Gyratory CRUSHERS
Experience & Know How

CITIC HIC commenced business in 1956. After more than 50 years of evolution and development it has become a significant global supplier of mining machinery equipment in the World. The works of CITIC HIC are located in Luoyang city, China. The factory at Luoyang covers more than 1.7 million square meters, of which 724 thousand square meters is under cover. It has a total workforce of approximately 9000 of which more than 1,500 are technicians. Within CITIC HIC works there are 10 manufacturing departments including the Engineering and Design facility. These manufacturing departments produce quality products ranging a broad spectrum of disciplines including casting, forging, heat treatment, machining, fabrication, unit assembly, electric controls and hydraulic control systems.

MINING PRODUCT LINE

- CRUSHERS
- GRINDING MILLS
- HPGR’S
- HOISTS
- SCRUBBERS

CITIC HIC produces over 200,000 tons of quality equipment annually. This equipment covers a broad range of industries and product types including mining, crushing, hoisting, washing, gearing, automation, construction, excavation, power generation, research and others.

It is this broad spectrum of experience that provides our customers with confidence in CITIC HIC.
Manufacturing Works

Melting and Casting

Casting capacity of 65,000 tonnes per year producing carbon steels, alloy steels, SG Iron, structural steels, non-ferrous and when specifically ordered heat resistance steels and stainless steels. CITIC HIC has a Single Casting capacity of 600 tons of steel in a 9500m² pouring area.

CITIC’s casting capacity for:
- Carbon steel - 600t
- SG Iron - 200t
- Non-ferrous - 20t
- Steel Ingot - 600t

Foundry equipment includes:
- 80t, 50t, 30t Electric arc furnaces
- 2x150t, 1x60t, 1x40t Ladle refining furnace
- 150t, 60t VD/VOD furnace

Machinery & Fabrication

CITIC HIC is extremely well equipped in relation to fabrication work. CITIC HIC is also a designated Training Base of the National Welding Institute. Over recent years CITIC has further expanded its machine base to include some of the largest machines in China, and in some instances the world.

Facilities include:
- More than 80 CNC based machines
- 100,000t annual fabrication capacity
- NDT and mechanical testing Laboratory with UT and RT equipment manned by certified technicians
- More than 3000 machines (incl. >80 CNC machines) including:
  - 160/250mmx4000mm & 105/200mmx4000mm Hydraulic Horizontal Plate Rolls
  - Automatic welders (14x10m, 10x10m, 7×7m, 6×6m, 5×5m...)
  - Narrow Gap welding units
  - Unionmelt welding, gas shield and arc welding units
  - A 7mx9mx45m shot blasting chamber
  - Multiple heat treating furnaces ranging from Ø2mx30m shaft furnace to 9mx9mx1.5m furnaces as well as carburizing furnaces
  - Ø16m, 13m, 12m, 10m, 5m, 4m, 2.8m, 1.6m Gear Cutting Machines
  - Ø5m, 4m, 2.8m, 1.25m 7m CNC Gear Grinding Machines
  - 600t Overhead crane (height of 26m)
  - Other cranes include 300t, 250t, 200t, 150t, 82t, 75t, 32t and others
  - Fabrication straddle 36m x 135m
  - Three Roll Straighteners
  - Ø16m CNC Vertical Borer
  - Also available to CITIC HIC are four external Fabrication and Machining works capable of producing large sized cement kilns up to 6m diameter and 95m long
  - 6mx20m CNC Cutting Machine

Forgings

CITIC HIC possess hydraulic presses of 18500t (the largest in the world), 8400t, 3150t, 1600t using Open die forging technique, 5000t Die Forging Press & High Precision Ring Roll Mill. It can produce free forgings up to 400t, ring roll forgings up to a maximum diameter of 7.8m and shaft forgings up to a maximum length of 25m.
Design

YOUR NEEDS ARE OUR BUSINESS

CITIC HIC’s Technology Centre, Luoyang Mining Machinery Engineering Design Institute (LMMEDI), is the largest organisation for comprehensive technology development and research in mining, metallurgy, coal, non-ferrous metals and building materials in China.

LMMEDI employs approximately 700 staff of which more than 600 are engineers (with approximately 30 masters and doctors) involved in research and development of machinery design, manufacturing, automation, hydraulics, construction, cement, active lime, pellets plants, plant design, water supply and drainage, heating and ventilation, electrical supply and testing technology, etc.

Using the latest in design methods and tools CITIC HIC prides itself in designing, manufacturing and Delivering equipment that exceed all expectations. CITIC HIC designs, manufactures and delivers all the major components at its’ own works at a single location (Luoyang, China) to the highest design and manufacturing standards.

Design Institute Departments

- Grinding Mills
- Hoists
- Kilns & Furnaces
- Crushing & Screening
- Excavation
- Process Washing
- Power Generation
- Hydraulics
- Metallurgical
- Gearing
- Automation
- Turnkey Systems
- Process Research
- Cement
- Civil Construction
Clearance Dimensions

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<th>C</th>
<th>D</th>
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CITIC-HIC PXZ Gyratory Crushers Series II

CITIC-HIC PXZ Series II Primary Gyratory Crushers offer a range of crusher sizes to suit the most demanding of applications in some of the world’s largest mining projects. With feed sizes up to 1200mm and capacities of 8000TPH. Combined with high speed (600rpm) and a range of eccentric strokes, high reduction ratios are possible resulting in higher mill production rates. The PXZ series utilizes the industry standard of hydraulically controlled setting adjustment & crusher protection which can be integrated to your system or supplied with a standalone automation package, ensuring maximum performance & productivity 24/7. The PZX series Primary Gyratory Crusher is equipped with a heavy duty spider assembly along with 1 piece main shaft / head assembly to accommodate the toughest of applications and easy maintenance procedures resulting in less downtime. Every component of the PXZ Primary Gyratory Crusher is manufactured within our own factory ensuring control over product design, quality, manufacture and assembly. All crushers are fully assembled in our works and test run prior to delivery resulting in quicker installation and commissioning times.

LIFTING EYE BOLT

SPIDER SEAL

LIFTING LUG

4th TIER CONCAVE

3rd TIER CONCAVE

2nd TIER CONCAVE

1st TIER CONCAVE

SHELL JOINT BOLTS

LIFTING LUG

DUST SEAL

DUST SEAL RETAINING RING

OUTER BUSH

ECCENTRIC BUSH

INNER ECCENTRIC BUSH

PINION GEAR

PINION SHAFT

PINION HOUSING

PINION BEARING

ECCENTRIC WEAR PLATE
## Model Range

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<tr>
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<th>Reference</th>
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<th>C/Shaft Speed</th>
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<th>Feed Opening</th>
<th>Maximum Feed Size</th>
<th>Head Diameter</th>
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* Capacities detailed above are based on an ore with a specific gravity of 2.7t/m³, the maximum feed size detailed above is not exceeded and the new feed size distribution includes 25%-30% material finer than the setting. Crusher capacities are also influenced by many size and material factors and we recommend you consult CITIC Heavy Industries to verify your particular operating condition.
Simulation

Further, at CITIC HIC we also run various software packages in order to simulate process circuits thereby optimizing equipment selection and operation. These software packages include:

- JK SimMet
- JK SimPlant
- MillTraj
- Various in-house programs

Laboratory

CITIC HIC also has a fully equipped laboratory on site for material testing and reporting. Through material testing and analysis we can accurately select the right equipment to meet your requirements.

Testing Available

- Specific Gravity
- Hardness
- Compressive Strength
- Crushing Work Index
- Rod Mill Work Index
- Ball Mill Work Index
- HPGR Testing
- Particle Size Analysis
- Lime Calcining Test
- Flotation Testing
- Drying
- Others

LAB EQUIPMENT

- JKMRC DROP WEIGHT TESTER
- BALL MILL
- VIBRATING MILL
- V-TYPE SEPARATOR
- LAZER SIZE ANALYSER
- RIFFLE SAMPLER
- DRY GRINDING
- HPGR
- DRY CLASSIFIER
- OTHERS
Total customer satisfaction is our everlasting pursuit!

**QUALITY MATTERS!**

ISO9001:2000 Certificate
ISO14001:2004 Certificate
GB/T28001-2001 Certificate