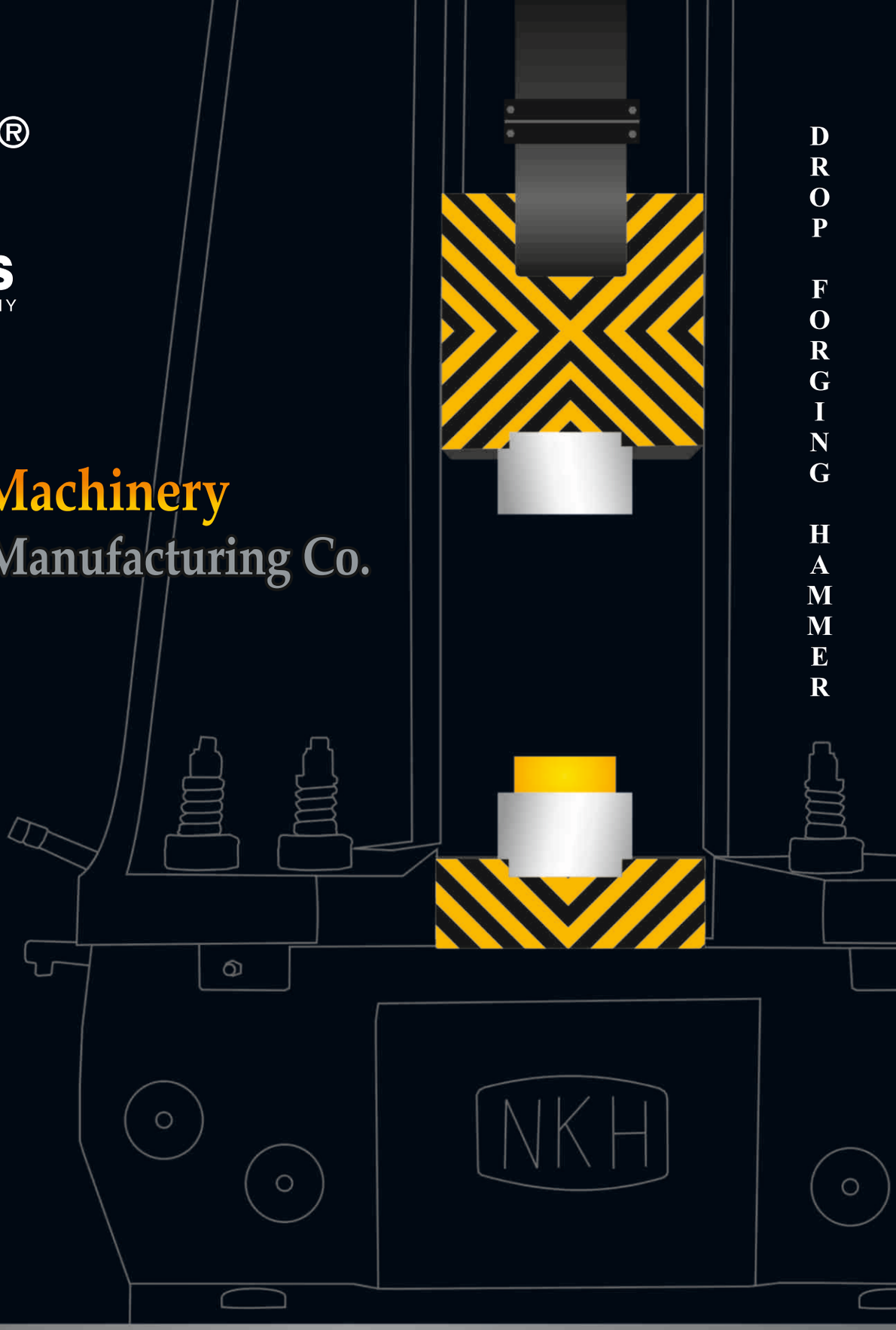
NKH®

HAMMERS

AN ISO 9001 COMPANY

Forging Machinery Manufacturing Co.

DROP FORGING HAMMER

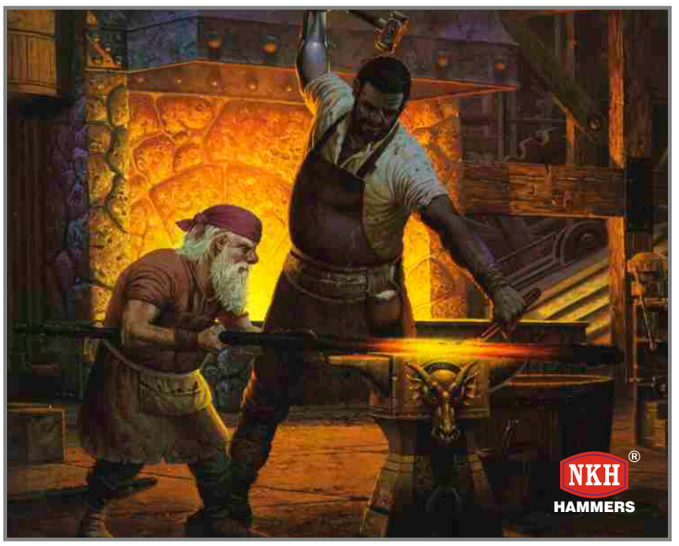


METAL

FORMING PEOPLE

SINCE 1960

Company Profile



Niranjan Singh Kartar Singh Hammers (N.K.H.), established in 1960 by S. Kartar Singh (1926-1993), with the vision of introducing the forging hammers in India, is known as God Father of Forging Industry. The Company is now headed by his son S. Kulwant Singh and Grandsons Mr. Jasmer Singh and Mr. Zailinder Singh.

NKH Hammers is the first Indian Company to Introduce Forging Machines in India and the feather more than 90% of successful installations in the forging Industry running across India as well as Abroad. Even in 21st Century, all other colorful accomplishments that of modern world of the media presents us with every day, machine engineering and plant construction which is dependent on forged components by Forging Machines is and will remain one of the most important pillars of our present-day prosperity. Without high-strength, forged metal components, the economic and technical development that we have experienced over the last seventy years would not have been possible. Electricity and mobility in the form of motorized vehicles of all kinds are just two of the multifarious fields of application for modern Forged Components.

Mile Stones :

- Year 1947 - Icorporated, Originally Engaged in Manufacturing and Trading of Cycle Parts.
- Year 1960 - Manufacturing of Belt Drop Hammers Started under M/s Forging Machinery Manufacturing Co. and First one in INDIA to Manufacture Belt Drop Hammers.
- Year 1972 - First Rolling Mill commenced.
- Year 1982 - Installation of Arc Melting Furnaces for Steel Plant.
- Year 1986 - Installation of Second Rolling Mill.
- Year 1991 - Installation of Steel induction furnace (Kohara), for special steel casting, Grey Iron casting, casting for railways, B.H.E.L, Defence etc.
- Year 1992 - Started Manufacturing Billet shearing Machines under the umbrella of M/s Forging Machinery Manufacturing Co.
- Year 1998 - Started Manufacturing Power Presses & Friction Screw Presses.
- Year 2000 - Founded Jaissons Engineering Pvt. Ltd. which is a Heavy Castings Division (Grey Iron Capacity up to 80,000 Kg Single Piece).
- Year 2003 - NKH Cast & Forge. (Forging Capacity 200 gm. to 150 Kg.)

Quality Certifications :

- ISO 9001:2008 by TUV Sud Certification in Order to enhance our system and process, create value, relevance to our Products, Services, People and our assets.

CNC Machining

Nicolas Correa CNC Machine

Haas VMC Machines

Haas Turning CNC Machine

Manufacting / Casting

Gears

Raw Casting of Columns

Raw Casting of Anvil Block

Testing Facility

Ultrasonic Flow Detector

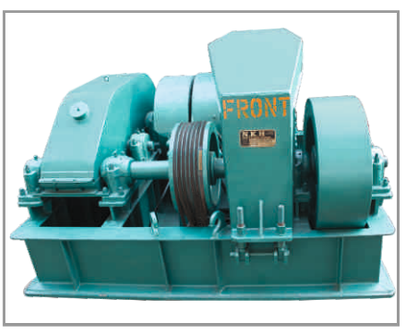
Wet Analysis Laboratory

Measuring Instruments

Assembly Shop

Hammer’s Ready for Inspection

Fitment of Parts of Hammers



Complete Head Assembly

Drop Forging Hammer

NKH®

HAMMERS

Capacity 500 Kgs. to 5000 Kgs.

Hammer Specifications

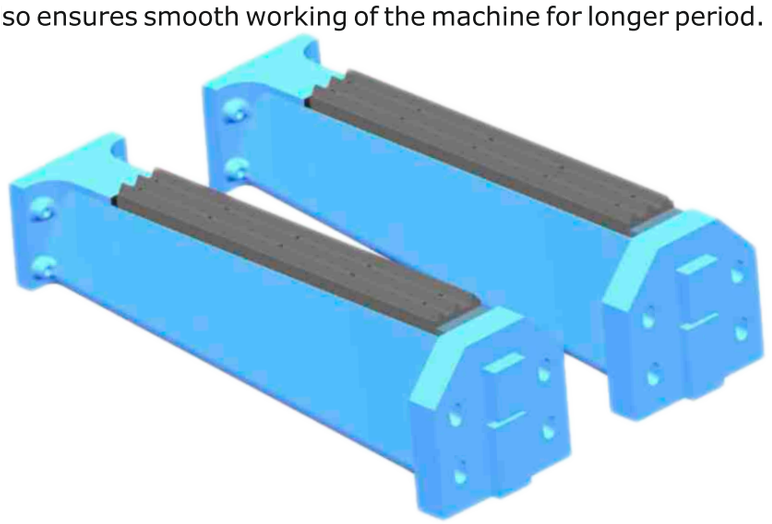
NKH Self Contained Friction Drop Hammer is being manufactured in different capacities. NKH Friction Hammers have been designed and developed with Indian know-how and material. Prospective customers are welcome to conduct trials and inspect our range of NKH Hammers at our works in Ludhiana.

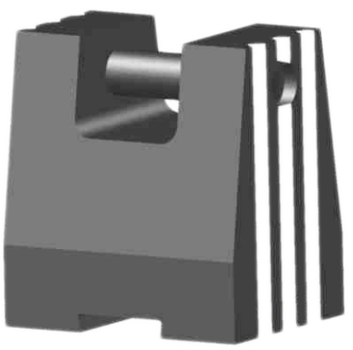
Size of Hammers (Wt. of Tup including)	Kgs. Lbs.	500 1120	750 1653	1000 2204	1500 3306	2000 4408	2500 5510	3000 6212	4000 8816	5000 11020
1. Space between Slides	mm. in.	431 17	482 19	558 22	635 25	712 28	751 29½	751 29½	787 31	863 34
2. Maximum Stroke	mm. Ft. in.	1550 5'	1631 5'3"	1601 5'2"	1546 5'0"	1476 4'8"	1980 6'5"	1905 6'2"	2036 6'6"	2086 6'8"
3. Tup (Front to Back)	mm. in.	368 14½	410 16	450 17	597 23½	610 24	660 26	660 26	914 36	950 37
4. Total Height of Machine	mm. Ft. in.	5260 17-3	5740 18-10	6000 19-8	6450 21-2	6790 23-3	6865 22-6	7390 24-3	8839 29	9754 32ft.
5. Max. Wt. of the top die	Kgs. Lbs.	150 330	225 500	300 660	450 992	600 1322	750 1653	900 1984	1200 2645	1500 3306
6. Max. No. of Blow per minute	Short Stroke Full Stroke	175 125	145 104	127 90	98 70	98 70	60 43	60 43	53 38	42 30
7. Approximate Gross Weight	M. Tons	20-22	27	32	50	62	72	82	102	122
8. Electric Motor	H.P.	30	40	50	75	100	125	150	200	250
9. Motor Rating	50 Cycles	440 Volts		3 phase		1440	r.p.m		S Q D P	

- Specifications are subject to change without Prior Notice.
- All Data is proposal and can be adjusted according to Customer's Requirements.

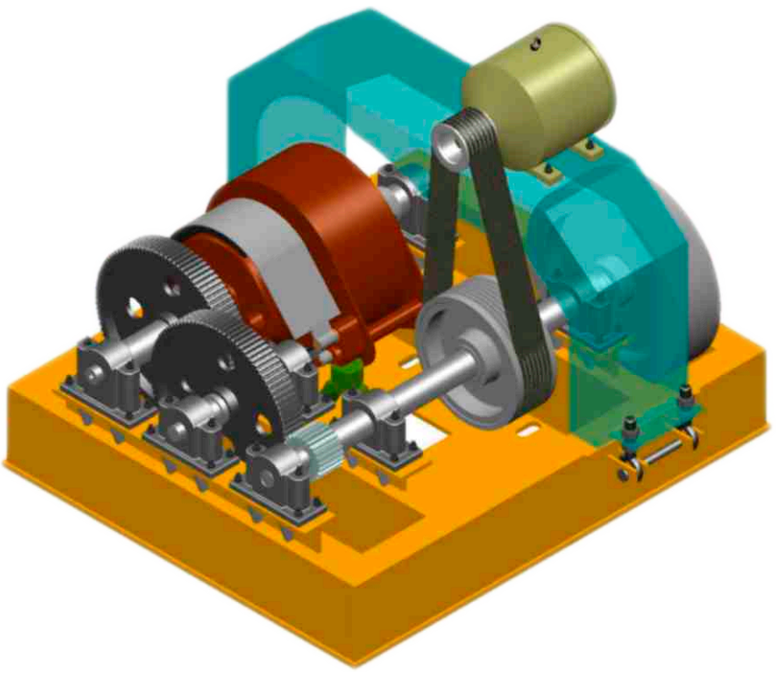
Columns, Slides And Tup

Cast steel columns duly-annealed and machined are very stiff and robust in construction to ensure longer stability. These are positioned by a large spigot on underside of each foot which fits into a machined recess in the anvil block. The columns are locked with the help of tapered wedges of alloy steel to ensure firm alignment of columns which helps in accurate guiding of tup (made out of EN-9 cast steel. The clearance between the tup and guide ways attached to columns is maintained with the help of tapered wedge which brings the columns inward and drawback bolt provided pushes the columns outwards. Synthetic rubber mat is provided on anvil block on which the columns rest. It dampens the induced shock vibrations which increase the life of the tup and also ensures smooth working of the machine for longer period.





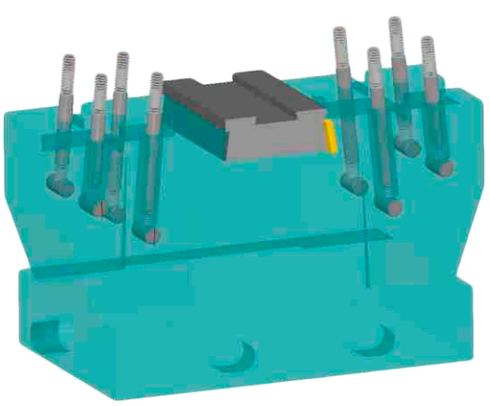
Head Assembly



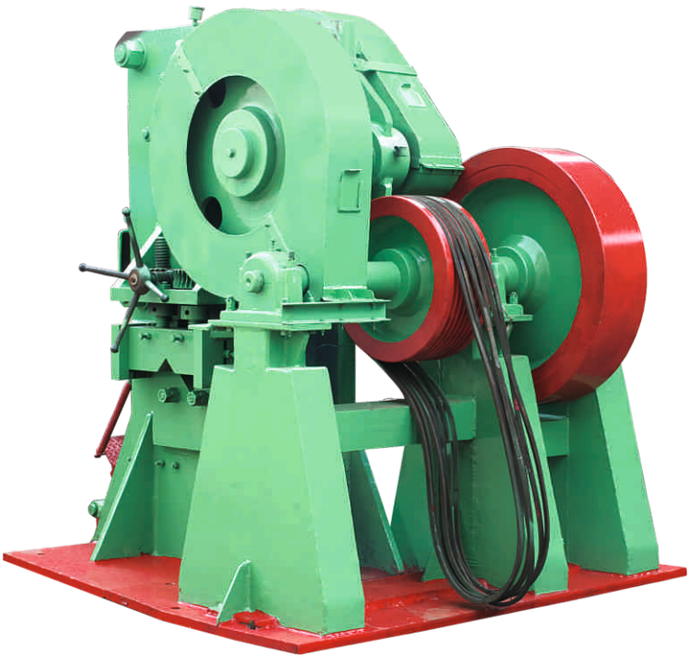
Heavy duty head assembly fabricated from rolled steel sections is mounted on top of the columns. The drive is through v-belts from high torque A.C. Electric motor via flywheel and reduction gears to the lifter-shaft. Friction lifting system is fitted to lifter shaft which runs on double ball bearings and one central phosphorus bronze bearing which also serves as support to lifter shaft. The friction lifter consists of constantly rotating drum and break lined steel band. This band is anchored at one end to stud in lifter drum and other end is carried by camshaft running through lifter drum which is actuated by lever. The lever is operated with the help of pulling cord tied to lever at one end goes to operating point by passing through capstan bush attached to lifter shaft. When we pull the cord it tightens on to the rotating capstan bush which operate the lever resulting in tightening of brake around the brake drum with the help of cam shaft. At this stage, lifter drum is rotated and tup is lifted with the help of nylon belt provided. On release of cord, the spring loaded arrangement help free fall of tup by disengaging friction band immediately from the friction drum. The spring loaded buffer work as a stopper for lifting drum is its rest position. Positive water cooling arrangement is provided to the friction drum to prevent excessive heating.

Anvil Block

It is made of grey cast iron weighting approx. 20 times of nominal capacity of the ram. It is machined on both top & bottom faces to hold die holder firmly and maintain position of the columns. The die holder fixed in the anvil block is forging from high grade alloy steel all over hardened and it is positioned properly with the help of alloy steel tapered wedge.



Billet Shearing Machine



- These Machines are manufactured to cut various sizes of Blooms and Slabs
- The Capacity of these Machines to Varies from 500mm to 200mm for Blooms and 50mm x 200mm to 125mm x 400mm for Slabs.
- Six number of Gears are Provided to facilitate operations with small Power.
- The body is made from M.S. (Plates).
- Cutting of Stainless Steel Billet 50mm to 200mm Plate thickness ½" to 2", width 8".

Technical Specifications

Capacity	2"	3"	4"	5"	6"	8"
Main Gear	32"	42"	42"	42"	50"	72"
Main Shaft	6"	9"	10"	11"	13"	18"
No. of Pcs. per Minute	30	25	20	17	14	10
Working Height	32"	32"	32"	36"	36"	40"
Appox. Weight	4 Ton	5½ Ton	8 Ton	9 Ton	12 Ton	18 Ton
Height in Feet	5½	6½	7½	8½	9½	10
Fly Wheel Dia (in inches)	30	42	42	42	50	66
H.P. Required	10 H.P.	20 H.P.	25 H.P.	40 H.P.	50 H.P.	100 H.P.
R.P.M.	1440	1440	1440	1440	1440	1440

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www.nkh.co.in

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Old Niranjan Singh Kartar Singh Unit

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