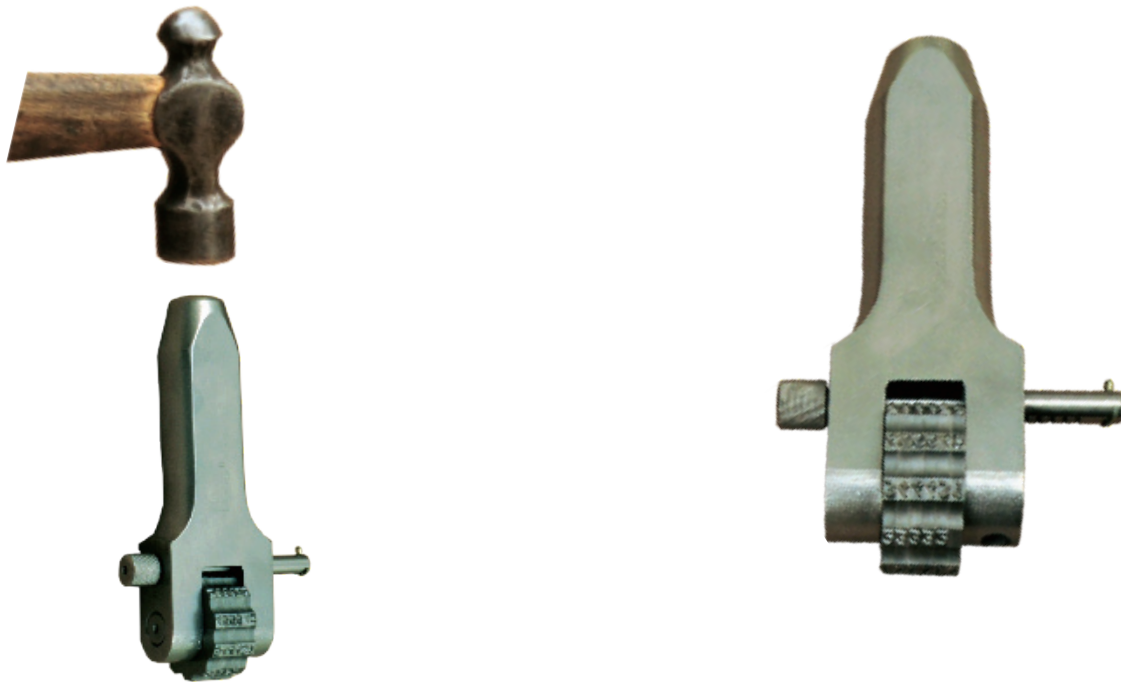
Bradma RTN Code No. with Hand Holder	Bradma RTN Code No. with Machine Holder	CHARACTER SIZE MM	CHARACTER SPACING MM	NO. OF WHEELS 0-9	MARKED LENGTH
6RTN 2	6RTN2M	2	2	6	11.2
6RTN 3	6RTN 3M	3	3	6	16.8
6RTN 4	6RTN 4M	4	4	6	22.4
7RTN 4*	7RTN 4M*	4	4	7	26.4
5RTN 5*	5 RTN 5M*	5	5	5	23.0
6 RTN 5*	6 RTN 5M*	5	5	6	28.0

Bradma High Performance Rotary Type Numerators- For Enhanced Marking life

Bradma RTN Code No. with Hand Holder	Bradma RTN Code No. with Machine Holder	CHARACTER SIZE MM	CHARACTER SPACING MM	NO. OF WHEELS 0-9	MARKED LENGTH
HP 6RTN 2	6RTN2M	2	2	6	11.2
HP 6RTN 3	6RTN 3M	3	3	6	16.8
HP 6RTN 4	6RTN 4M	4	4	6	22.4
HP 7RTN 4*	7RTN 4M*	4	4	7	26.4
HP 5RTN 5*	5 RTN 5M*	5	5	5	23.0
HP 6 RTN 5*	6 RTN 5M*	5	5	6	28.0

Bradma

HAND HELD ROTARY TYPE NUMERATOR IN OPERATION



- Perfect for part numbers or Code numbers marking by hand stamping on Casting, Steel, Brass, Aluminium

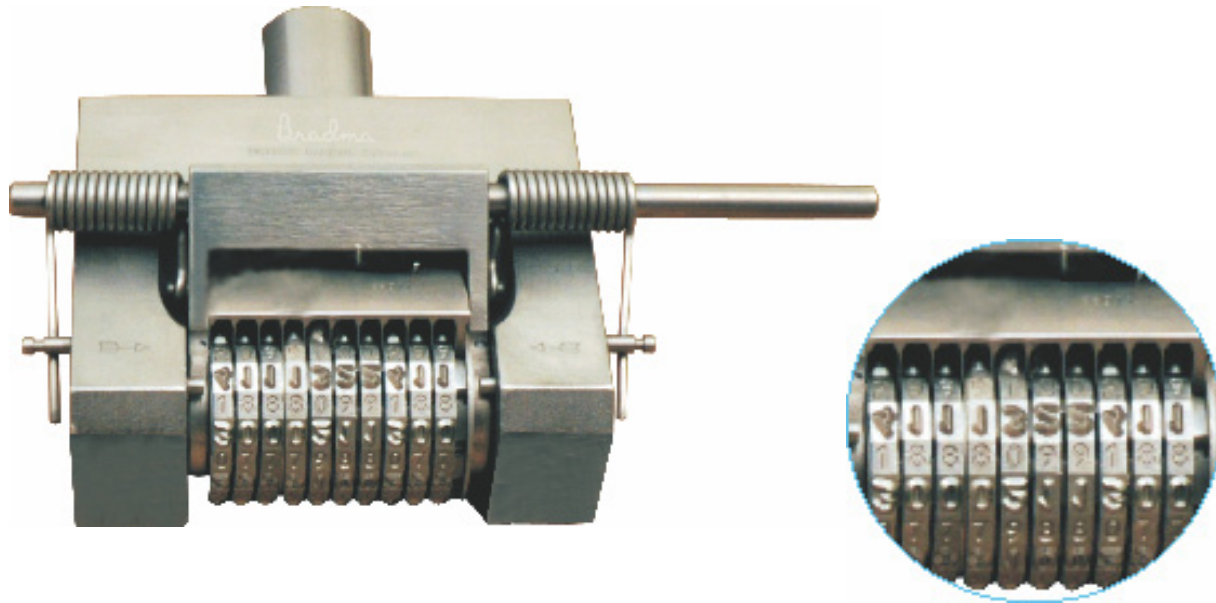
Salient features of Bradma Rotary Type Numerators

- Each 'Marking wheel has 11 faces with 0 to 9 figures on 10 faces, and one face blank.
- Marking Wheel can be rotated to any desired position, then locked positively by a locking pin.
- Individual wheel release : One wheel can be released at a time, without disturbing set - up of other wheels (The locking pin can be pulled to release just that particular wheel.
- No loose parts. The unit is complete, compact and sturdy; ready to use.
- All parts specially heat treated and dull - Nickel plated
- **Range of High Performance Numerator for Enhanced life.**

Special Rotary Type Numerators

- Rotary Type Numerators with wheel combinations of Alpha - Numeric Wheels
- Rotary Type Numerators with provision to mark Logo / fixed Letters along with numbers
- Special Numerators with Concave / Convex wheels to Mark on Curved surfaces
- Special wheels for Hot Stamping
- Numerators with special Calligraphy other than "Bradma" Calligraphy.
- Rotary Type Numerators with more than 6 Wheels.

BRADMA DIE HARD AUTOMATIC ROTARY NUMERATOR



SERIAL NUMBERS can be marked on metal parts - in a simple operation. Special design ensures that numbers advance one - at - a time accurately and automatically.

Impressions are perfectly aligned, evenly spaced, uniformly deep - Component after component !

Salient features of Bradma Rotary Type Numerators

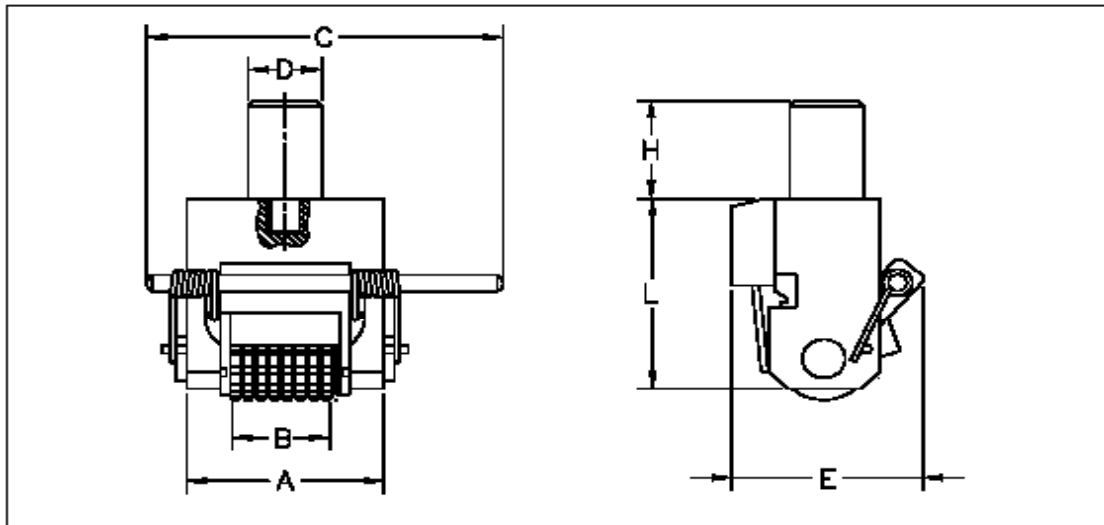
- Wheels made from special Tool Steel.
- Advancing cams machined into solid wheels
- Cam material as durable as stamping characters.
- Extra wide unit wheel for longer life.
- One - piece actuating pawl machined from solid bar.
- Direct - reading characters to check set-up
- No rivetted assembly - easy to dismantle and clean by user.
- Unique design of holding catch and springs.

Special Automatic Rotary Numerators

- Automatic Rotary Numerators with more than 10 wheels
- Numerators with Alpha - Numeric and / or special wheel combination.
- Concave / Convex Numerators for Curved Surfaces
- High Performance Numerators for longer life.
- Composite Numerators with provision to mark Logo or Repeated fixed data along with serial numbers.
- Numerators for marking at Red Hot temperature or Numerator with Heating arrangement.
- Numerators with special Calligraphy.

Bradma

DIMENTIONAL DETAILS



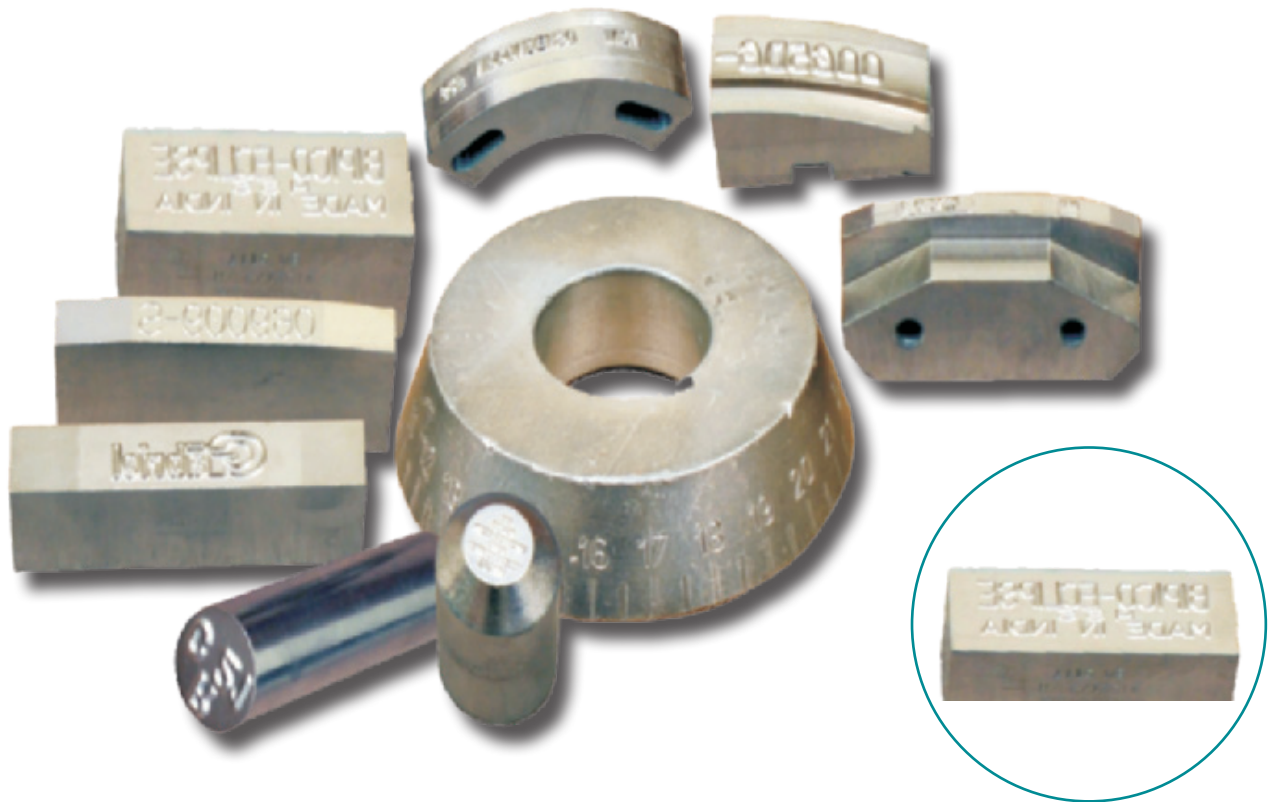
CHARACTER SIZE IN MM	NO. OF WHEELS ALL 0-9	BRADMA CODE	OVERALL DIMENSION						
			A	B	C	D	E	L	H
1.6	6 WHEELS	6AN 062	49.2	13.46	109	25.0	72.3	75.0	35
2.0		6AN 020	51.0	15.70	109	25.0	72.3	75.0	35
3.0		6AN030	60.1	23.40	123	25.0	72.3	75.0	35
4.0		6AN040	88.0	25.30	140	25.0	105.7	90.0	35
6.0		6AN060 *	88.0	31.80	140	25.0	105.7	90.0	35
8.0		6AN080 *	138.0	44.20	270	30.0	134.3	120.0	45
1.6	7 WHEELS	7AN062	60.15	15.96	123	25.0	74.5	75.0	35
2.0		7AN020	60.15	18.60	123	25.0	74.5	75.0	35
3.0		7AN030	94.0	27.72	157	25.0	74.5	79.0	35
4.0		7AN040 *	88.0	29.88	140	25.0	107.5	90.0	35
6.0		7AN060 *	106.5	37.44	140	25.0	107.5	100.0	35
2.0	8 WHEELS	8AN 020	60.15	21.50	123	25.0	74.5	75.0	35
3.0		8AN 030	94.0	32.04	157	25.0	74.5	79.0	35
4.0		8AN040	88.0	34.46	140	25.0	107.5	90.0	35
5.0		8AN050	88.0	39.75	140	25.0	107.5	90.0	35
6.0		8AN060 *	88.0	39.75	140	25.0	107.5	100.0	35
2.0	9 WHEELS	9AN020	60.15	24.40	123	25.0	74.5	75.0	35
3.0		9AN030	94.0	36.36	157	25.0	74.5	79.0	35
4.0		9AN040*	112.0	39.04	155	25.0	107.5	100.0	35
5.0		9AN050 *	112.0	45.00	155	25.0	107.5	100.0	35
6.0		9AN060 *	123.5	48.72	140	25.0	107.5	100.0	35
2.0	10 WHEELS	10AN 020	77.00	27.30	134	25.0	74.5	75.0	35
3.0		10AN 030	94.0	40.68	157	25.0	74.5	79.0	35
4.0		10AN040*	112.0	43.62	155	25.0	107.5	100.0	35
5.0		10AN050*	112.0	50.25	155	25.0	107.5	100.0	35
6.0		10AN060 *	123.5	54.36	140	25.0	107.5	100.0	35

► Items with codes marked as * are made to order

► More than 10 wheels & / or special wheel combination available on request

Bradma

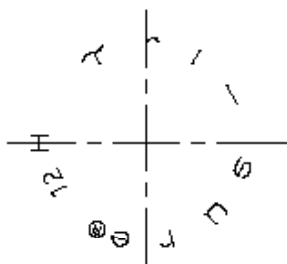
BRADMA DIE HARD HIGH PRECISION STAMP MARKS



- Custom made with total precision, with fidelity to every logo
- Precision designed cutting edge geometry for clear and long lasting marking of Logos
- Reduce Stress concentration on the marked surfaces
- Controlled hardening and tempering process to ensure marking reliability and longer service life
- Dull Nickel Plated to resist rusting of Stamp Marks
- ASSURED SAFETY OF LOGO DESIGNS IN OUR CUSTODY

SAMPLE VARIETIES OF STAMP MARKS

SINGLE LINE

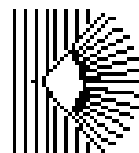


DELPHI-TVS
INDIA LJBB05501A

infinium
Ag 999

USE STAPLES-NQ.10

BIPICO-ECLIPSE
MADE IN INDIA



IS:1239
CM/L-
0061929



Bradma

SAMPLE VARIETIES OF STAMP MARKS

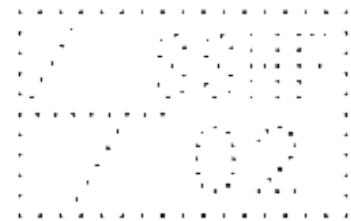
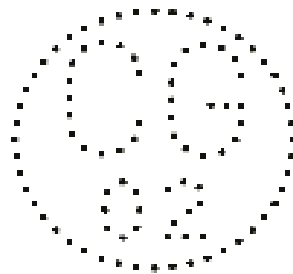
BOLD



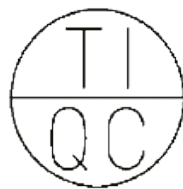
DOUBLE LINE



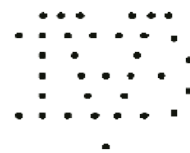
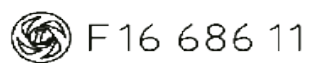
LOW STRESS STAMP MARKS



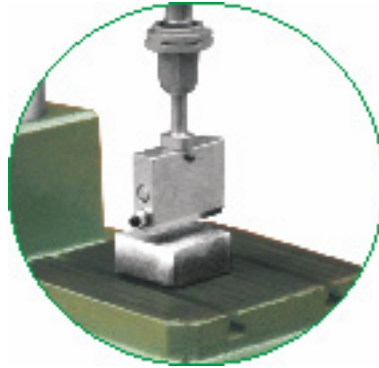
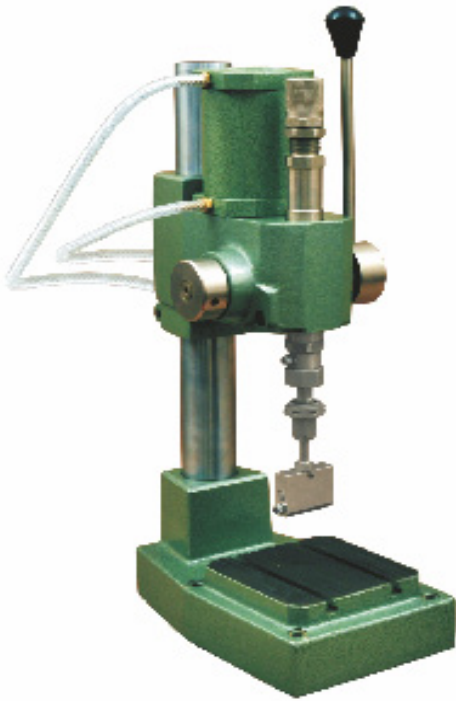
INSPECTION STAMP MARKS



LISTED 529X



BRADMA DIE HARD IMPACT PRESS



Standalone Impact Press

Portable Impact Press

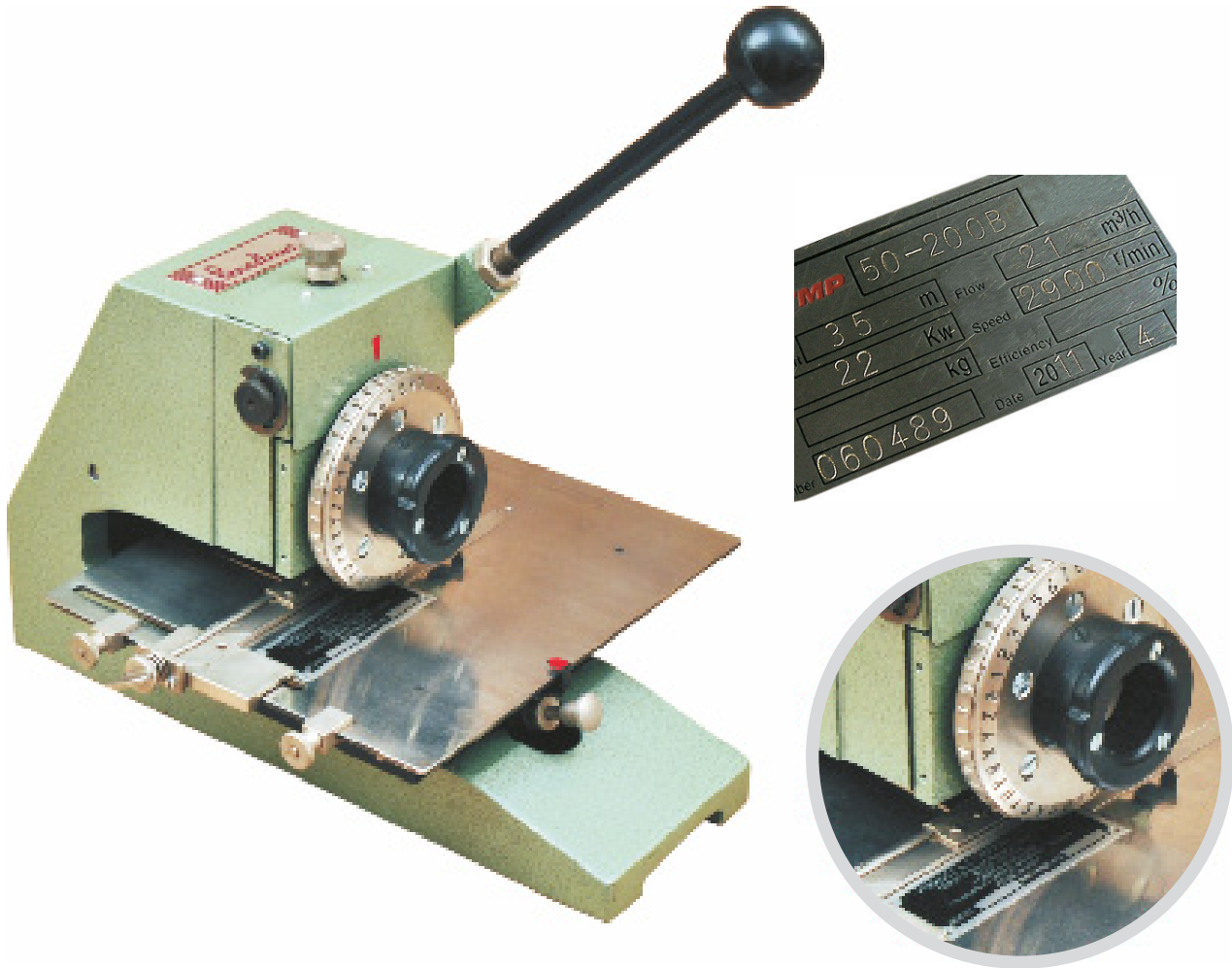
- Easy - to - adjust impact force.
- Automatic compensation for different workpiece thickness (note : Airline Pressure is only compressing the spring - not for determining impact force).
- Highly versatile : Ideal for LIGHT ASSEMBLY WORK and for SHEET METAL WORK (Rivetting, flaring, Piercing, Shearing, Bending plus many more operations).
- Out put speed matches speed of manual loading.
- Lowest rejections - even in precision jobs.
- Far longer tool / die life !
- Adaptable for automation with appropriate fixtures tools and dies.
- Tools with cylindrical shanks are clamped by a collet in tool-holder.
- Arm can be set and clamped at any height on the column.
- Fine-ground working table surface with T-slots for speedy fitting of work - holding fixtures.
- All sliding parts are made of selected steel hardened and ground.

SPECIFICATIONS :

	IP28PN	IP28H
CAPACITY	2.5 T	2.8 T
DAYLIGHT	273 mm	273 mm
THROAT	140 mm	140 mm
TABLE SIZE	160 X 160 mm	160 X 160 mm
COLUMN	60 mm dia	60 mm dia
COLLET	10 mm	10 mm
AIR LINE PRESSURE	5 kg / sq cm	----
NETT WEIGHT	60 kg	55 kg

Bradma

BRADMA DIE HARD METAL LABEL MARKER



BRADMA CODE	CHARACTER SIZE
LM 40/1.6	1.6 MM
LM 40/2	2 MM
LM40/3	3 MM
LM40/4	4 MM

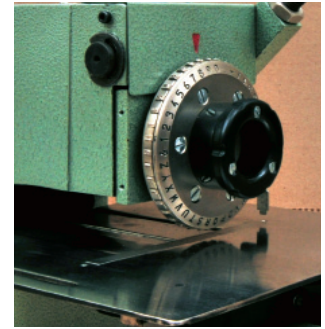
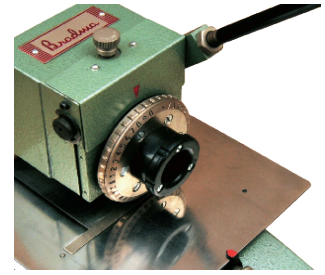
SPECIAL FACILITIES

Leaf gauge for multi-line labels. This special leaf-gauge can be custom-built to your individual need. It enables speedy alignment of each lines before marking!.... After marking a line, a leaf is flipped for immediate setting to mark in the next line!

Stops for 2-lines labels Specially for 2-line marking, there are two stops (supplied with machine) to enables faster, accurate automatic alignment of each line before marking.

FEATURES :

- **MARKS WIDE RANGE OF LABELS/TAG** Perfectly marks Aluminium, Brass, Steel....almost every metal (especially effective in marking into windows of pre-printed labels!)
- **SHARP CLARITY SAYS 'HIGH QUALITY'** All marked data is sharply clear and easy-to-read; accurately aligned, evenly spaced and uniformly deep.
- **PRECISION ENGINEERED** Has a rugged cast iron frame, specially hardened ground steel components and a unique dial wheel construction with interchangeable type inserts. Every feature is designed and engineered for long, trouble - free service.
- **VERSATILITY** ideal when a wide range of label sizes need marking, when marking data varies, and when short production runs are required.
- **LOW COST TOO** Remember, this Bradma Diehard Metal Label Marker is a **HIGH PRECISION TOOL** Which means virtually no label spoilage, virtually no rejections. Result : Marking cost is considerably lower that that by tedious unreliable hand - stamping methods.



ENGINEERED FOR LONG LIFE AND LASTING PRECISION !

so easy to operate ! Takes just a few minutes on the machine to know to operate it!

BASIC 5-STEP OPERATION

1. Simply set for marking depth.
2. Locate label on marking table.
3. Rotate dial wheel to select the character to be marked.
4. Depress operating handle to mark label.
5. Release operating handle - and the table **automatically** advances the label to the next marking position.

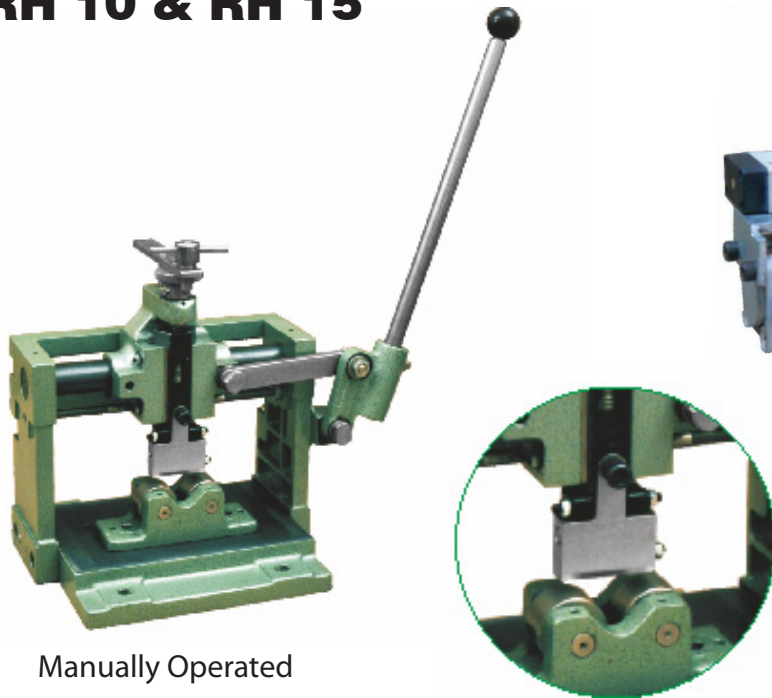
SPECIFICATIONS

SPECIFICATIONS	
LABEL CAPACITY	upto 100 mm deep and 200 mm wide
LABEL THICKNESS	0.3 mm to 2.5 mm 10 mm minimum and 95 mm maximum from top edge of label
MARKING LIMITS	10 mm minimum and 95 mm maximum from top edge of label
TABLE SIZE	240 X 90 mm
TABLE TRAVEL	125 mm from right to left
CHARACTERS ON DIAL WHEEL	A thru' Z
DIAL WHEEL	0 thru' 9 . - / &
NETT WEIGHT	15 kg.

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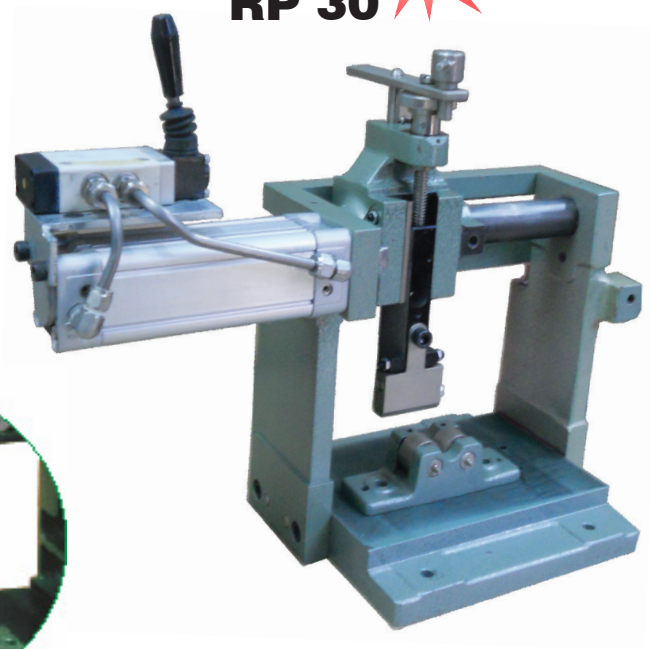
BRADMA DIEHARD ROLL MARKING MACHINE

RH 10 & RH 15



Manually Operated

RP 30



Pneumatically Operated

Features :

- Ideal for marking cylindrical (Solid or hollow) components of Steel, Aluminium, Brass, etc. using Bradma interchangeable Steel Types and marking Dies.
- Perfect for marking such specific components as drills, taps, engine valves, spark plugs, cutting tools, diamond tools, bushes, nozzles, sanitary fittings, hose end fittings, gas lighters and studs.
- Outstanding benefits : Low set -up time. Easy operation. High output rates. Robust construction low costs (uses standard tooling).
- The Steel Types or stamp marks are mounted in holder fixed to the machine carriage.
- A simple hand lever operates the carriage producing a uniform, legible marking.
- Marking depth is precisely set by adjusting the vertical dove-tail slide, which can then be locked any position for for repetitive work.

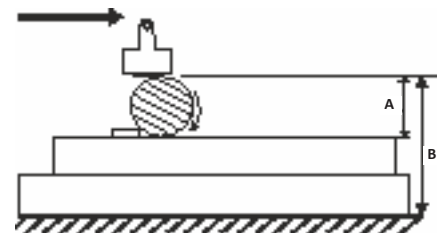
Note : The length of inscription, size of characters number of lines and depth of impression are interrelated and also depend on the hardness of the material being marked.

ACCESSORIES

Anvil, Roller Cradle, Stud Arbour, Type Holder.

ANVIL

Components to be marked can be placed either on the Anvil or directly on the Bed.



PRINCIPLE OF OPERATION

Bradma

TYPE	CHARACTER SIZE MM	MARKING DIE TO ANVIL 'A'		MARKING DIE TO BED 'B'		MARKING DIE TO ANVIL 'A'		MARKING DIE TO 'B'	
		MAX. MM	MIN. MM	MAX. MM	MIN. MM	MAX. MM	MIN. MM	MAX. MM	MIN. MM
T010	1.00	34	0	69	29	84	50	119	79
T062	1.59 (1/16")	43	0	78	38	93	50	128	88
T020	2.00	34	0	69	29	84	50	119	79
T093	2.40 (3/32")	40	0	75	35	90	50	125	85
T030	3.00	34	0	69	29	84	50	119	79
T125	3.18 (1/18")	40	0	75	35	90	50	125	85
T040	4.00	34	0	69	29	84	50	119	79

SPECIFICATIONS



MODEL RH 10

MODEL RH 15

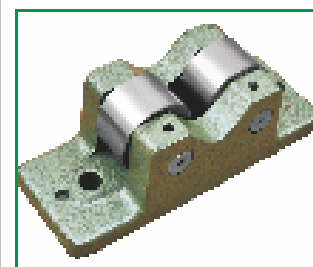
MARKING CAPACITY (IN MILD STEEL)	1 Line of 3 mm Characters 2 Lines of 1/16" Characters	1 Line of 3mm Characters 2 Lines of 1/16" Characters
DIE SLIDE STROKE	125 mm	125 mm
VERTICAL MOVEMENT	40 mm	40 mm
CAPACITY- BASE TO DIE FACE	69 mm	119 mm
HEIGHT	350 mm	400 mm
WIDTH	270 mm	270 mm
LENGTH	320 mm	320 mm
NETT WEIGHT	30 Kg	33 Kg

ROLLER CRADLES

- These support and position Solid, round components or thick-walled tubing for peripheral marking
- During the marking operation, the type holder or marking die rolls over the periphery of the component, causing it to rotate in the cradle.
- Lubricated rollers assure free movement of components while marking.

SPECIFICATIONS FOR ROLLER CRADLES

ROLLER CRADLE CODE NO.	MODEL RH 10		MODEL RH 15	
	USED FOR MARKING DIA. RANGING BETWEEN		USED FOR MARKING DIA. RANGING BETWEEN	
	Min.	Max.	Min.	Max.
RC 1	6 mm	20 mm	-	-
RC 2	12 mm	35 mm	-	-
RC 3			25 mm	55 mm





STUD ARBOUR

- This provides internal support to hollow, round components allowing them to rotate freely during marking.
- Generally, thin-walled components require close-fitting studs to avoid distortion due to marking : while thick-walled components do not necessarily require close-fitting studs.
- Hollow, round components with stepped outer diameters can also be marked with the Stud Arbour.

TYPE HOLDERS

- These guarantee accurate type position, positive locking and durability.

HOLDER CAPACITY - NUMBER OF TYPES



HOLDER CODE NO.	TYPE SIZE (mm)						
	1.00	1.59 (1/16")	2.00	2.40 (3/32")	3.00	3.18 (1/18")	4.00
8 R 10 20	20		10		6		5
8 R 10 40	40		20		13		10
R R 10 60			30		20		15
125 R 10 1000		16					
125 R 10 2000		32					
250 R 10 1000				10		8	
250 R 10 2000				21		16	
250 R 102 L1000		*24					
250 R 102 L 2000		*56					

SPECIAL ODD SHAPED COMPONENTS ALSO CAN BE MARKED WITH RP - 50 OR RH - 200



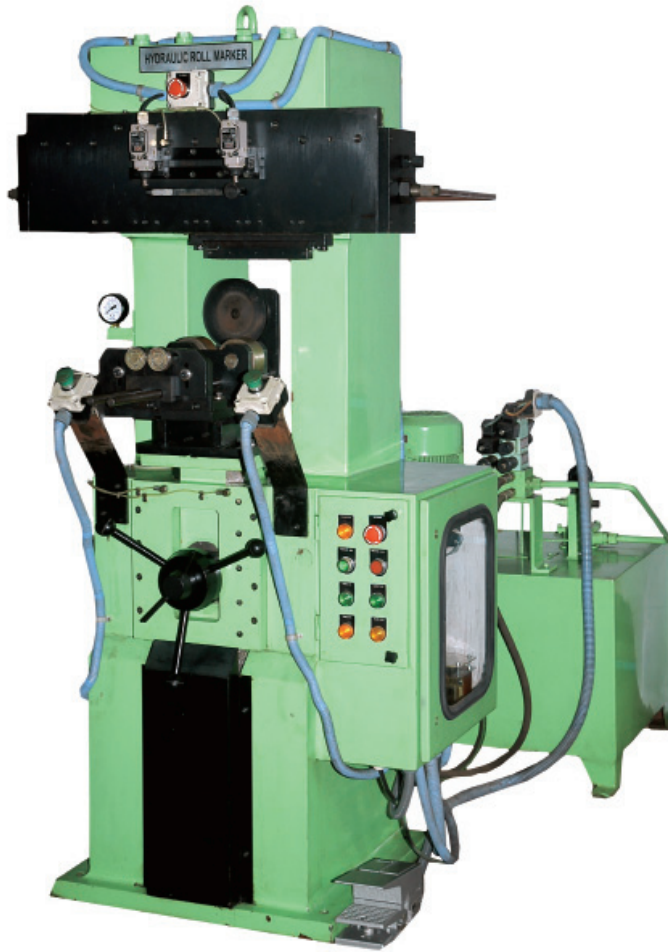
BRADMA DIEHARD PNEUMATIC ROLL MARKING MACHINE (Model RP - 50)



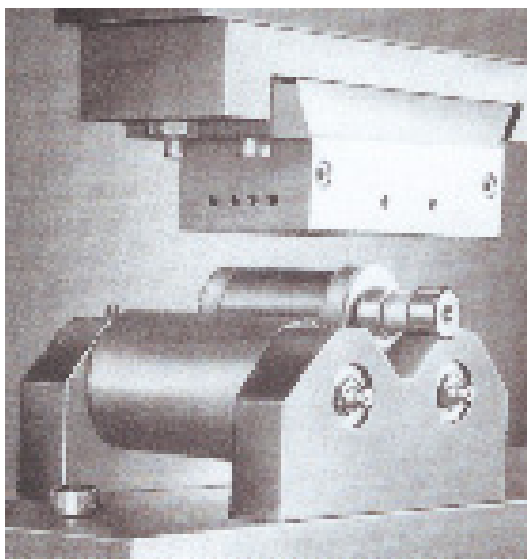
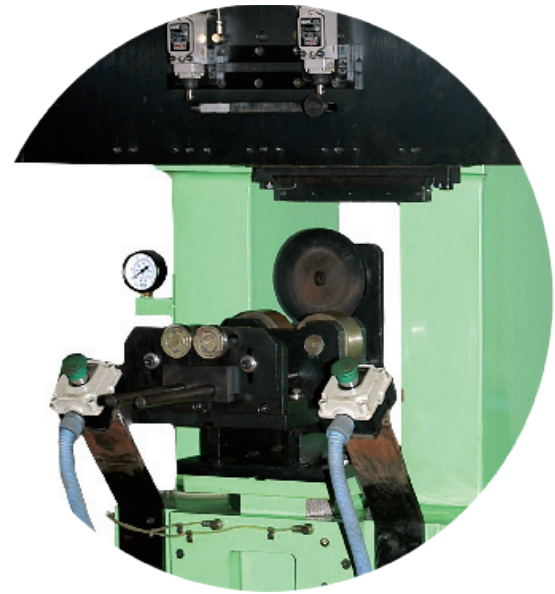
BRADMA DIEHARD HYDRAULIC ROLL MARKING MACHINE (Model RH - 200)

Bradma

BRADMA DIE HARD HYDRALIC ROLL MARKING MACHINE



MODEL RH 200



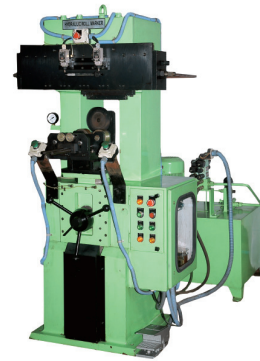
HYDRALIC ROLL MARKING MACHINE

Features :

- Easy to operate
- Automatic compensation for variation in workpiece diameters.
- Rigidly fabricated, reinforced steel frame.
- Stress relieved.
- Can mark round workpiece upto 200 mm diameter.
- Can mark flat workpiece upto 170 mm thickness.
- Open back permits marking of long bars.
- Serial numbers can be marked with automatic indexing.
- Can make upto 4 lines of 6 mm characters, or 8 lines of 3mm characters.
- Ample daylight permits extensive use of fixturing and tooling for alomost all shapes and sizes of components.

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- Electrically - controlled hydraulic operations : hydraulic cylinders operate table and marking die slide.
- Table pressure controls depth of mark : ensuring uniform depth.
- One master foot-pedal control for operating table and die slide cylinders in proper sequence.
- Specially designed cylinder fitted with hardened bearing.
- Die slide moves on hardened plate with rollers for precision and long life.



COMPONENTS THAT CAN BE MARKED

Shock Absorbers, Flanges, Elbows, Bends, Mortar Barrels, Gears, Fuses, Pistons, Couplings, Railroad Bearings, Shells, Axles, Propeller Shafts, Rock Drills, Magneto, Lock Body.

ALSO AVAILABLE AGAINST SPECIFIC ORDERS : SPECIAL PURPOSE MACHINES WHEREIN

- Daylight can be increased to 425 mm.
- Stroke can be increased 250 mm.
- Marking capacity can be increased to 8 lines of 6 mm characters.

FOR ASSURED RESULTS WE RECOMMEND :

BRADMA DIEHARD TOOLINGS

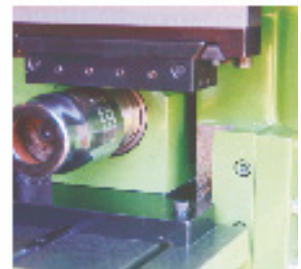
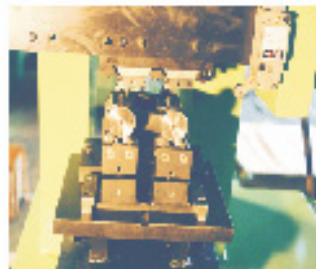
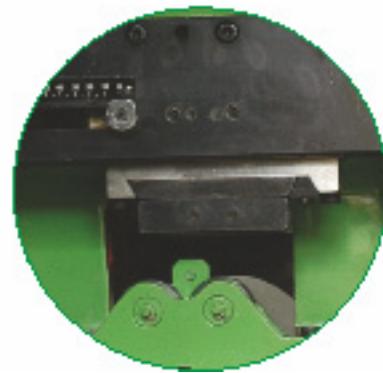
(Interchangeable Steel Types, Stamp Marks and Holders)

SPECIFICATIONS :

Marking Capacity	:	4 Lines of 6 mm Characters
(in Mild Steel)	:	6 Lines of 6 mm Characters
	:	8 Lines of 3 mm Characters
Die Slide Stroke	:	10 mm
Daylight	:	285 mm
Throat	:	90 mm
Open Back	:	Permits Marking of Long Bars
Open Distance	:	180 mm Between Up-Rights
Output	:	Upto 600 Nos. per hour depending on Length of stroke and shape of component
Table Size	:	250 X 200 mm.
Table Rise	:	10 mm Hydraulically, 110 mm by handwheel.
Table Pressure	:	1T to 4T
Floor Area	:	2000 X 2000 mm
Height	:	1500 mm
Nett Weight	:	850 kg
Motor	:	3HP, 1500rpm, 440 V, 3-Phase, 50 Cycles
Pump	:	10 Litres / Min
Hydraulic Tank	:	75 Litres.

BRADMA DIE HARD PNEUMATIC ROLL MARKING

Model RP 50



Features :

- Rugged bench model
- Automatic compensation for variations in workpiece diameters
- High production rates. Easy to operate
- Flat marking, round marking or curved marking
- Quick set-up time
- Serial numbers can be marked with automatic indexing
- Can mark up to 3 lines of 3mm characters
- Can mark round workpiece up to 140 mm dia.

- All - pneumatic operations : air cylinders operate table and marking die slide - free from electrical connections.
- Table pressure controls depth of mark : ensuring uniform depth.
- One master foot-pedal control : operating table and die slide cylinders in proper sequence
- Pneumatic filter, regulator and lubricator : provide for direct connection to plant pneumatic supply
- Specially designed cylinder and linkage mechanism, fitted with hardened bearings. Die slide moves on hardened plate with rollers for precision and long life.

Components that can be marked : Gears, Engine Valves, Drills, Taps, Bomb Fuses, Bomb Shells, Sockets, Fuel injection Nozzles, Hose End Fittings, Pneumatic Tools, Axles, Propeller Shafts, Pinions, Cylinder Neck Rings, Squares Shank Tools, Bushes, Machines Tool Accessories such as Chucks, Collets, etc.

- Thin walled tubular components can be marked using a mandrel fixture with custom - built mandrel to prevent distortion
- Flat components can be marked using a segmental type holder.
- Solid or thick walled cylindrical components can be marked either by using a roller cradle or special fixture.

SPECIFICATIONS :

MARKING CAPACITY	: 3 Lines of 3mm characters (IN MILD STEEL)
DIE SLIDE STROKE	: 75 mm
DAYLIGHT	: 200 mm
THROAT	: 90 mm
OPEN BACK	: 75 mm between uprights
OUTPUT	: Upto 600 per hour depending on length of stroke and shape of component
AIR CONSUMPTION	: 3 Litres / stroke
TABLE SIZE	: 250 X 200 mm
TABLE SIZE	: 7 mm pneumatically, 160 mm by handwheel
TABLE PRESSURE	: 1.5T at 5Kg/sq cm line pressure
FLOOR AREA	: 700 X 400 mm
HEIGHT	: 720 mm
NETT WEIGHT	: 240 Kg

Also available against specific orders-increased stroke Length of 125 mm can be supplied.

FOR ASSURED RESULTS WE RECOMMEND :

BRADMA DIEHARD TOOLINGS (Interchangeable Steel Types, Stamp Marks and Holders).

ALSO AVAILABLE : BRADMA DIEHARD
 PNEUMATIC ROLL MARKING MACHINE (Model RP 100)
 &
 HYDRAULIC ROLL MARKING MACHINE (Model RH 200)

HYDRO PNEUMATIC PRESSES



2 - Pillar



4 - Pillar



C - Frame



Compact
C - Frame

Tonnage	Model No	Total Travel MM	Power Stroke MM
2 Tonnes	2T 2P 100 T 6PG	100	6
	2T 2P 150 T 6PG	150	6
	2T 4P 100 T 6PG	100	6
	2T 4P 150 T 6PG	150	6
	2T CF 100 T 6PG	100	6
	2T CF 150 T 6PG	150	6
	2T CCF 100 T 6PG	100	6
	2T CCF 150 T 6PG	150	6
4 Tonnes	4T 2P 100 T 6PG	100	6
	4T 2P 150 T 6PG	150	6
	4T 4P 100 T 6PG	100	6
	4T 4P 150 T 6PG	150	6
	4T CF 100 T 6PG	100	6
	4T CF 150 T 6PG	150	6
	4T CCF 100 T 6PG	100	6
	4T CCF 150 T 6PG	150	6
8 Tonnes	8T 2P 100 T 6PG	100	6
	8T 2P 150 T 6PG	150	6
	8T 4P 100 T 6PG	100	6
	8T 4P 150 T 6PG	150	6
	8T CF 100 T 6PG	100	6
	8T CF 150 T 6PG	150	6
	8T CCF 100 T 6PG	100	6
	8T CCF 150 T 6PG	150	6
15 Tonnes	15T 2P 100 T 6PG	100	6
	15T 2P 150 T 6PG	150	6
	15T 4P 100 T 6PG	100	6
	15T 4P 150 T 6PG	150	6
	15T CF 100 T 6PG	100	6
	15T CF 150 T 6PG	150	6
	15T CCF 100 T 6PG	100	6
	15T CCF 150 T 6PG	150	6

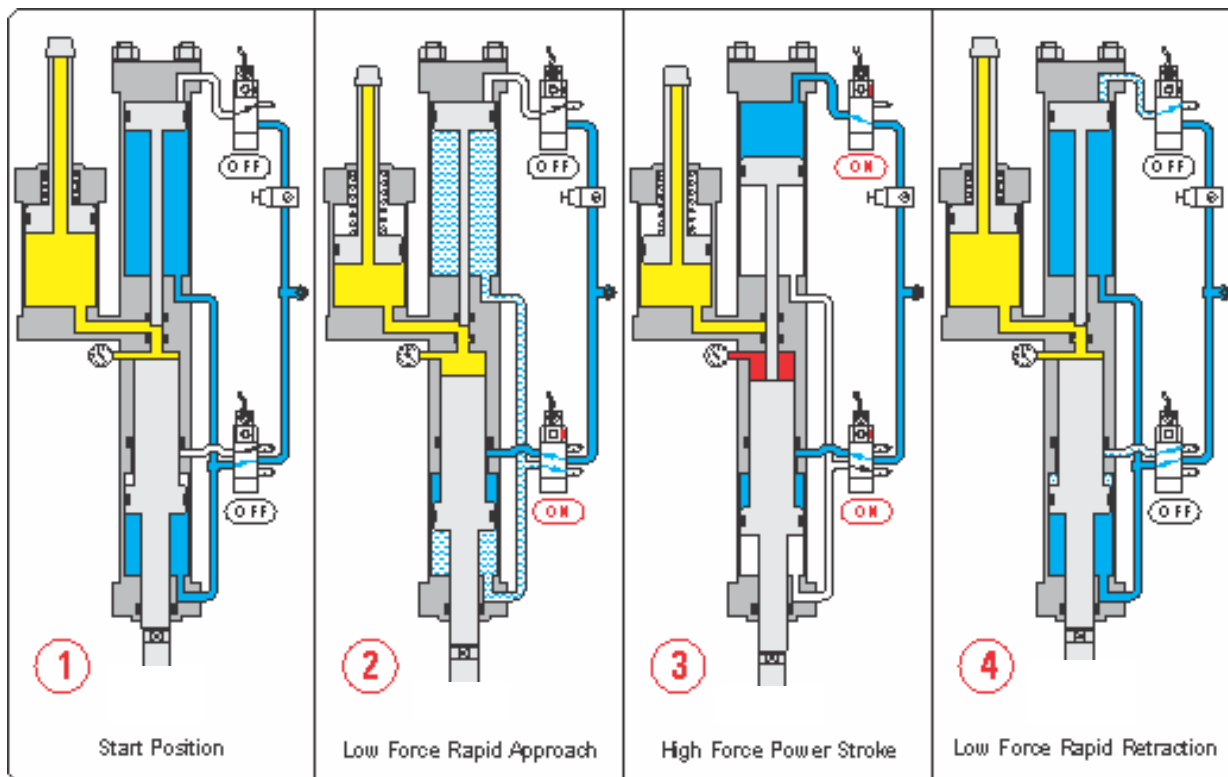
HYDRO PNEUMATIC PRESSES

Bradma Hydro Pneumatic Presses are recommended for high production rates in marking applications. The ram travels are pneumatically actuated but the marking loads are delivered hydraulically at controlled speed.

Hydro Pneumatic Presses are efficient & reliable, low cost & compact alternative to hydraulic power presses and mechanical presses.

Salient Features :

- **Fast Action** : 2T @ 100 cycles / min (CPM). 4T @ 60 CPM, 8T @ 40 CPM, 15T & 30T @ 20 CPM.
- **Compact, Light Weight & Vibration free** : Can be mounted on existing work benches without any foundation
- **Versatile** : Force & speed can be varied infinitely. Machine can be mounted in any orientation.
- **Energy efficient** : 50% to 70% saving over equivalent hydraulic and pneumatic systems.
- **Low cost** : Upto 60% cheaper than hydraulic presses.
- **Safety** : True, non tie down, interlocked Two Hand Safety operation.



Sequence of Operation

There are three stages of operation

- (a) Initial low force, large travel, fast approach (Fig 2)
- (b) High force, short travel (6mm), Power Stroke (Fig 3)
- (c) Low force, rapid retraction (Fig 4)

The low force approach and retraction at 5 bar air pressure results in upto 70% saving in energy.



Bradma®

Leader in Marking Solutions



FORBES & COMPANY LIMITED



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