



ROLLING MILL MACHINERY

An ISO 9001:2015 Company



- B** Best
- E** Economical
- N** Newest Technology
- T** Trustworthy
- E** Efficient
- X** Xpertly Crafted Machinery



Manufacturers & Exporters of

Steel Rolling Mill Plants

& Allied Machinery



www.bentexindls.com



Message from Chairman cum Managing Director Motivated to Achieve Excellence

With the support of My Family, Dedicated Staff, Supporting Supplying Network & Encouraging Global Clientele, I was able to expand your "BENTEX INDUSTRIALS (A Proprietorship Concern) as a Private Limited Concern, and re-named it as BENTEX INDUSTRIALS PRIVATE LIMITED.

In 1996, I started Business as a Proprietor of M/s Bentex Industrials with the focus on Commission basis sale/purchase of steel scrap & finished steel material. Focus was diversified in 1999, when we started Trading in Old and New Steel Rolling Mill Machinery. During trading, I had a dream to serve my clientage with my own manufacturing. I could achieve that very soon, in 2004, when I setup my own manufacturing unit. Today, Bentex has a good reputation in the field of Manufacturing, Servicing & Exporting of Steel Rolling Mill Plants, Machinery & all type of Industrial Accessories.

Bentex Industrials Private Limited is today a professionally managed company; fully equipped Manufacturing Unit with more than 50 Machines, 125+ skilled, unskilled, official and marketing staff members and a huge network of registered vendors to provide the quality material on time.

This enterprise has today grown to become one of the most "efficient" and "cost-effective" engineering companies in the country, which provides you the best quality product and after sale services. We are specialists in various types of Hot Steel rolling Mill Plants, Machinery and Accessories and provide Tailor made solutions to our Indian and overseas Customers.

Our extensive research has helped us in developing Latest Technology, Improving Productivity & Product Quality, Reducing cost of production, power consumption & specific fuel rate etc. Our aim is to maximize customer satisfaction through Commitment, Quality products and Adherence to delivery schedule.

We feel proud to say that Bentex has always met with its clients' expectations, which have led to a strong and continuous bond with its customers worldwide which resulted in getting regular & repeat orders from them. We are announcing the next expansion of our company to "MINAK INTERNATIONAL GROUP OF COMPANIES", with the registered Trademark named "MINAK."

This Catalogue is an insight into our portfolio of technologies and shows how earnestly we have worked to meet your requirements. We look forward to hearing from you and discuss any idea that you contemplate..

Thanking you for your belief in us.

Naresh Kumar Mittal
(Chairman cum M. D.)





Our Vision

Being the most trusted and admired company in Industrial Services, alongside offering- timely support, commitment and uncompromised quality to our clients for a long-standing relationship.

Our Mission

“The mission of BENTEX is to lead the Global Market in the long-run with the consistent dedication, innovative technology & best quality and achieving highest levels of customer satisfaction”.

Our Belief

We believe in building strong relationships with every customer to grow stronger with mutual success and growth.
"Friendship of those we serve, is foundation of our progress”.

Our Quality Assurance

Bentex believes in adherence to the ISO 9001:2015 Quality standards religiously to maintain pre-determined quality of the entire process of production. Our company has Quality Testing Unit & Quality Analysts, to ensure our quality at par with the international standards.

Our team of quality analysts undertakes various non-destructive tests on our range to ensure better quality. The tests are based on the following parameters

- * Dimensional accuracy
- * Operation
- * Tolerance
- * Tensile strength

Our quality analysts monitor the entire process and leave no space for any sort of defect. Their sincerity and perseverance have assisted us in offering world class range to our customers.

Some of the salient features of our range are as follows:

- *Corrosion resistance
- *Dimensionally accurate
- *Less maintenance
- *Easy to install
- *High performance
- *Durable.





INFRASTRUCTURE

Bentex is a one-stop Rolling mill solution provider offering comprehensive solutions. Supported by our state of the art infrastructure, we manufacture and export superior range of precision engineered products



MANUFACTURING UNIT

Bentex is well equipped with a very advanced manufacturing set up to assist in manufacturing steel rolling mill machinery of the highest quality.

The machines available at Bentex include :

- Boring machines
- Gear Hobbing machines
- Profile cutting machines
- Plano-millers
- Milling machines
- Shaper Machines
- VTL's
- Extra heavy duty lathe machines
- Drilling machines.



"Infrastructure is much more important than architecture"



TEAM & STAFF :

We are a team of approx 125 People & we conduct regular training sessions for our team, to enhance their professional skills.

Our team includes:

- **Designing team** : Our highly skilled and experienced Designing team which uses various software's like CAD, Gear Design using KISS soft, 3D Modelling etc to provide solutions as per the client's requirement.
- **Quality Control Engineers**: They continuously monitors and audits the manufacturing process, to ensure that our quality is at par with the international standards.
- **Research and Development Team** : In achieving perfection, this team helps us in reinventing ourselves to match the requirements of changing times. They conduct regular research on following factors:
 - * Raw material
 - * Latest manufacturing process
 - * Market dynamics.
- **Administrative and Management staff**: They help in management of the organisation and provide solutions to our day to day needs.
- **Team of Experts** : Our organization has a team of skilled and talented professionals, who assist us in every stage of our endeavor to offer precision engineered range to our clients.
- Highly reliable localized Vendor base.



"Genius begins great works, Labour alone finishes them"



OUR SERVICES

- Undertaking the projects on Turnkey basis from layout planning to successful trial run of the plant.
- Upgradation and Modernization of Existing Sick Mills.
- Design and Manufacturing of New Hot Rolling Mills and Machines.
- Erection & Commissioning.
- Production Contracts.
- Start-up and Production Assistance.
- Consultation and Engineering Services.
- After Sale Services: We Provide experienced and efficient personnel to serve the clients after sale, for installation, Erection, Commissioning and trouble shooting of Steel rolling mill plants.
- Emergency services : We can serve in following type of industrial emergencies, if the concern unit provide us necessary information in advance:
 - Plant & Machinery breakdown handling services on call.
 - Arrangement of Spares to handle the breakdown in shortest possible time.
 - Preparation for assemblies for breakdown handling in rolling mills

TURNKEY & AUTOMATION SOLUTIONS FOR HOT ROLLING MILLS

- BENTEX has been providing complete project solutions (Design, Manufacture & Mill Commissioning) for Bar, Rod and Section mills for the last 16 years. We are having a great experience in providing various successful turnkey projects to many of our customers to best of their satisfaction . Bentex Industrials Private Limited believes in enduring partnerships with every customer, so that relationship grows stronger with mutual success and growth.
- Our teams of highly qualified and experienced design engineers are instrumental in providing value added solutions for the Hot Rolling Mill industry.
- BENTEX has modern facilities with some of the best European made machines equipped with latest CNC and digital readout systems. This coupled with strict Quality Control procedures ensure quickly and smooth implementation of projects.





PRODUCT PORTFOLIO

BENTEX Product Portfolio includes Industrial Flywheel, Reduction & Pinion Gearboxes, Rolling Mill Stands, Shearing Machines, Rolls, Gear Couplings, Roller Guide Box & Twist Pipe, Pinch Rolls, Reheating Furnace & its equipment and other Rolling Mill Accessories & Machinery. We use high grade raw material and comply with the International standards of the industry. Our robust machines can withstand harsh environment and perform well under pressure.

We also manufacture and export all types of highly efficient Hot Steel Rolling Mill Plants which are incorporated with latest and advanced technology. Our Steel rolling mill plants are available in 6" to 26" sizes and can be designed and manufactured as per industrial requirements. These machines are available for both small scale & large scale industries with capacity upto 500 tons per day.





BENTEX Manufacturers Steel Rolling Mills for the following Products:

TMT Bar/Rebar/Bar



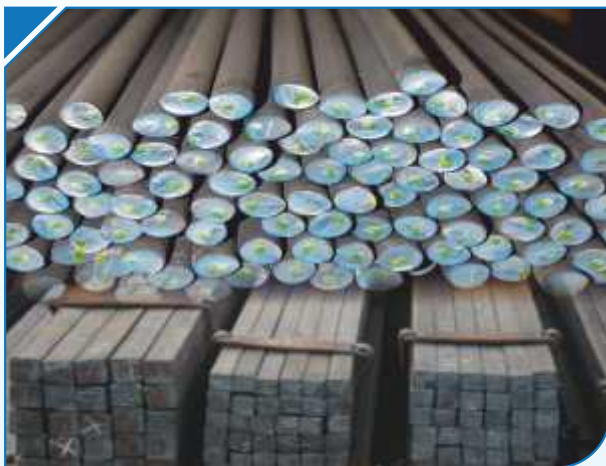
Sizes : Upto to 40 mm **Mode :** Manual, Automatic

Wire Rod in coils



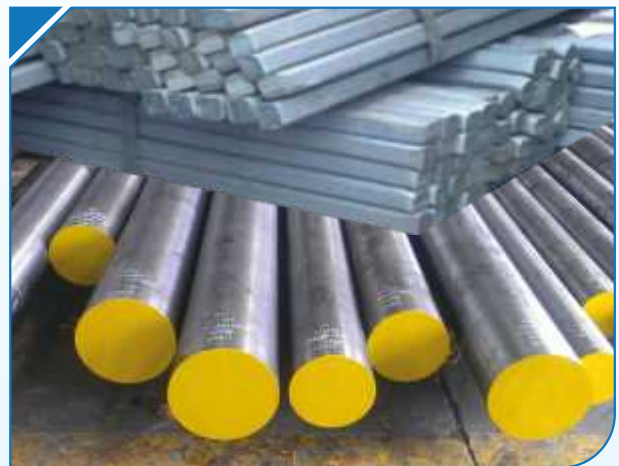
Sizes : 5.5mm to 12 mm **Mode :** Manual, Automatic

Light Round & Square



Sizes : Upto to 40 mm **Mode :** Manual, Automatic

Heavy Round & Square



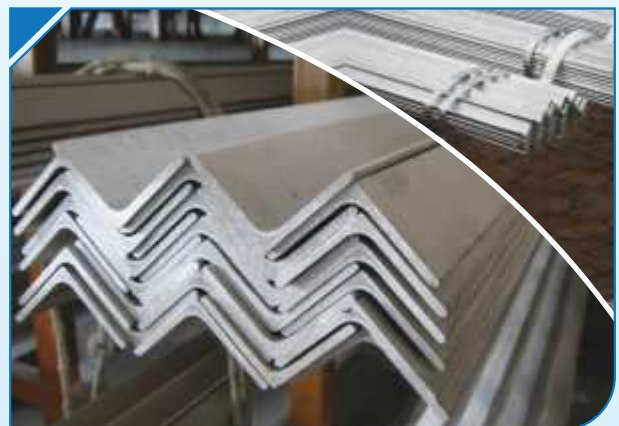
Sizes : Upto to 260 mm **Mode :** Manual, Automatic

FLATS



Sizes : Upto to 600mm x 25mm
Mode : Manual, Automatic

Angles



Sizes : Upto to 250mm x 250mm x 25mm
Mode : Manual, Automatic



BENTEX Manufacturers Steel Rolling Mills for the following Products:

Channels



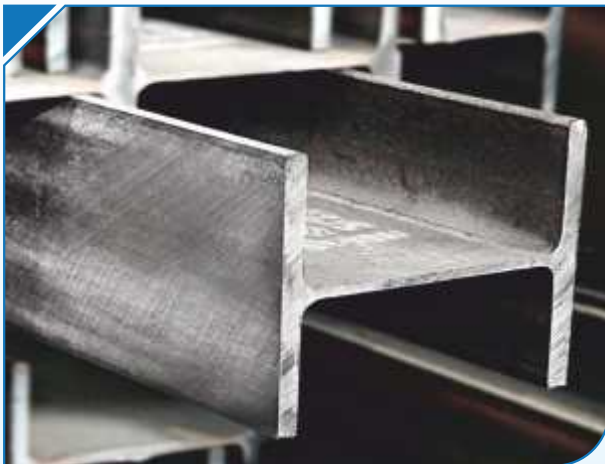
Sizes : Upto to 500mm x 130 mm
Mode : Manual, Automatic

I-Beam



Sizes : Upto to 330mm x 330mm

H-Beam



Sizes : Upto to 600mm x 180mm

Strip / Patra



Sizes : Upto to 600mm x 6mm

T-Iron and Window Section



Sizes : All Sizes

Hexagonal



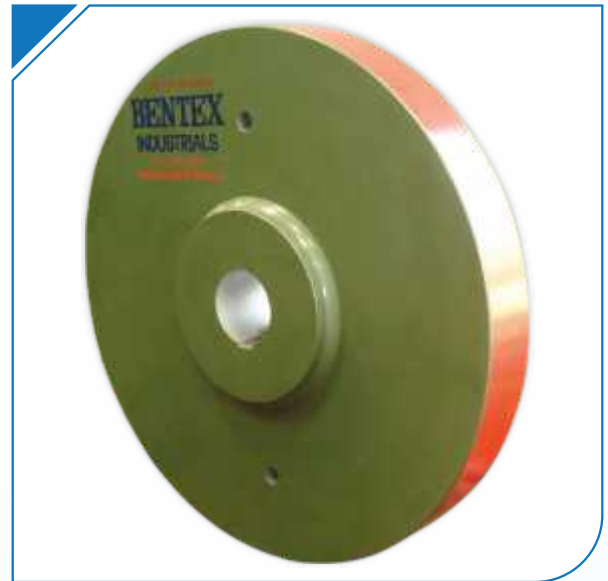
Sizes : Upto to 110 mm



STEEL ROLLING MILL MACHINERY

INDUSTRIAL FLY WHEELS

Flywheel is a mechanical device attached to a drive shaft. It's main function is to reduce speed fluctuation. Our flywheels are **Duly Machined, Bored & Balanced**



Technical Features:

- | | | |
|--------------------------|---|------------------------------------------------------------|
| Material | : | Mild Steel/Graded Cast Iron |
| Weight | : | Upto 20 M.T. |
| Revolution Range | : | Upto 1000 RPM |
| Shafts | : | Forged EN-Series |
| Pedestal (Bearing Block) | : | Cast Iron with precision (machines Plummer Blocks) |
| Balancing | : | Statically, dynamically and mechanically balanced. |
| Bearings | : | Branded Heavy Duty Anti Friction Spherical Roller Bearings |





STEEL ROLLING MILL MACHINERY

INDUSTRIAL GEAR BOXES

We manufacture & supply various types of Rolling Mill duty gear boxes like Reduction Gear Box, Pinion Gear Box, Speed Increaser etc.

Special features of our Gear Boxes :

1. Sturdy design suitable to Bear overloads.
2. Complete structure of our Gear Box is MIG Welded, Stress Relieved & Fully aligned.
3. All Gears are ultrasonic tested.

Technical Details

Input Load	: up to 2500 KW (Torque)
Peak Load	: up to 10000 KW
Ratio	: As per Mill requirement
Sizes	: 6" to 26" i. e. from 150 to 660 mm PCD (as per requirement of mill)
Stages	: Single/ Double/ Multiple
Gears	: Forged EN-Series Material with SINGLE/Double Helical
Bearings	: Imported antifriction Spherical roller bearing
Shaft	: Forged EN-Series
Lubrication	: Internal pipes connected with central oil lubrication System with Double Oil Seals



REDUCTION GEAR BOX

These are used to reduce the R.P.M. i.e. reducing an input speed to a slower output speed & more output torque.

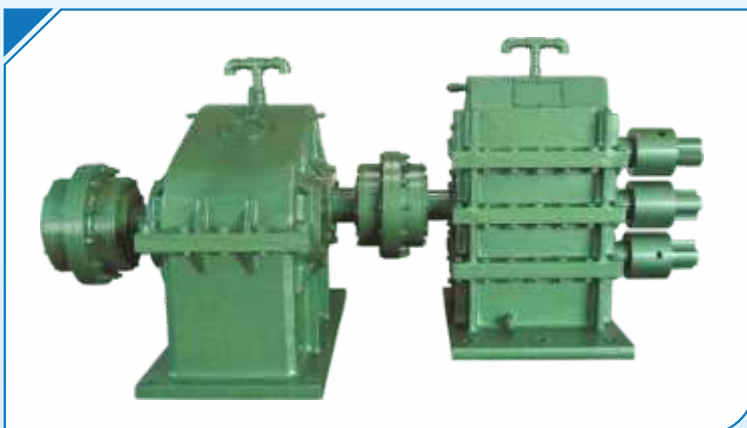


PINION GEAR BOX 3 Hi & 2 Hi

These are used to reduce an input speed to a slower output speed



REDUCTION CUM PINION GEAR BOX



REDUCTION AND PINION GEAR BOX



SPEED INCREASER

These Gear Boxes are generally installed between Intermediate Mill stands to Increase or decrease the output speed of rolled products.



STEEL ROLLING MILL MACHINERY

MILL STANDS

We manufacture and supply complete mill stands for the rolling of Wire rods / TMT / Light Section / Medium Section & Heavy Sections steel and of ferrous and non ferrous metals, technicalities of our Mill Stands are:

Material	:	Mild Steel, Graded Cast Iron
Sizes	:	6" to 26" i.e. from 150 to 660 mm PCD (as per requirement of mill)
Bearing Type	:	Antifriction Spherical Roller Bearing / Fibre Bearing / Gun Metal Bush
Housing (Stand)	:	Two open housing connected together With standard accessories
Chocks	:	Steel Chocks with each stand

Special Features:

- Heavy duty and sturdy design which is suitable to bear overloads
- Complete housing / structure of the Mill Stand is Stress relieved and fully machined
- Genuine and Branded Heavy Duty Accessories are installed after thorough calculation
- Compact and simple design to ensure quick roll change, easy maintenance and to avoid major down time



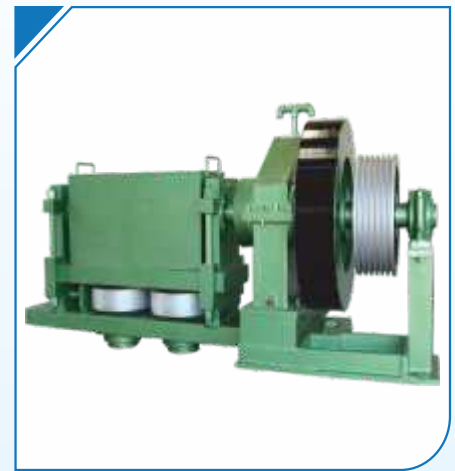
GUN METAL TYPE MILL STAND



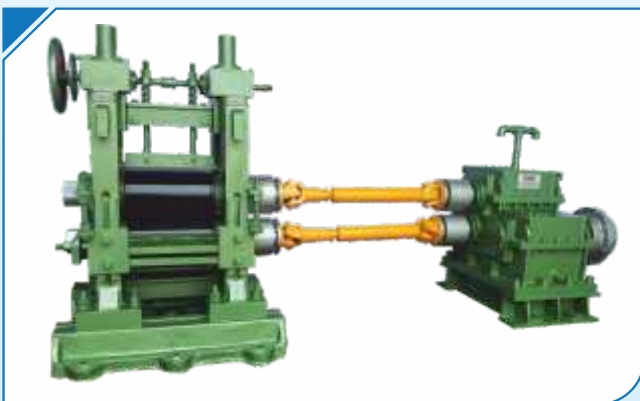
SPHERICAL ROLLER BEARING TYPE MILL STAND



FIBRE BEARING TYPE MILL STAND



VERTICAL MILL STAND



CONTINUOUS MILL STAND



**CONTINUOUS MILL STAND
SINGLE INPUT DOUBLE OUTPUT**



STEEL ROLLING MILL MACHINERY

SHEARING MACHINES

We provide a comprehensive range of shearing machines that offer high strength, stable performance, easy Operation and convenient maintenance. With robust design, our shearing machines feature all welded steel frame to ensure durability and performance. Additional safety features such as overload protection adds to the reliability of the machines.

BILLET SHEARING MACHINE

- Used For : Billet – cutting up to 200x 200 mm
{Specialty Round-Cutting of up to 225 mm}
- Operation : Without Clutch / With Mechanical Clutch



ROTARY SHEARING MACHINE- SWIVEL /FIX TYPE:

These types of machines are used in pairs between Roughing and intermediate Finishing Mill Stands for Fix Length cutting of TMT Bar/ Wire Rod Mills.

- Used For : TMT – cutting up to 25 mm
- Shearing Blades : H.C.H. Cr steel
- Operation : Pneumatic cylinder



TMT SHEARING MACHINE WITH POWER BACKUP:

It's our specialty Product that can be work either the electricity goes.

- Used For : TMT – cutting up to 18 mm
- Can be used for : (Round- up to 20 mm) (Square- Upto 18 mm)
(Special Feature) (Flat- up to 50x6 mm)
(Angle- up to 25 mm x 25 mm)
- Operation : Mechanical
- Power Backup : Diesel Engine





STEEL ROLLING MILL MACHINERY

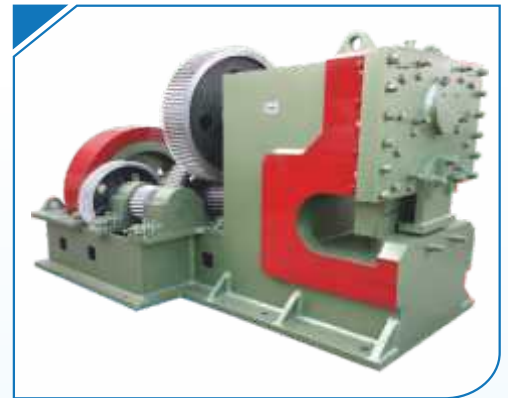
ANGLE / FLAT / ROUND SHEARING MACHINE

- Used For : TMT– cutting up to 40 mm
Round– cutting up to 110 mm
- Can be used for : (Square-Upto 90 mm) (Flat- up to 355x50 mm)
(Special Feature) (Angle- up to 250x250 mm)
- Operation : Mechanical Clutch



PLATE / SCRAP SHEARING MACHINE

- Used For : Cutting Re-rollable scrap, plates, rail, beams etc. in cold condition
- Capacity : Flat– cutting up to 75 mm
- Operation : Mechanical



SHIP BREAKING PLATE SHEARING

Single Stroke Cutting with Width 1800 mm & Thickness 32 mm



ALLIGATOR SHEARING MACHINE



HORIZONTAL SHEARING MACHINE



TMT / ROUND SHEARING MACHINE



STEEL ROLLING MILL MACHINERY

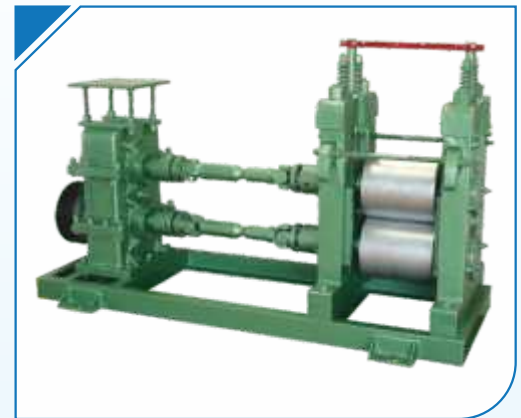
FLYING SHEARING MACHINE

Flying Shear Machine is used to cut the material of various sizes, in different lengths with flying arm effects. It is installed after the TMT Quenching Box and before the cooling bed. It drives through Programmer Logic Controller (PLC) system. DC or AC Variable Motors. It is used in high speed mills.



PINCH ROLL:

- Material : M.S. Prime Plate, Graded Cast Iron
- Sizes : 205 mm to 355 mm (as per requirement of mill)
- Chocks & Bearing : Steel Chocks fitted in Pinch Roll with Spherical Roller Bearing
- Shaft : Jointing with Carbon Shaft
- Gear Box : Includes Forged Steel Single Helical Gears with all accessory
- Operation : Through AC/DC Motor



TAIL BREAKER (SPEED REDUCER):

Tail breaker is installed after the flying shear and before cooling bed to reduce the velocity of the TMT bars. It consists of steel fabricated body, pneumatic cylinder, top and bottom rocker arms and rollers.

- Material : M.S. Prime Plate, Graded Cast Iron
- Chocks & Bearing : Steel Chocks fitted in Tail Breaker with Spherical Roller Bearing
- Shaft : Jointing with Carbon Shaft
- Gear Box : Includes Forged Steel Single Helical Gears with all accessory
- Operation : Pneumatic Cylinder control
- Drive : Through DC or AC Motor





STEEL ROLLING MILL MACHINERY

STEEL STRAIGHTENING MACHINES

STRAIGHTENING MACHINE: (For Section Straightening)

Body	:	M.S. Prime Plate Fabricated
Rolls	:	H.C.H.CR
Gear	:	Forged Steel
Shaft	:	Forged EN-Series/Axial Steel
Bearings	:	Imported Anti-Friction Roller Bearing
Roll Adjustment	:	Vertical and Horizontal – Mechanical
Reduction Gear Box	:	Fitted on Base



WIRE STRAIGHTENING AND CUTTING MACHINE

SPECIFICATIONS:

MODEL	Bentex M-04 to M-025
Thickness of Wire mm	1.5 to 25mm
Length of Wire to be cut automatically mm	28 to 1500 mm
Feeding Capacity per Min.	Upto 90' feet



Wire / Round / TMT Straightening Machine

INDUSTRIAL OIL LUBRICATION SYSTEMS

Oil Lubrication System is generally used for control temperature & Texture of Gears & Bearing of complete rolling mill. These are used for prolonged the life of machine. Our Oil Lubrication systems are basically designed as Simplex/Duplex type System(As per requirement of Mill) which consists with a Settling Tank, Gear Oil Pump, Oil Filter, Oil Cooler, necessary Pipes, and Pipe line Fittings, Oil Flow Control Valves & Instrumentations.





TMT QUENCHING BOX

TMT EQUIPMENTS - (QUENCHING SYSTEMS)

- Quenching Process Solutions as per Rolling Mill capacity.
- Self Tempering Process that ensures high Weld ability.
- TMT Bars of Fe 415, Fe 500 & Fe 550 Grades.

Thermo Mechanical treatment (TMT) Process basically consists of Following Steps:

Quenching

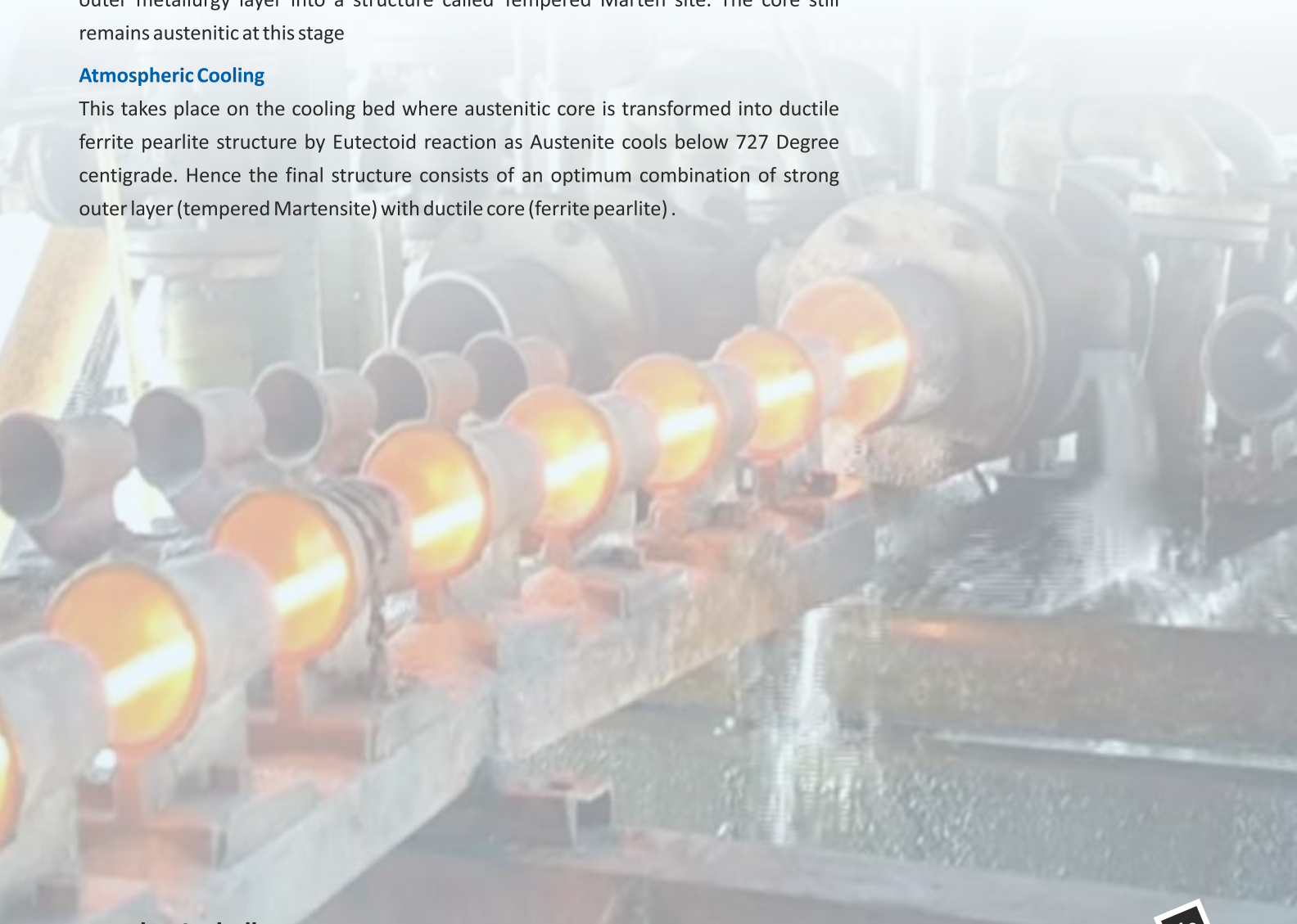
After the hot rolled bar leaves the finishing mill stand, it is rapidly quenched by a water spray system hardening the surface of the bar to an optimized depth optimized through formation of martensitic rim while the core remains hot and austenitic.

Self Tempering

When the bar leaves the quenching box its core is at higher temperature compared to the surface causing the heat flow from the core to the surface resulting in tempering the outer metallurgy layer into a structure called Tempered Martensite. The core still remains austenitic at this stage

Atmospheric Cooling

This takes place on the cooling bed where austenitic core is transformed into ductile ferrite pearlite structure by Eutectoid reaction as Austenite cools below 727 Degree centigrade. Hence the final structure consists of an optimum combination of strong outer layer (tempered Martensite) with ductile core (ferrite pearlite).



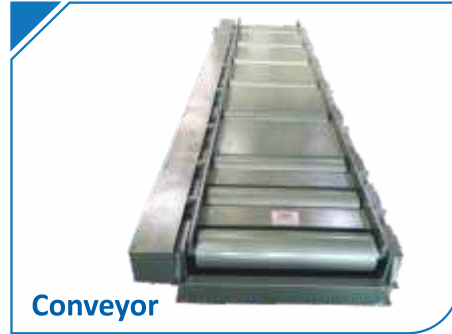


MATERIAL HANDLING EQUIPMENTS

CONVEYORS, Y TABLE & REPEATERS



Shifting Table cum Conveyor



Conveyor



Repeater

COOLING BED

Cooling Bed naturally cool the materials as well as cross transfer towards the discharge end. Bentex Cooling Beds are fabricated following International Industry Standards. Sturdily constructed these cooling beds are appreciated globally for their optimum performance & simple operation.

We manufacture following types of Cooling Bed :

1. Manual Cooling Bed
2. Automatic Rack type Cooling Bed
3. Simple Rope Skid / Chain Skid type Cooling Bed

Manual Cooling Bed : Manual handled cooling bed comes with W channel, Stationery platform & Conveyor.



W Channel

Automatic Rack Type Cooling Bed : provide uniform air-cooling to the bars & profiles and transport these in phased manner from entry to discharge side. These type of cooling bed are provided with twin channel bar delivery system.

Features :

- *Automatic cooling beds (rack type) up to 70mtr.
- *Designed & Developed as per Plant's requirement.
- *Transporting Finished Product in phased manner from entry of cooling bed to the discharge side.



TWIN CHANNEL



AUTOMATIC COOLING BED



AUTOMATIC BUNDLING SYSTEM

TWIN CHANNEL

Basic & prime use of twin channel is to collect the high speed TMT Bars leaving the quenching box after being sheared by flying shear in two strands. This carries the bar in a closed channel until the material comes to a stand still position & discharges it to cooling Bed below automatically. These channels minimize the risk of accidents while transferring the bars.

Features:

- Capable of collecting bars with size up to 40mm in diameter and stock.
- Maximum speed of about 25 meters per second.
- Hydraulic Drive for operation of the cams
- Twin water-cooled C-type channels with water cooling arrangement



STEEL ROLLING MILL ACCESSORIES

UNIVERSAL COUPLING

These are generally used for couple the mill stands which works for the equal power transmission from one stand to other stand

Technical Features:

Material : Forged Steel
Design : As per load Application



UNIVERSAL SPINDLE :

Universal Spindles are generally used for couple the Rolling Mill Stands.

Technical Features:

Material : Forged Steel



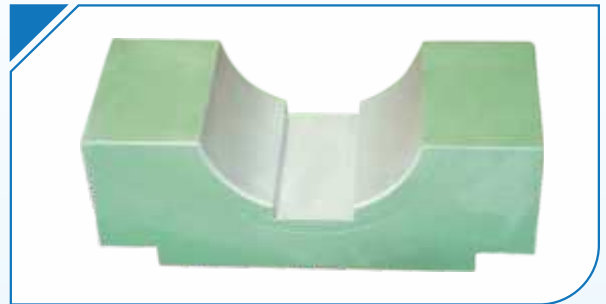
CHOKES

FIBER BEARING CHOKE:

Bearing Chokes are generally used for grip the Fiber Bearing

Technical Features:

Material : Forged Steel

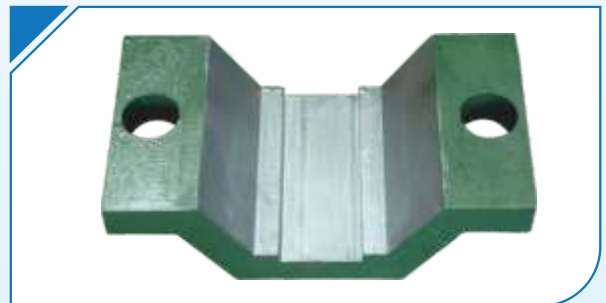


FIBER KEY HANGING CHOKE:

Hanging Chokes are generally used to grip the Fiber Bearing

Technical Features:

Material : Forged Steel



BEARING CHOKE & BEARING CHOCK ACCESSORIES:

Bearing Chokes are generally used for grip the Spherical Roller Bearing

Technical Features:

Material : Forged Steel





STEEL ROLLING MILL ACCESSORIES

FOUNDATION RAIL MILL / MOTOR

Foundation Rails are generally used for grip the motor, Reduction Gear Box, Pinion Gear Box, Mill Stand etc.

Technical Features:

Material : Graded Cast Iron



SHAFT :

Shafts are generally used for couple the Fly -Wheel, V-Belt Pulley, Reduction Gear Box, Gears, Pinion, Rolls Etc.

Technical Features:

Material : Forged EN-Series



SPINDLE :

Spindles are generally used for couple the Rolling Mill Stands.

Technical Features:

Material : Forged Steel



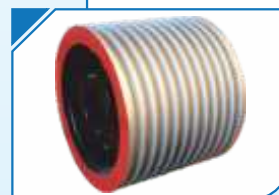
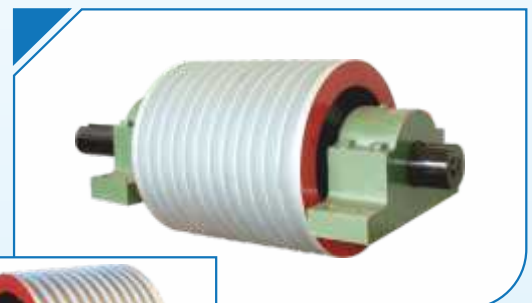
V BELT PULLEY & V-BELT COUNTER PULLEY :

Technical Features:

Material : Graded Cast Iron

Sizes : Up to 2150 mm Dia

Grooves : 4 to 26 (as per requirement) Section E or D



WOBLERS:

Wobblers are generally used for Pinion Gear Box for safety of Gears.

Technical Features:

Material : Forged Steel



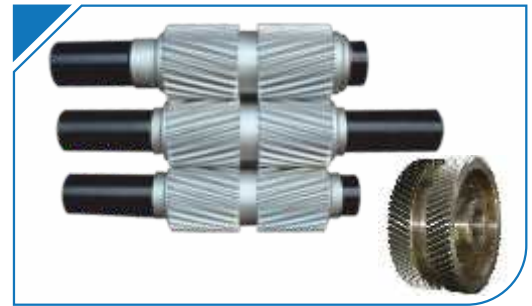


STEEL ROLLING MILL ACCESSORIES

GEARS : Gears are generally used for Reduction Gear Box, Pinion Gear Box, Speed Increaser Etc.

Technical Features:

Material : Forged Steel EN-Series
Teeth : Spur, Single/ Double Helical



BRACKET / PEDASTAL BLOCK / BEARING BLOCK

Technical Features:

Material : Cast Iron, Graded Cast Iron
(Dully machined & grinded.)



C.I COUPLINGS:

These are generally used for couple the mill stands which works for the equal power transmission from one stand to other stand

Technical Features:

Material : Graded Cast Iron
Size & Design : As per load Application



ROLLER GUIDE BOX & TWIST PIPES

These are generally used for TMT mill

Technical Features:

Material : Forged Stainless Steel
Design : As per load Application



Our Roller Guide Box & Twist Pipe Features:

- Capable of handling increased radial and axial misalignment capacity
- Rated speed & Rated torque
- Offers high torque capacity
- Designed to fit a given space
- Can be customized as per the client's requirements
- High Tensile fixing bolts





INDUSTRIAL STEEL ROLLS

We are manufacturer and supplier of all kinds of steel rolls used in rolling mill industry for the past 21 years.

Technical Features:

Material	:	Adamite, Alloy Steel, S.G. Iron, Forged Steel
Type	:	Chill Roll/ Solid/ Barrel
Size	:	As per Requirement of Steel Rolling Mill



Adamite Rolls or Alloy Steel Rolls

These rolls are statically casted and undergo a special high temperature heat treatment process, which is followed by tempering cycles to give it a micro structure consisting of fine pearlitic matrix with spheroidised / broken carbide. These rolls are special hyper-eutectoid steel rolls alloyed with Nickel, Chromium & Molybdenum. The extra carbon and special alloys give it extra wear resistance and strength.

These rolls are suitable for rolling medium and heavy sections where resistance is very important along with considerable amount of strength and toughness. The chemical composition of Adamite Rolls or Alloy Steel rolls is as follows:

C	Mn	Si	Ni	Cr	Mo	Hardness SHD
1.20 – 1.40	0.50 – 0.70	0.30 – 0.60	0.6 – 0.9	0.70 – 0.90	0.20 – 0.30	40 - 45
1.50 – 1.80	0.60 – 0.90	0.30 – 0.60	0.6 – 0.9	0.90 – 1.10	0.25 – 0.35	45 - 50
1.60 – 1.90	0.60 – 0.90	0.30 – 0.60	1.2 – 1.5	1.00 – 1.20	0.35 – 0.50	50 - 55

S.G. Iron Rolls

S.G. Iron or Spheroidal Graphite Iron is considered as one of the most versatile roll material. It is produced by a small proposition of magnesium added to the melt as nickel magnesium or alternative alloy, or pure magnesium. In S.G. Iron roll, the free carbon takes the shape of spheroids or nodules, thereby eliminating the notch effect to flake graphite and improving upon the mechanical properties of cast iron. S.G. Iron rolls find application in Roughing and Intermediate rolls for slabbing and blooming mills. These are also use for roughing, intermediate and finishing for rail and structural mills as well as in finishing for wire rod and narrow strip mills. The Chemical composition of S.G. Iron (Pearlitic) Rolls is as follows:

C	Mn	Si	Ni	Cr	Mo	Hardness SHD
3.00 – 3.30	0.30 – 0.60	1.50 – 2.30	1.50 – 2.00	0.40 – 0.50	0.25 – 0.40	50 – 60
3.10 – 3.50	0.50 – 1.10	1.30 – 1.80	1.50 – 2.50	0.50 – 0.80	0.30 – 0.60	60 – 70

The chemical composition of S.G. Iron (Accicular) Rolls is as follows:

C	Mn	Si	Ni	Cr	Mo	Hardness SHD
3.10 – 3.50	0.50 – 0.80	1.30 – 2.00	2.00 – 3.50	0.30 – 0.80	0.80 – 1.10	60 – 70
3.10 – 3.50	0.50 – 0.80	1.30 – 2.00	2.50 – 4.50	0.30 – 0.80	0.80 – 1.10	70 – 75



INDUSTRIAL STEEL ROLLS

Chilled Iron Rolls

Double layered centrifugally casting system is used to produce clear chill – Graphite free white Iron rolls which are called as Double Poured Definite Chilled Rolls (DPCC). These rolls are mostly fitted with Steel shafts in the barrel. High Alloy Chilled Rolls find application for finishing mill for rod and light section mill as well as for continuous small and medium hot strip mills. The chemical composition of Definite Chilled Rolls (DPCC) rolls is as follows:



C	Mn	Si	Ni	Cr	Mo	Hardness SHD
2.90 – 3.20	0.25 – 0.60	0.20 – 0.90	0.50 – 1.00	0.20 – 0.50	0.25 – 0.30	55 - 60
3.00 – 3.40	0.25 – 0.60	0.20 – 0.90	1.00 – 2.00	0.20 – 0.50	0.25 – 0.35	60 - 70
3.20 – 3.60	0.20 – 0.60	0.20 – 0.80	1.70 – 2.50	0.20 – 0.50	0.25 – 0.45	70 - 75

Double layered static casting system is used to produce indefinite chill – Graphite containing white iron rolls which are called as Double Poured Indefinite Chilled Rolls (DPICC). These rolls have superior Biting performance, maximum functional depth and ensure minimum sacrifice of clear chill layer. Indefinite Chilled Rolls find application for finishing mill for bar mills, wire rod mills and strip mills. The chemical composition of Indefinite Chilled Rolls (DPICC) rolls is as follows:

C	Mn	Si	Ni	Cr	Mo	Hardness SHD
3.00 – 3.50	0.55 – 1.20	0.80 – 1.50	1.45 – 2.50	0.80 – 1.50	0.25 – 0.45	65 - 75

Forged Rolls

Forging is a process in which the casted ingot is heated in the furnace & then material is hammered according to the customer's sizes & requirements. Thereafter, Heat treatment is done in normalizing or annealing furnaces. Rolls are ultrasonically tested to check any structural discontinuity or defects. Forged Rolls find application for Roughing Mills for bar mills, structure mills as well as in Stainless Steel Mills. The chemical composition of different steel grades that are commonly used in Forged Rolls is as follows:

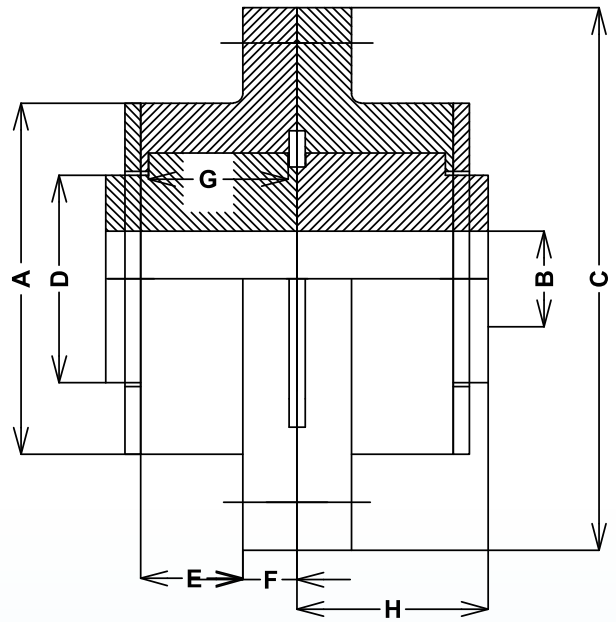


Grade	C	Mn	Si	S	P	Cr	Ni	Mo
EN – 8	0.35 - 0.45	0.60 – 1.00	0.10 - 0.35	0.050	0.050	-	-	-
EN – 9	0.50 - 0.60	0.50 - 0.80	0.05 - 0.35	0.040	0.040	-	-	-
EN – 19	0.35 - 0.45	0.50 - 0.80	0.10 - 0.35	0.040	0.040	0.90 – 1.40	-	0.20 - 0.40
EN – 24	0.35 - 0.45	0.45 - 0.70	0.10 - 0.35	0.040	0.040	0.90 – 1.40	1.30 – 1.80	0.20 - 0.35
EN – 42	0.70 - 0.85	0.55 - 0.75	0.10 - 0.40	0.040	0.040	-	-	-



INDUSTRIAL GEAR COUPLINGS

Gears couplings are generally used to couple one Shaft to another Shaft for transmitting power and torque between both the shafts. Our gear couplings are manufactured using tough quality controls; we used best quality raw materials capable of transmitting high torque at very high speeds and are available in different sizes.



TYPE - BENTEX FULL GEARED COUPLING

Technical Features : Material : Forged Steel
Size : 100 No. to 119 No.

Gear Coupling Model No.	H.P. Capacity at 100 R.P.M.	Max Torque Kg. M	Max R.P.M.	Bore Min.	Bore Max.	A	B	C	D	E	F	G	H
BENTEX-100	7	50	7200	12	35	90	12	120	50	25	16	S	45
BENTEX-101	14	100	6300	20	50	110	20	170	65	32	17	S	52
BENTEX-102	35	250	5000	25	60	125	25	185	85	45	17	S	70
BENTEX-103	63	450	4000	30	75	150	30	220	105	58	20	S	85
BENTEX-104	119	850	3350	40	90	175	40	250	130	76	20	S	105
BENTEX-105	182	1300	2800	50	110	200	50	290	155	81	25	S	110
BENTEX-106	280	2000	2500	60	125	230	60	320	175	92	25	S	125
BENTEX-107	510	3600	2200	85	130	300	70	400	210	80	25	80	130
BENTEX-108	650	4600	2000	90	150	325	90	425	235	90	25	85	137
BENTEX-109	810	5700	1800	110	170	350	100	460	255	95	30	95	147
BENTEX-110	1280	8200	1500	120	210	418	75	535	315	105	35	110	175
BENTEX-111	1570	11150	1350	130	260	470	95	600	355	125	45	125	210
BENTEX-112	2110	14900	1220	140	300	530	115	705	410	135	45	140	235
BENTEX-113	2850	21000	1100	170	330	575	130	730	450	155	50	160	270
BENTEX-114	4080	28900	1000	190	350	650	150	830	510	170	55	180	280
BENTEX-115	4950	35000	900	220	380	690	170	860	540	163	60	230	300
BENTEX-116	8440	60400	810	240	440	785	210	980	625	177	65	250	320
BENTEX-117	12060	83800	730	280	500	891	250	1110	720	200	70	280	360
BENTEX-118	17110	113500	660	350	580	1050	300	1300	810	230	80	320	400
BENTEX-119	21080	149700	600	400	680	1160	350	1410	910	248	90	350	430



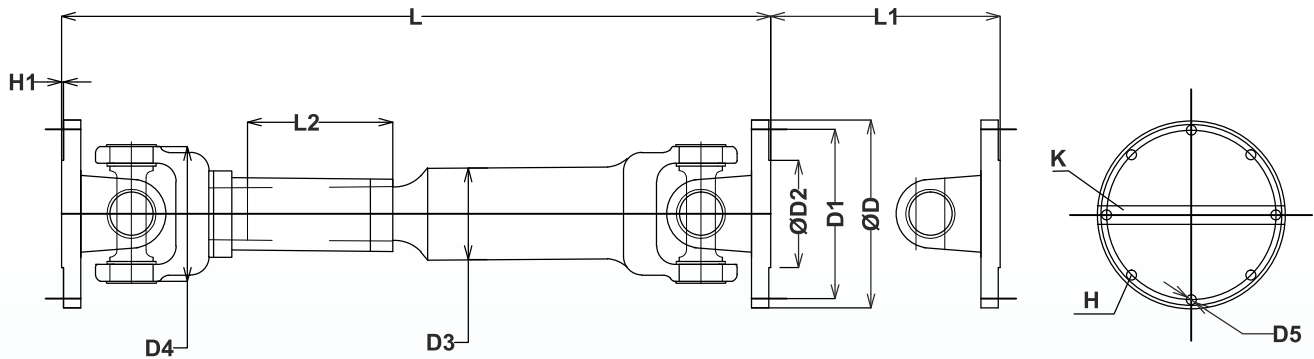
INDUSTRIAL CARDAN SHAFTS

Cardan Shafts

It is a mechanical component for transmitting Torque and Rotation from input to output source. As the carrier of torque, it is subjected to torsion and shear stress. Bentex's Cardan shaft are designed in such a way to bear the stress.

Function of a cardan shaft :

- Smoothly transfers Torque, Rotation and Speed.
- Changing distance between power input and output.
- Changing angle between power input and output.



BENTEX JOINT SHAFTS / CARDAN SHAFT

Universal Cardan Shaft Model No.	Duration Torque (NM)	Angular Movement Min.	Falange OD (D)	PCD of Bolt Hole (D1)	SPIGOT DIA (D2)	PIPE DIA (D3)	Rotation of Cross DIA (D4)	Bolt Hole DIA (D5)	Number of Hole (H)	Spigot Height (H1)	Face Key Way Design (K)	Compressed Length (L)	Maximum Length (L1)	Length Opening (L2)
BENTEX-86	672	15°	86	70	57.2	63.5	82.5	8	4	2	---	270	3500	45
BENTEX-90	780	20°	90	75	F-42	60.5	105	10	6	---	---	410	3500	55
BENTEX-97	850	20°	97	80	60	63.5	98.1	10	4	2	---	340	3500	50
BENTEX-100	1400	20°	100	84	57.1	60	103	8	6	2	---	375	3500	55
BENTEX-120L	2100	20°	120	95	69.9	76	122.5	11.1	4	2	---	360	3500	60
BENTEX-120H	2700	20°	120	101.5	83	70	110.5	10.1	6	2	---	470	3500	75
BENTEX-130	3000	20°	130	112	82.5	89	129	10.15	8	2	---	600	3000	91
BENTEX-146	3350	16°	146	121	95.1	89	137.5	13	4	2	---	465	3500	75
BENTEX-146R	3850	16°	146	121	95.1	89	149	13	4	2	---	430	3500	75
BENTEX-150	3850	18°	150	129.9	F-91/D-3	100	152.1	12.15	8	---	---	590	3500	75
BENTEX-165	8000	16°	165	140	F-96/D-3	100	176.1	16.1	8	---	---	640	3500	100
BENTEX-175	4200	20°	175	155	168.1	89	160	10	8	1.99	---	530	3500	175
BENTEX-185	9000	15°	185	165	178	110	180	10	8	1.99	---	580	3500	100
BENTEX-205L	8000	15°	205	184	197/F140/D4	100.5	176.1	10	8	1.99	---	580	3500	100
BENTEX-205H	12500	15°	205	184	197/F140/D4	115	184	10.5	8	2.1	30x6	605	3500	110
BENTEX-225J	14000	15°	225	205	197/F140/D4	115	184	12.5	8	2.1	30x6	605	3500	110
BENTEX-230J	14000	15°	230	196	222/F-140/D4	115	184	16	8	2.1	30x6	640	As per required	110
BENTEX-240L	14000	15°	240	218	F-140/D4	115	184	14	8	---	30x6	640	As per required	110
BENTEX-240H	24000	15°	240	205	---	130	200	16	8	---	32x8	705	As per required	85
BENTEX-250H	40000	15°	250	215	---	150	225	16	8	---	32x8	805	---	95
BENTEX-285H	58000	15°	285	245	157	168	230	21	8	7	32x12	910	3000	110
BENTEX-315H	85000	15°	315	280	175	194	265	23	8	7	32x12	950	3000	110
BENTEX-350L	85000	15°	350	310	155	245	310	23	10	8	32x12	1200	3000	125
BENTEX-350H	120000	15°	350	310	155	245	310	25	10	8	40x15	1200	3000	125
BENTEX-390L	165000	15°	390	345	170	270	320	28	10	8	80x15	1300	3000	138
BENTEX-390H	210000	15°	390	345	170	270	320	30	12	8	80x15	1300	3000	138
BENTEX-440L	210000	15°	440	390	190	320	---	28	16	10	50x16	1450	3000	138
BENTEX-440H	250000	15°	440	390	190	320	---	28	16	10	50x16	1450	3000	138



INDUSTRIAL CASTING & FORGING SERVICES

Bentex's vast network of manufacturing, high-tech engineering and design capabilities deliver an unmatched range of diverse and dynamic products such as Ingot moulds, Slag Pot, Bottom Plate, Center Column and many other type/ size / quality of Cast Iron/ Graded Cast Iron Casting and Forging to its customers. We can under take an individual piece casting of weight upto 20 M.T. as per customer specification or drawing.



Furnaces

a. Reheating Furnaces and other type of Furnace Equipments

We are providing & exporting various type of Quality Oil fired/Coal/Natural Gas/Furnace Oil based Reheating Furnaces such as Pusher Type Reheating Furnace, etc. our Reheating Furnaces are High on quality and range from a small capacity to a large capacity.



Re-Heating Furnace Equipments



Injector For Re-Heating Furnace



Air Pollution Device



Pusher For Re Heating Furnace



B. Induction Furnaces & type of Furnace Equipments

We are providing & exporting various type of Quality Induction / Arc / Blast Furnaces etc. High on quality, our Induction Furnaces range upto 40 M.T.



WE ALSO SERVES WITH FURNACE PARTS & CONSUMABLES

- Silico Manganese
- Ferro Silicon
- Silica Ramming Mass
- Boric Acid Powder
- B.P. Set
- Sodium Silicate
- Ingot Moulds
- Bottom Plates
- Slag Pot
- Center Column
- Fire Clay
- Tempering Measuring Instruments
- Temperature Tips
- Whyheat A
- Tundish Tiles
- Graphite Powder
- Refractories

Continuous Casting Machine

Bentex is Supplying & Exporting Continues Billet Casting Technology that precisely meets the requirement of existing and new mini steel plants for casting liquid steel into billets. The Modular Caster of Bentex is suitable for heat size as small as 6 ton and modules are available for casting sections from 80 mm x 80 mm to 160 mm x 160 mm.



Slag Crusher Plant

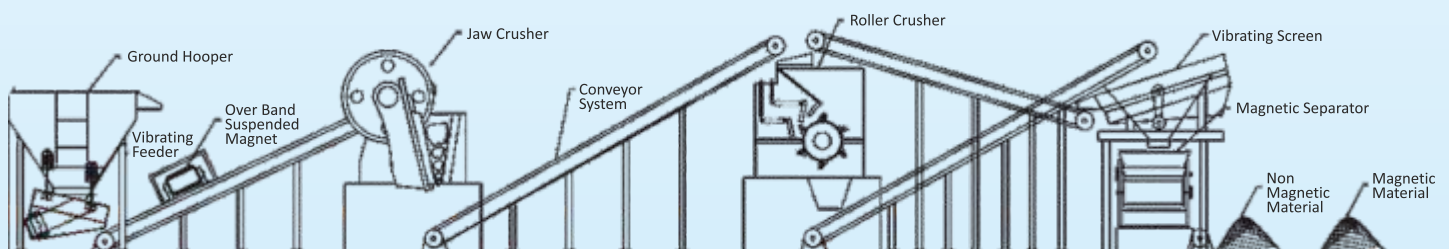
We supply various capacity successful Slag Crusher Plant in used by reputed steel plants in India, Bentex's Slag Crusher Plant is widely used for crushing especially slag, stone, refractory, coal & many other products & helps in the recovery of metal having commercial value, earn healthy profits from their waste product. Slag of steel plant of furnace containing 10 to 20% pure metal but discharged in the form of slag or waste product due to improper operation. But the slag of steel plant is no more the waste product, because our crusher separator plant is simple & efficient source of purifying metal from slag or furnace waste.

Features:

- Approximately 50 square yards area is required for installing the plant
- 4 to 6 men are required for operating the plant
- Iron impurities can be automatically separated by the machine
- Quality magnets are used in the equipment that requires no maintenance.



COMPLETE LAYOUT STRUCTURE OF SLAG CRUSHER PLANT

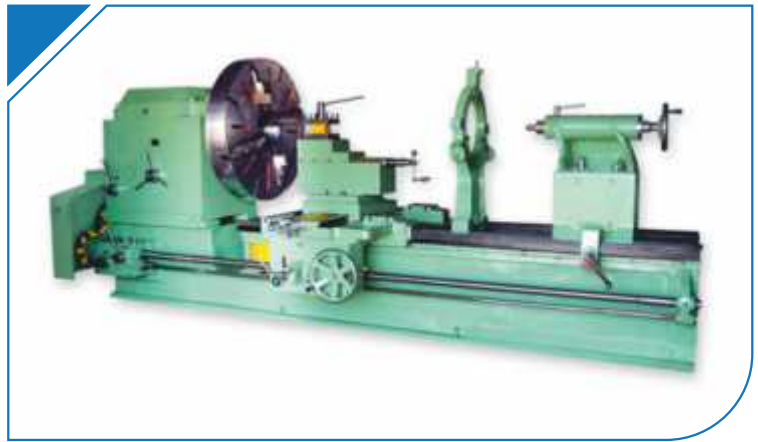




WORKSHOP MACHINERY

LATHE MACHINE

Bentex is a chief Manufacturer, Exporter & Supplier of the unique Extra Heavy Duty Lathe Machine, Semi Geared Lathe Machine, Heavy Duty Roll Turning Lathe Machine, Shaper Machine, Slotter Machine, Radial Drill Etc. Our Machines are highly efficient industrial tool and incorporates the latest technology. Moreover, the Heavy Duty Roll Turning Lathe Machine is manufactured in compliance with the international standards and is very durable. Our machines are known for their optimum performance, durability, reliability, longer working life, assured quality, feasible rates, abrasion resistance, and faster operations.



Features

Good quality raw material
Strong built
Affordable rates

Applications

Engineering applications
Construction work
Manufacturing Industry

Specifications of Bentex's Lathes

Model no.	BIPL-8	BIPL-10	BIPL-12	BIPL-14	BIPL-16	BIPL-18	BIPL-20	BIPL-22	BIPL-24	BIPL-30	BIPL-36	BIPL-40
Bed Length Ft.	8'	10'	12'	14'	16'	18'	20'	22'	24'	30'	36'	40'
Width of Bed	16"	18"	20"	22"	24"	26"	28"	30"	32"	36"	40"	48"
Height of Centre	14"	16"	18"	20"	22"	24"	26"	28"	30"	34"	36"	46"
Spindle Bore	3"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"	4"
Swing in Gap	42"	52"	55"	60"	68"	72"	76"	80"	84"	92"	100"	116"
No. of Spindle Speed	6	6	6	6	6	6	6	6	6	6	6	6
Admit between Centre	54"	72"	96"	120"	138"	154"	174"	198"	222"	294"	354"	402"
Leading Screw Dia	1¼"	1¾"	2"	2"	2½"	2½"	2¾"	2¾"	3"	3"	3½"	4½"
H.P. Required	2	3	3	3	5	5	7½	10	15	20	25	25

SHAPER MACHINE

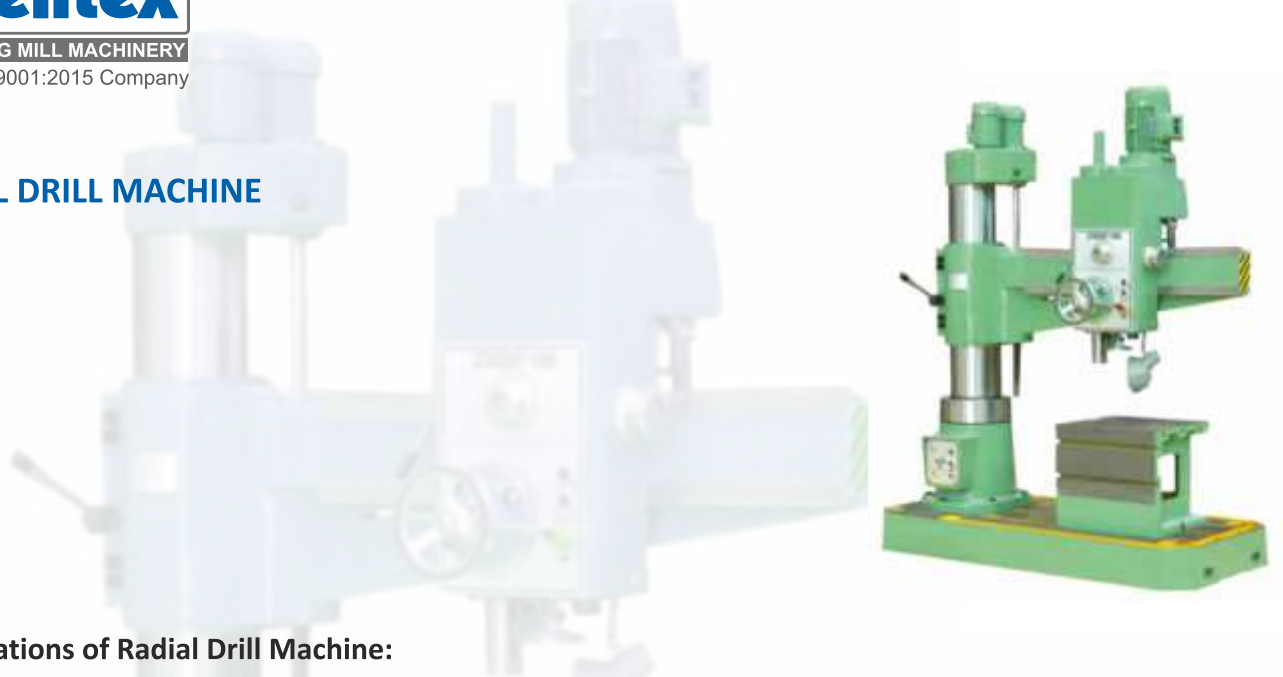
Technical specifications of Bentex's Shaper Machine

Model No	BIPL-18	BIPL-24	BIPL-30	BIPL-36	BIPL-40
Size	18"	24"	30"	36"	40"
Length of Ram	40	53	60	67	79
Working Stroke	18	24	30	36	40
Ram Bearing in Col.	27	36	38	42	45
Ram Bearing in Width	9½	11½	12	12½	14
No. of Speed	3	4	4	4	4
Max. Dia. From table 10 Ram	14	17	16	2	2
Motor Recommended	18"	24"	30"	36"	40"
Size Length of Ram	40	53	60	67	79





RADIAL DRILL MACHINE



Specifications of Radial Drill Machine:

Drill Head	BIPL-40B	BIPL-40C	BIPL-50B	BIPL-50C	BIPL-65B	BIPL-75B	BIPL-85B
Drilling Capacity (In steel/ cast iron)	40/50	40/50	50/60	50/60	65/75	75/85	85/95
Drilling Depth	180	180	225	250	325	355	400
Taper Spindle Nose Socket	MT-4	MT-4	MT-5	MT-5	MT-5	MT-6	MT-6
No. of Spindle Speeds/Range (RPM)	6 (55-665)	12 (56-1000)	9 (45-750)	12 (45-1000)	12 (18-810)	12 (18-810)	12 (16-1250)
No's of Spindle Feeds/Range (mm/rev.)	3	3	3	6	6	6	6
Drill Power	(0.1-0.2)	(0.1-0.2)	(0.1-0.2)	(0.125-1.25)	(0.125-1.25)	0.125-1.25	(.08-1.0)
CAPACITY	1.5 kw	2.2 kw	2.2 kw	3.7 kw	3.7 kw	5.5 kw	7.5 kw
Drilling Radius Max.	1050	1050	1100	1300	1700	1900	2200
Drilling Radius Min.	375	375	450	450	500	600	650
Drilling Head Traverse	675	675	650	850	1200	1300	1550
Distance Base Plate to Spindle Max.	1000	1000	1300	1300	1500	1750	1800
Distance Base Plate to Spindle Min.	225	225	225	325	300	400	550
Diameter of Column Sleeve	255	255	310	310	355	405	450
Working Sur face of Base Plate	900*680	900*680	920*830	1120*830	1500*1020	1850*1160	2130*1300
DIMENSIONS OF BASE PLATE							
Length*Width*Height	1480 700 200	1480 700 200	1585 850 200	1800 850 200	2265 1040 225	2650 1180 225	3150 1300 250
Arm Elevator Motor	0.75 kw	0.75 kw	1.5 kw	1.5 kw	2.2 kw	3.7 kw	3.7 kw
Standard Box Table	400 350 350	550 420 420	550 420 420	550 420 420	600 500 500	600 500 500	1000 750 500



OUR PACKAGING

Packaging helps in protecting and preparing goods for transport, logistics, sale, and end use. So, Bentex offers Complete Packaging Solutions for its Machinery and Accessories.

Details of our packaging:

Primary Packaging - Wrapping of each product with a wrapping sheet.

Secondary Packaging- Products after primary packaging are shifted to an enclosed wooden box and then details of the products in the box and address of the client are mentioned on each box.



OUR CLIENTS

ASIA	India, Bangladesh, Sri Lanka, Saudi Arabia, Oman, UAE, Afghanistan
AFRICA	Uganda, Zambia, Congo, Nigeria, Kenya
NORTH AMERICA	Mexico



MILL INSTALLATION IN INDIA



ROLLING MILL IN NORTH AMERICA



ROLLING MILL IN INDIA

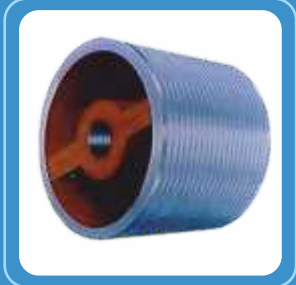
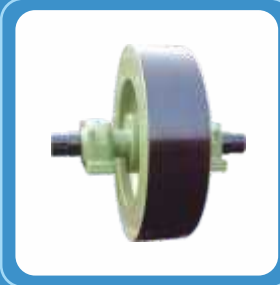
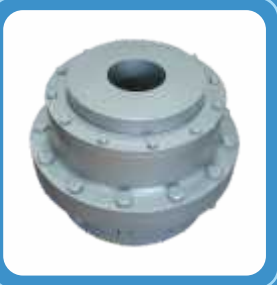


BENTEX INDUSTRIALS PVT. LTD believes in giving the next generation ..a better tomorrow.

Bentex consider maintaining ecological balance as our responsibility, so we believe in sustainable development, through a judicious use of resources and by keeping pollution at the lowest possible levels.

The company works extensively to give back to society through its close association with Lions Club (Mandi Gobindgarh) .

We continuously strive to improve our processes in all areas in order to guarantee consistently high standards of Quality and constantly strive to add value to our environment.



ROLLING MILL MACHINERY

An ISO 9001:2015 Company

Bentex Industrials Pvt. Ltd

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