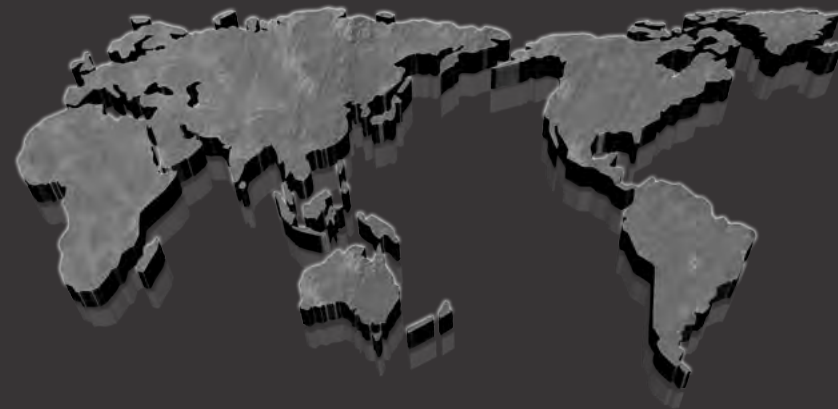




GLOBAL PRESENCE



CHINA

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SRI LANKA



www.nkh.co.in

Forging Machinery Manufacturing Co.
(Old Niranjan Singh Kartar Singh Unit)

ADMN. OFF./ WORKS:
Plot No.1, Link Road,
Industrial Area-A Extn.,
Near Cheema Chowk,
Ludhiana -141 003 (Punjab) India.

Tel. : +91-161-5011755, 2225996
Fax : +91-161-5011754

E-mail: info@nkh.co.in
nkhhammer@yahoo.co.in

QR CODE:



Scan bar code



METAL
FORMING PEOPLE
SINCE 1960

Forging Machinery Manufacturing Co.

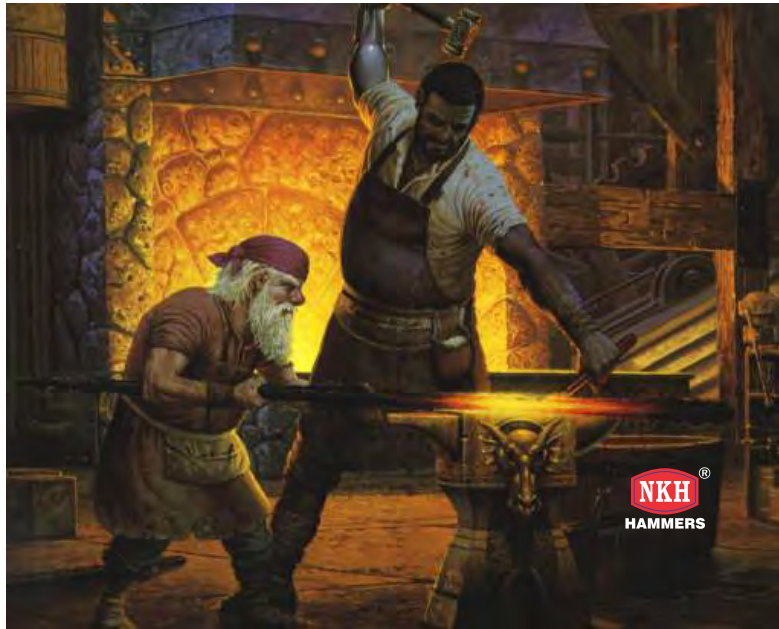
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Company Profile



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 - Incorporated, 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.

Infrastructure

■ CNC Machining



Multi AXIS CNC Machines



VMC Machines



Turning CNC Machines

■ Manufacturing / Casting



Head Gears



Raw Casting of Columns



Raw Casting of Anvil Block

■ Testing Facility



Ultrasonic Flow Detector



Wet Analysis Laboratory



Measuring Instruments

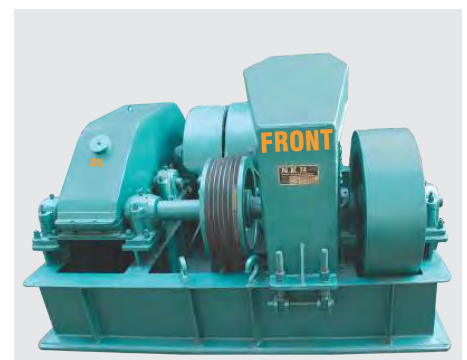
■ Assembly Shop



Hammer's Ready for Inspection



Fitment of Parts of Hammers



Complete Head Assembly

Drop Forging Hammer



Capacity 500 Kgs to 10000 Kgs

Introduction

The NKH Drop Hammer is a rationalized version of the 'Self Contained' designs. The NKH Hammer has a reputation for versatility and economical operation by virtual of its long stroke and high blow energy. The NKH Hammer since its introduction 50 years ago has established itself for its simplicity in headgear design, economic production of close tolerance forging and low maintenance costs.

The Headgear is a rigid structure , flexibly mounted on a substantial hammer frame, and is eminently suitable for the modernization of existing plant when obsolete or worn out headgear need to be replaced. Heavy standards, with large bedding areas at the base, are spigot mounted on the anvil block. The seating and locating surfaces are protected by reinforced resilient pads. Easily adjustable compound wedges are used to position the standards on the anvil block for correct slide clearance.



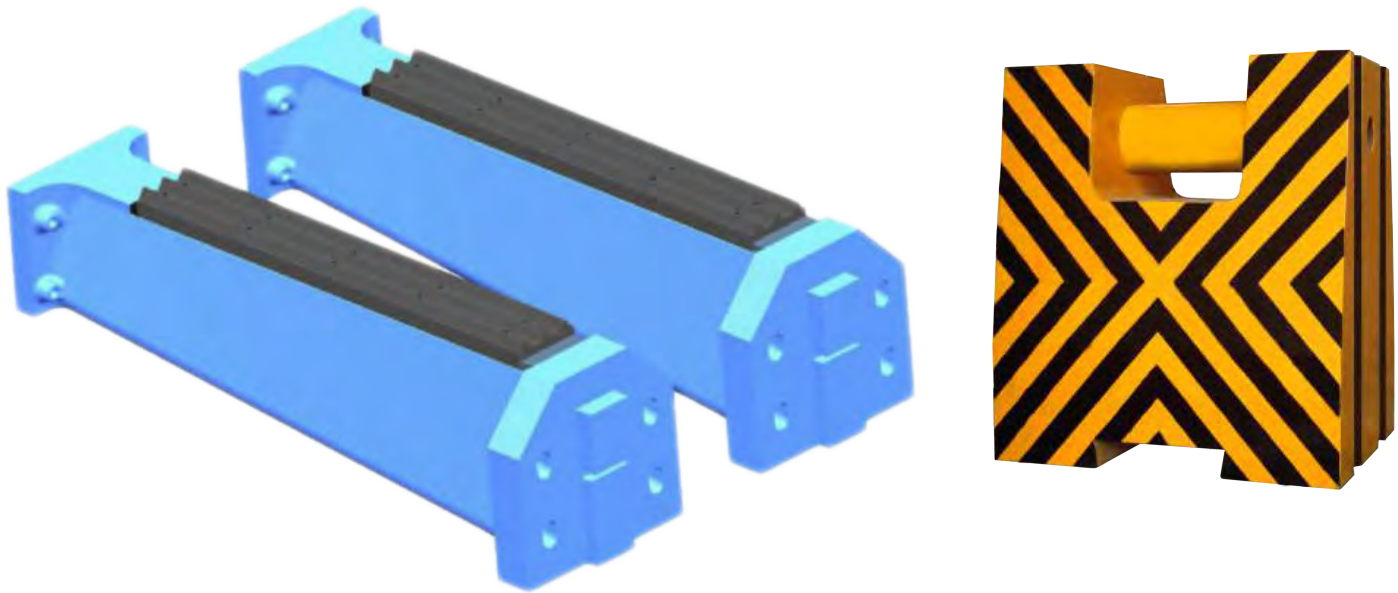
Specifications

NKH Self Contained Friction Drop Hammer is being manufactured in different capacities. NKH Friction Drop 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	10000 22222
1. Space between Slides	mm. in.	431 17	500 19.6	574 22.6	635 25	722 28.4	773 30.6	755 30.5	810 31.9	863 34	1150 42.3
2. Maximum Stroke	mm. Ft. in.	1650 5'6"	1700 5'8"	1750 5'10"	1800 6'0"	1850 6'2"	2025 6'9"	2200 7'4"	2300 7'8"	2350 7'10"	2400 8'0"
3. Tup (Front to Back)	mm. in.	430 17	450 18	480 19	540 21.3	600 23.3	670 26.4	690 27.2	810 32	850 33.5	1170 46
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.	11440 37'2"
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	3900 8764
6. Max. No. of Blow per minute	Short Stroke Full Stroke	135 90	120 80	100 70	75 50	75 50	60 35	55 30	45 25	40 25	22 15
7. Approximate Gross Weight	M. Tons	20-22	27	32	50	62	72	82	102	122	300
8. Electric Motor	H.P.	30	40	50	75	100	125	150	200	250	300
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 & Tup



Cast steel columns duly-annealed and machined are very stiff and robust in construction to ensure longer stability. In all cases the standards are more massive than previous designs and joint areas have been increased. Front to back location of standards to anvil is achieved by large spigots on the standards and corresponding recesses in anvil block 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 reinforced to protect the vertical abutment faces and horizontal joints against impact erosion. 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.

The top of each standard is drilled for the standard to Headgear bolts and has machined circular recesses to accommodate the resilient mounts for the Headgear.

Two /Four substantial bolts secure each standard to the anvil block the are inclined inwards at the top so that, When tightened, they holed standard abutment faces hard against the compound wedges.

A circular spring reinforced with washers at the top of each bolt maintains bolt tightness and reduce impacting of the bearing areas on the standards an anvil block.

Slides

The Separated Slides which are in forged Steel, are accurately machined to ensure positive location in the pockets in the standards and can be reversed end to end when wear develops after long service. High tensile bolts secure each slide and large resilient washers, located in the back of the standards, protect again slide looseness and bolt fracture. The guiding surfaces of the slides are semi-radially disposed relative to the center of the tup for close and accurate alignment. The material of the slides is EN-9 forging fully with heat treatment process for resistance to wear and pick-up , thus considerably prolonging the life of the slide and tup.

Head Assembly



Heavy duty headgear Structure is a substantial rolled steel fabrication, fully stress relieved and accurately machined on all bearing surfaces. The heavy duty motors are of the squirrel cage totally enclosed type and are easily adjustment for correct tensioning of the vee belts.

The AC Electric motor via flywheel and reduction gears to the lifter-shaft. The normal method of starting is by a push-button operated direct-on type started. Automatic Star Delta or auto transformer starting can be supplied if required.

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.

