

ISO 9001 : 2015  
CE (EN-16092 : 2018)  
CSA Z142  
NR 12



# PRESSES

MECHANICAL  
HYDRAULIC & SERVO



Engineering for Excellence

---

---



*Isgec Corporate Office at Noida (a suburb of New Delhi) India.*



Isgec Heavy Engineering Ltd. is a multi-product, multi-location public company that has been providing engineering solutions to customers around the world for the past 90 years.

#### **Manufacturing Facilities:**

- **Mother Plant:** Yamunanagar (Haryana) India
- **Eagle Presses Plant:** Windsor (Ontario) Canada
- **Coastal Plant:** Dahej (Gujarat) India
- **Boiler Manufacturing & Piping Plant:** Rattangarh (Haryana) India
- **Standard Mechanical Presses Plant:** Bawal (Haryana) India
- **Foundry:** Muzaffarnagar (U.P.) India

#### **Other Businesses:**

- **Process Equipment**
- **EPC Projects**
- **Boilers**
- **Sugar Plants & Distillery**

- **Castings**
- **Air Pollution Control Equipment**
- **Contract Manufacturing**

**The Company has Customers in 90 Countries, across 6 Continents**

*Isgec Plant at Yamunanagar (Haryana) India.*



We started production of Hydraulic Presses in 1968 with technical knowhow from John Shaw of UK (1967 to 1978) and of Mechanical Presses in 1985 with technical knowhow from Rovetta of Italy (1985 to 1997). We acquired **Eagle Press & Equipment Co. Ltd.**, a Windsor (Ontario) Canada based Press manufacturer in 2018. Eagle is now a wholly owned company of Isgec Heavy Engineering Ltd. We have experience of building over 5500 Presses, most of which have been supplied in the last 20 years.

### Isgec Presses - References include

- Ashok Leyland
- AK Pres
- Amvian
- BSH Household Appliances
- Big Rapids Products
- Brandl Maschinenbau
- Benteler
- Bharat Forge
- BARC
- Caparo
- Camaco
- CIE Automotive S.A.
- Farguell
- Ford Motors
- Force Motors
- Franke
- Gedia
- Gruppo Azpiaran
- GM de Mexico
- Hirotec
- Hindustan Aeronautics
- Honda Motorcycle & Scooter
- Honda Siel Cars
- H-One
- Hirschvogel
- IFB
- Indian Railways
- Isuzu
- JBM Group
- Kalyani
- Lear
- LuK
- Munjal
- Mahindra & Mahindra
- Maruti Suzuki
- Magnetto
- Nagata
- Nissan
- Ogihara
- Ordnance Factory Board
- Sangwoo Hitech
- Sankei
- Suzuki Motorcycle
- Satyam
- SKHY-Tec
- Tata Motors
- Thai Summit
- ThyssenKrupp
- Topre
- Toyota
- TVS Group
- Unipres
- Uliana Metallurgica
- Valeo Group
- Vinfast
- Willmes Umformtechnik (UTW)
- Yutaka



### Press Manufacturing Plants

Yamunanagar (Haryana) India

Bawal (Haryana) India

Windsor (Ontario) Canada

**5500<sup>+</sup> Presses**  
**100<sup>+</sup> Transfer Presses**  
**90<sup>+</sup> Press Lines**  
**26 Countries**

*Plant at Bawal (Haryana) India for manufacturing Standard GAP Frame, H-Frame Mechanical Presses and Press Brakes*



*Plant at Windsor (Ontario) Canada for manufacturing Mechanical & Hydraulic Presses*

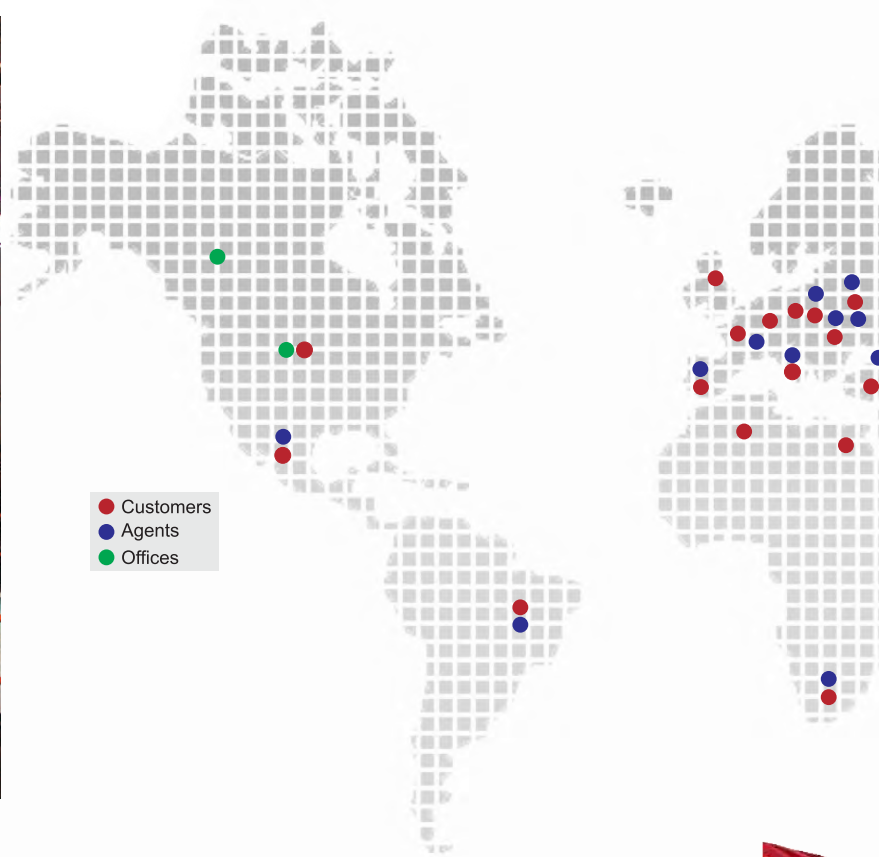


# GLOBAL REACH

USA • Canada • Germany • Brazil • China • Mexico • France • Spain • Sri Lanka • India • Iran • South Africa • Czech Republic • Slovakia  
 UK • Indonesia • Thailand • Turkey • Poland • Hungary • Romania • Egypt • Algeria • Saudi Arabia • Bangladesh • Vietnam



This extra rigid (deflection 0.07 mm / m) 630 T Mechanical Press, running at 100 SPM, is for Progressive Die Applications. It has been supplied in **Brazil**. Another 1500 T Hydraulic Press has also been supplied to the same customer.



1000T Hydraulic Press supplied to an Auto OEM in **Vietnam** for deep draw cross member chassis components



800 T Link Drive Progressive Die Mechanical Press with Bed Size 3500 mm x 1600 mm and 20-40 SPM, installed in **Spain**. Also received repeat order of this press for their plant in **Poland**





630 T Automated Hydraulic Press supplied to German Multinational for their plant near Port Elizabeth, South Africa. This Press is fitted with Robots for loading & unloading of components. Repeat order was placed for their Plant in India and similar 1000 T and 800 T presses have also been supplied to same customer for their China facility.



**PRESSES**  
MECHANICAL • HYDRAULIC • SERVO

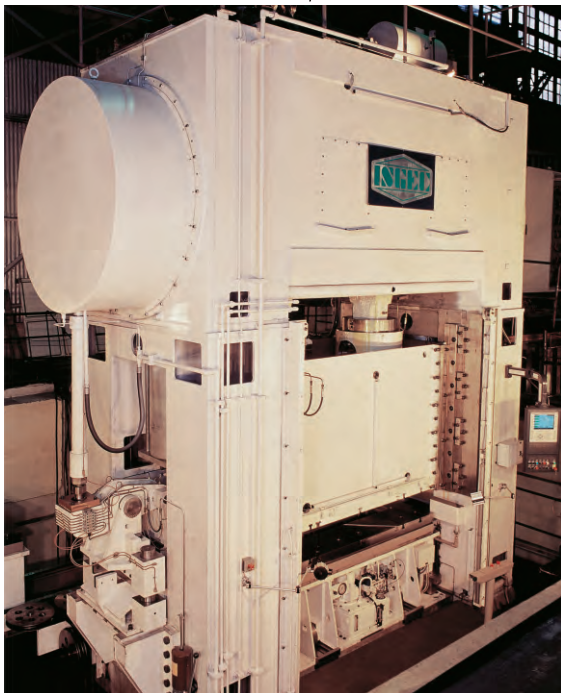


2000 T Mechanical Transfer Presses supplied in USA with Bolster Size 7600 mm x 2800 mm, 3-Axis Servo Transfer System. Below photograph was taken during installation. Subsequently, we have received another order for an Identical Press.



We have supplied 4 similar Progressive Pressing (Progdie) Presses to the Valeo Group. These Presses are equipped with inbuilt shears and feedlines.

Two of these Presses of 1000 T capacity are installed in France. The first one, supplied in the year 2000, is being run at a speed of 100 SPM. Subsequently we have supplied another 1000 T Press to Valeo in 2005. This Press runs at a speed of 120 SPM.



1200 T Transfer Press supplied to an MNC producing car seats at their plant in China. Bolster Size 5500 mm x 2500 mm, equipped with 3 Axis Electronic Servo Transfer System & Destacker



# TANDEM PRESS LINES

12-10-8-8 Tandem Mechanical Press Line  
supplied to Tier-1 automobile supplier in Vietnam





25/20t mlhe

P5

SGEC

SGEC

swiss

swiss

# TANDEM PRESS LINES (MAT Series) 315T to 2000T



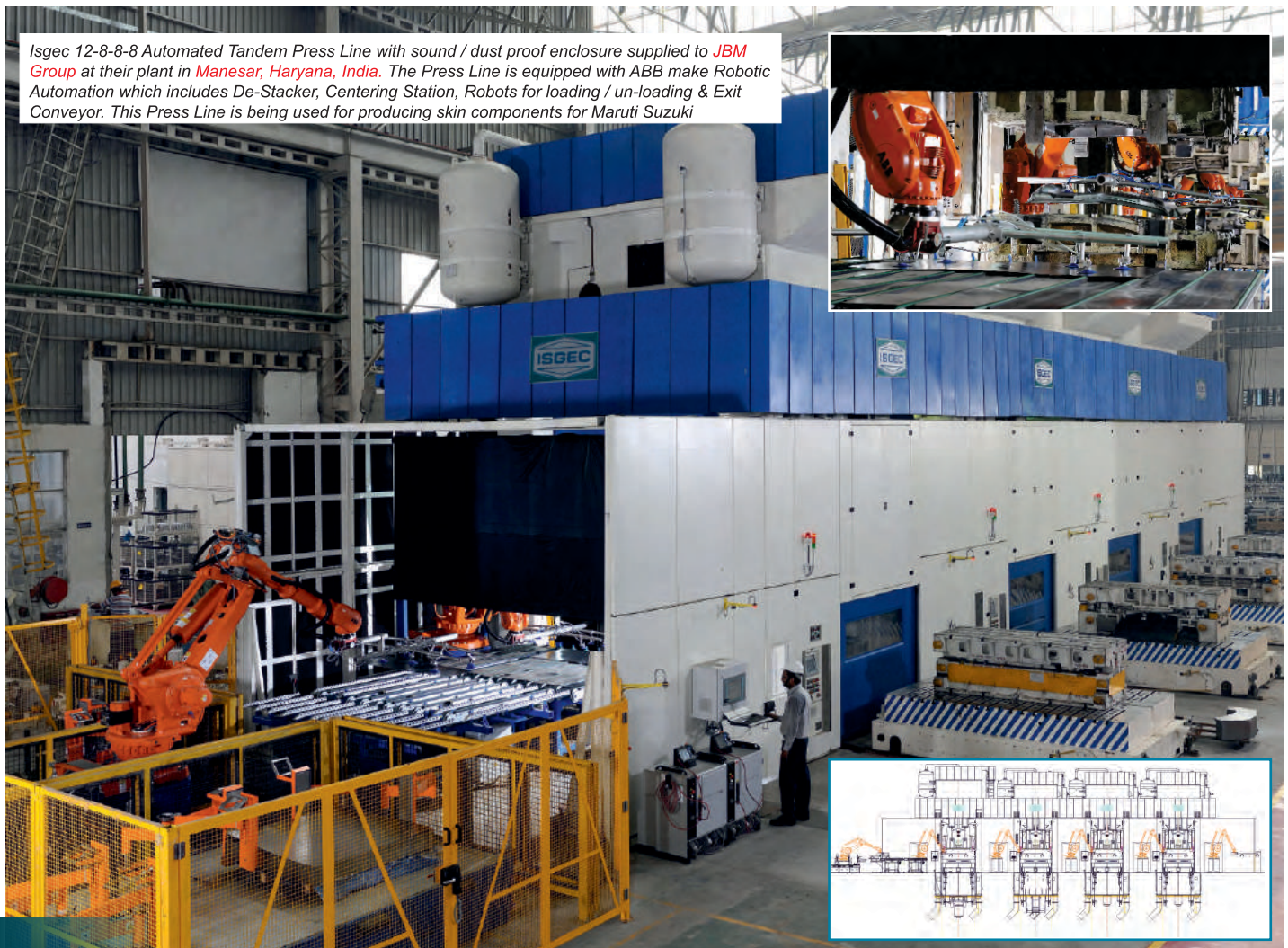
Isgec has so far supplied **90+ Tandem Press Lines.**

Most of these have:

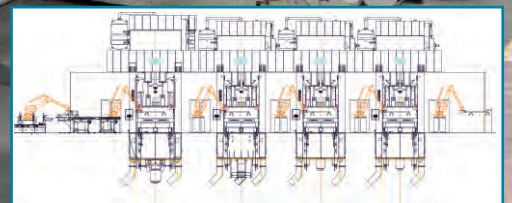
- Link Drive Mechanism on Head Press.
- Variable Speed Drive to Maximize production.
- Compatibility for Inter-Press Automatic Transfer of Parts.
- Quick Die Change with Moving Bolsters, Auto Die Setting and Auto Die Clamps.



6-10-10-6-6 Compact Automated Tandem Press Line with Die Transfer & Storage System installed at **Valeo Transmissions, Mexico.**



Isgec 12-8-8-8 Automated Tandem Press Line with sound / dust proof enclosure supplied to **JBM Group** at their plant in **Manesar, Haryana, India.** The Press Line is equipped with ABB make Robotic Automation which includes De-Stacker, Centering Station, Robots for loading / un-loading & Exit Conveyor. This Press Line is being used for producing skin components for Maruti Suzuki

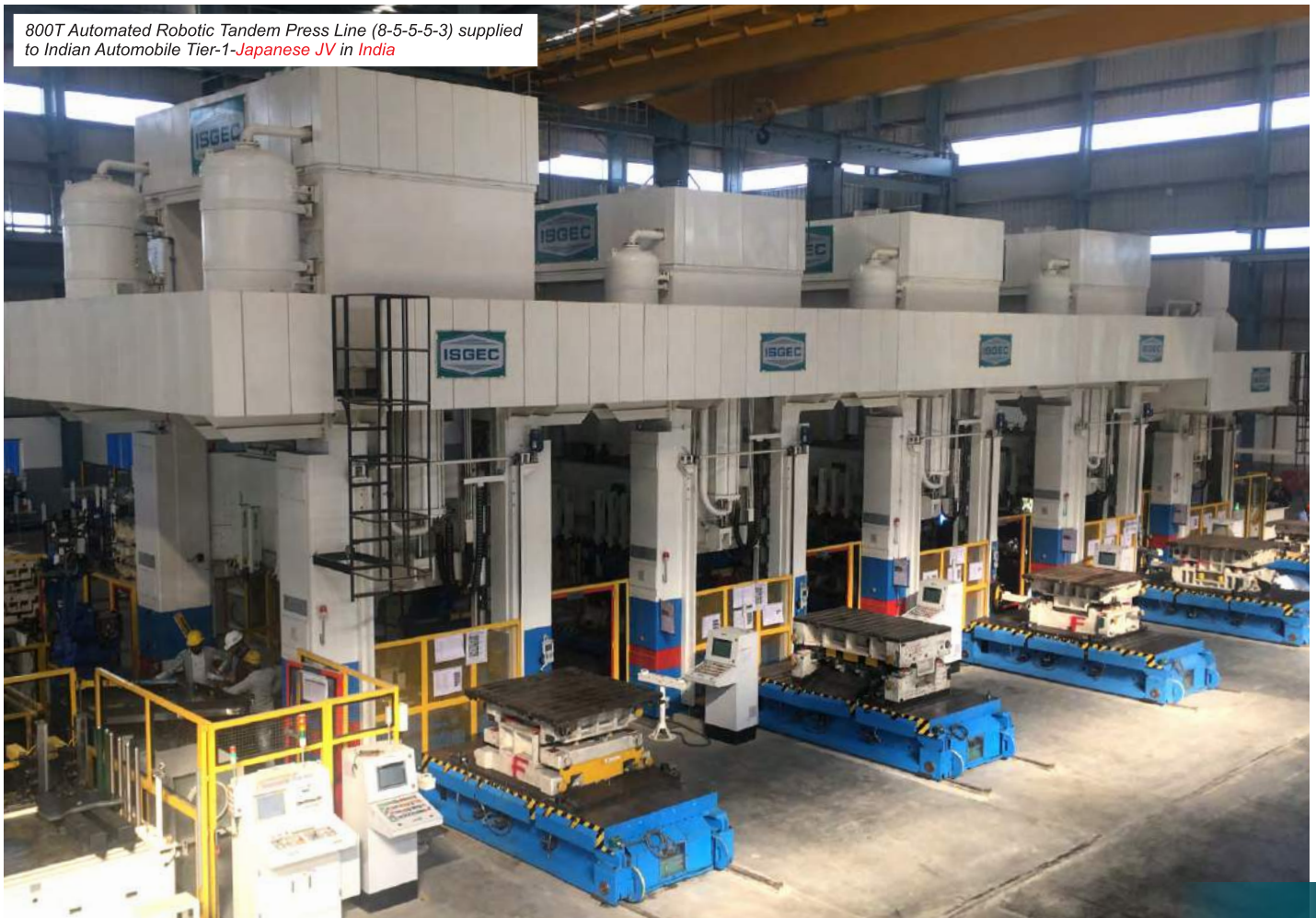




630 T Link Drive & 400 T  
Eccentric Gear Drive Tandem Line  
supplied to  
**Japanese OEM in India**  
for manufacturing of  
Two Wheeler Components



800T Automated Robotic Tandem Press Line (8-5-5-5-3) supplied  
to Indian Automobile Tier-1-**Japanese JV in India**



# TRANSFER PRESSES (MATR Series) 630T to 3500T



1250 T Transfer Press with Bolster Size of 4300 mm x 1400 mm & 630 T with Bolster Size of 3700 mm x 1400 mm integrated with **Korean make** transfer system supplied to Auto Tier-1, Bangalore, **India** supplying majorly to most 4 Wheeler & 2 Wheeler OEM's

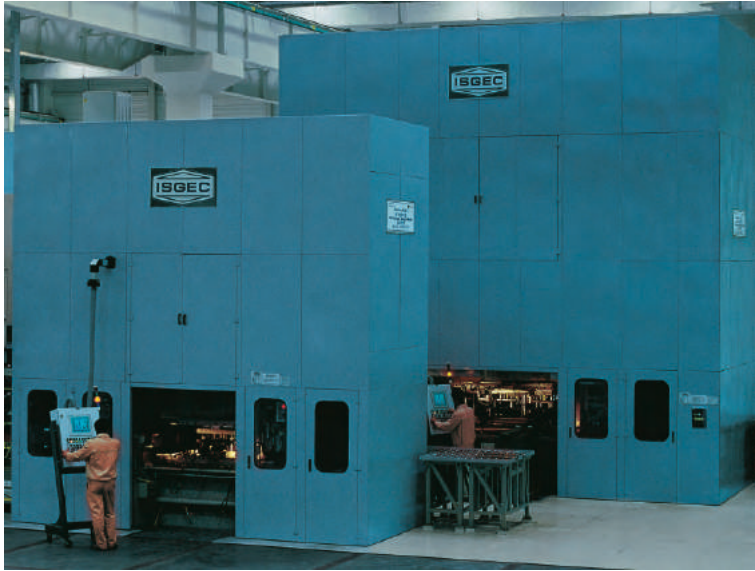


1500T Mechanical Transfer Press supplied to automobile seats manufacturer in **USA** for their plant in **Mexico**

800 T Hydraulic Transfer Press with Parallelism Control System, supplied to **German Multinational** for their plant in **Shanghai, China**



# PROGRESSIVE PRESSES (MAP Series) 315T to 1500T



The customer has entrusted Isgec with all orders for their requirements of Progressive Die Presses in the last 11 years for their plants around the world. These include 11 Presses for their plants in *Buhl, Germany; Sorocaba, Brazil; Taicang, China; Port Elizabeth, South Africa and Hosur, India*. The Presses shown in this picture are installed at their Plant in China

400 MT Progressive Die Mechanical Press Supplied to a Major Automotive Tier-1 Manufacturer in *India*



630 T Progressive Die Mechanical Press supplied to a plant in *Poland*. The press has a bed size of 3700 mm x 1600 mm, Slide Stroke 400 mm and speed of 22-44 spm. Identical presses supplied for their plants in *Mexico and Brazil*.

The customer has awarded an order for 2 no's 1500 T Transfer Mechanical Presses for *Mexico & USA* and 1200 T Progressive Die Mechanical Press for *Brazil* after satisfactory performance of 630 T Progressive Die Mechanical Presses.



400 T Progressive Die Mechanical Press with Bed Size 4000 mm x 1500 mm, installed at *Japanese OEM in India*



# SERVO PRESSES 110T to 3150T



110 T Ring Frame  
Servo Mechanical Press



630 T Servo Mechanical Press with Bolster Size 3400 mm x 1600 mm and 3-50 spm  
installed in *Slovakia* for Progressive Application



630T & 400T  
Straight Sided Servo  
Mechanical Press  
supplied to a  
customer in *Hungary*

400 T Servo Mechanical Press  
with Bolster Size 2800 mm x 1100 mm and 3-60 spm  
supplied to a Customer in *Romania*



# HIGH SPEED PRESSES (MHS Series) 63T to 400T



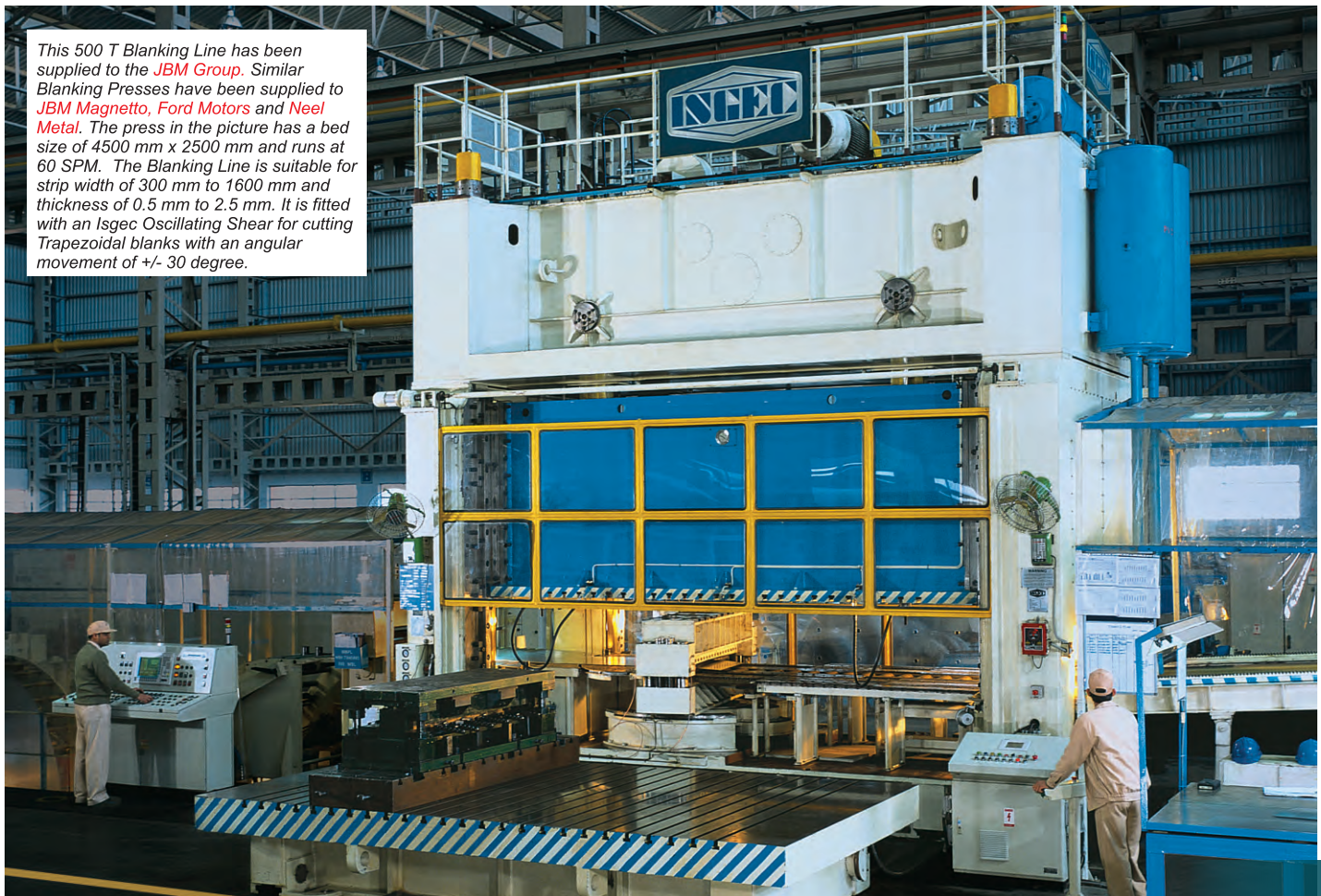
Isgec High speed presses are designed to deliver superior part quality with enhanced die life to suit various applications like Motor Laminations, Heat Exchanger Plates and Automotive Key Blanks etc. High Precision, Dynamic Balancing, Repeatability and Special Guiding systems are few of the key features. Isgec High Speed presses are available upto 600 spm.



A line of 200 T High Speed Presses installed in *Mexico* to produce Automotive Heat exchanger Plates @ 200 spm

## BLANKING PRESS LINES

This 500 T Blanking Line has been supplied to the *JBM Group*. Similar Blanking Presses have been supplied to *JBM Magnetto, Ford Motors* and *Neel Metal*. The press in the picture has a bed size of 4500 mm x 2500 mm and runs at 60 SPM. The Blanking Line is suitable for strip width of 300 mm to 1600 mm and thickness of 0.5 mm to 2.5 mm. It is fitted with an Isgec Oscillating Shear for cutting Trapezoidal blanks with an angular movement of +/- 30 degree.



# HYDRAULIC PRESSES up to 15000T



1200T Hydraulic Press was supplied in **Germany** for tryout and manufacturing critical components for Auto majors. The Press is equipped with moving bolster of size 4500 mm x 2200 mm and has provision for mounting Dampers, which makes it suitable for blanking.



315T Hydraulic Press supplied to a customer in **Romania**



1600T Hydraulic Press for manufacturing Cold Forged Automobile Transmission Components in **India**

1200T Hydraulic Hot Forming Press at Tier-1 automobile supplier in **India**



Range of hydraulic presses supplied to a major Tier-1 automobile supplier in India for manufacturing wheels



1500T Hi-speed Hydraulic Press supplied to a German MNC in Brazil for manufacturing Clutch Components. Similar supplies made to their plants in South Africa & India



12500T Hydraulic Press with large Accumulator Bank is being used for Hot & Cold Forming of High Tensile Steel Plates for Defense & Aerospace Applications



# PRESSES for SPECIAL APPLICATIONS



## HYDRAULIC DIE SPOTTING PRESSES

300T Hydraulic Die Spotting Press supplied to Japanese Tier-1 automobile supplier at their plant in India



300 T Die Spotting Press built to JIS B 6403 Special Grade with Equalizing Beam, Micro-inching features & Blanking Shock Absorbers. We have supplied 35 similar Presses of capacities up to 400 T to major Tool Rooms and OEM's in India including Toyota, Toyotetsu, Ashok Leyland, Tata Motors, Maruti Suzuki, Suzuki, Honda Motorcycles, Sermo-moulds, ThyssenKrupp, Rasandik, & JBM Group.



## HYDRAULIC HEMMING (CLINCHING) PRESSES

Isgec has supplied Hemming Presses to Maruti Suzuki, Ford India & Honda Cars. The Presses in the picture, installed at Ford India, are equipped with Die Carts and a Die Parking System for fast & efficient changeover.







# MECHANICAL TRYOUT PRESSES

2000 T Mechanical Tryout Press with full force Micro Inching supplied to **Tata Motors**



1500T Mechanical Tryout Press Supplied to a Japanese MNC.

We have supplied such Presses upto capacity of 2000T to **Tata Motors, Mahindra Group, Hirotec, Unipres** etc.



1200 T Tryout cum 300 T Die Spotting Press with 180 deg Slide Tilting feature supplied to **Japanese Auto Tier-1** for their JV in **India** for Suzuki Project



1000 T Tryout cum 300 T Die Spotting Press supplied to Japanese Stamping Dies manufacturer in **India**



# PRESSES for SPECIAL APPLICATIONS

## COMPOSITES

2000 T Hydraulic Press for Composite Applications supplied to an OEM Group Company in *India*



## REFRACTORIES

750 T Press supplied for Refractory Application in *Iran*



## HEAT EXCHANGERS

7000 T and 2000 T Hydraulic Presses supplied to manufacture Heat Exchanger Plates for High Capacity Industrial Heat Exchangers



## AEROSPACE

6500 T Hydraulic Elastofforming Press supplied for Aerospace Application in *India*



Component



# STANDARD MECHANICAL PRESSES 40T to 630T

Isgec offers a wide range of Standard Mechanical Press Machines ranging from 40T to 630T in Monolithic Frame, Ring Frame & Gap Frame constructions for Domestic & Export markets. These machines are primarily focused at Small & Medium scale Industries and are available at short delivery.



250 T MAX 1 Monolithic Frame Single Crank Press supplied to Auto Tier-2 in India. MAX 1 Models are available from 200 T to 400 T



Ring Frame Presses GR Series are available from 110 T to 400 T

Battery of MAX 2 Series Monolithic Frame Double Crank Presses ranging from 200 T to 400 T capacity supplied for Progressive & Stamping Applications for Two Wheeler Components to Auto Tier-1 in India. MAX 2 Models are available from 200 T to 630 T

CNC Hydraulic Press Brake 50 T to 800 T



Battery of Gap Frame Presses supplied to Automotive Tier1 Industry in India. Gap Frame Presses GZ/GL series are available from 40T to 400 T. Link Motion and Medium Speed options are also available



Double Crank Gap Frame Presses are available from 110 T to 315 T

# TECHNOLOGY

At Isgec, we have been continuously working on developing and updating ourselves Technologically. After acquiring Technology for Mechanical Presses from Rovetta Presse Spa of Italy (1985 to 1997) and Hydraulic Presses from John Shaw of UK (1967 to 1978), we have now experience of building over 5500 Presses, most of which have been supplied in the last 20 years.

Today Isgec has in-house design capability, expertise in Finite Element Analysis & 3-D Modeling and proven skills in the development of dedicated software for System Controls.

To refine our knowledge base, we obtained the help of world renowned premier research institutes including the Indian Institute of Technology (IIT) and consultancy from Aachen University of Technology, Germany.

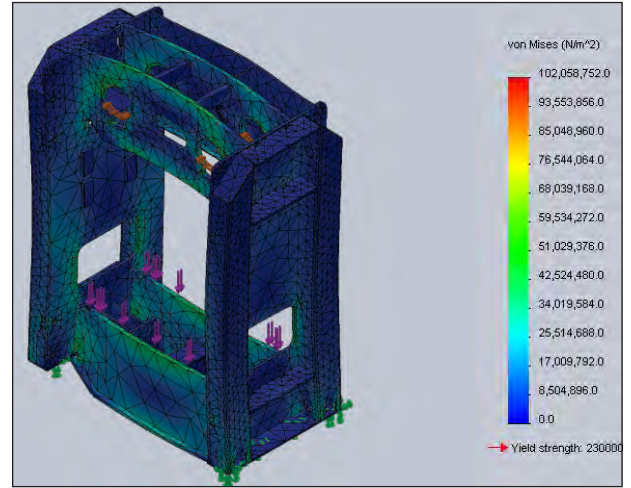
CNC Designs using Servo Motors and Servo Hydraulics are applied extensively on our Presses. Isgec has manufactured a large size 4500 T Hydraulic Press for manufacturing Long Chassis Members for commercial vehicles. This press is equipped with a tool turning device.

## R & D Center

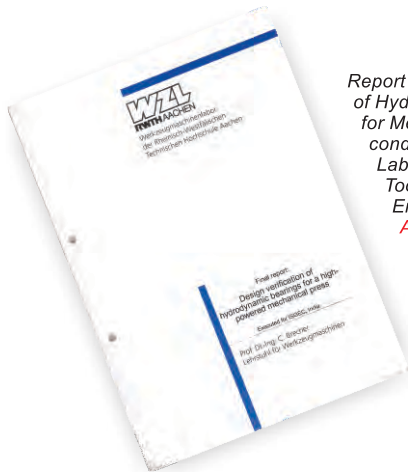


R & D Center at Yamunanagar (Govt. Registered)

## Finite Element Analysis

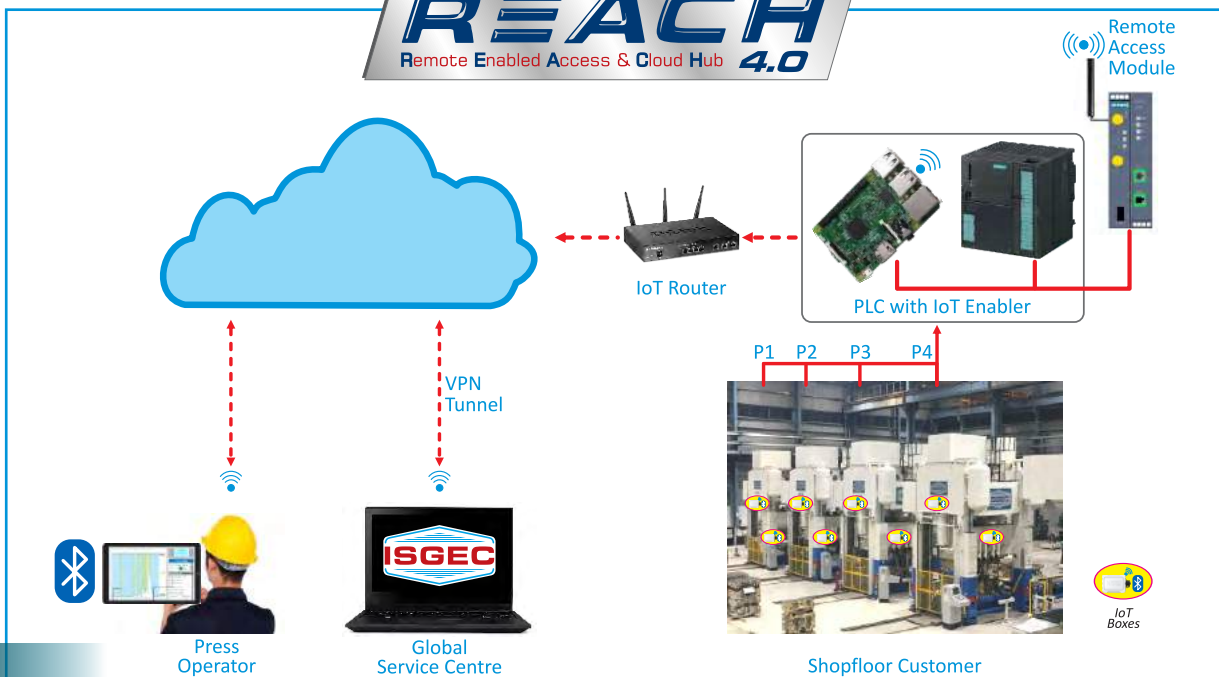
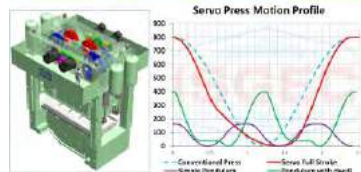


Finite Element Analysis (FEA) adopted to verify fatigue life of Press structure and to enable Maximum Rigidity.



Report of Design Verification of Hydrodynamic Bearings for Mechanical Presses conducted for Isgec by the Laboratory for Machine Tools and Production Engineering (WZL), Aachen University of Technology, Germany

## Servo Press Technology



# QUALITY

## Safety

CE (EN 16092 : 2018)  
 OSHA 1910.217  
 CSA Z142  
 NR-12

## Accuracy

Mechanical Presses : JIS B 6402 - Grade 1  
 Hydraulic Presses : JIS B 6403 - Grade 1  
 Die Spotting Presses : JIS B 6403 - Special Grade

## Rigidity

Deflection of Bed / Slide under full load:  
 Standard - 0.167 mm/m  
 Special - up to 0.07 mm/m



Dedicated software has been developed by Isgec for Press System Controls. The user friendly software is used for instant diagnostics. This picture is of the Main Menu Touch Screen.

# QUALITY COMPONENTS

## Components

- Clutch & Brake Units
- Cam Limit Switches
- Electrical Drives
- Hydraulic Components
- Pneumatic Components
- PLC Controls
- Dual Solenoid Safety Valve

## Makes Normally Used

Ortlinghaus, Goizper, Ompi, Herion  
 Balluf, KAMCO  
 Siemens, Allen Bradley, Telemecanique, Mitsubishi  
 Bosch Rexroth, Parker, Vickers  
 Festo, SMC Pneumatics  
 Siemens, Allen Bradley, Wintress, Mitsubishi  
 ROSS, Herion

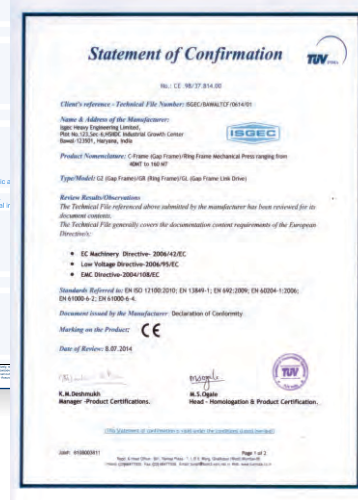
Other Makes can also be used as specified by the customer



ISO Certificate for Quality Assurance from Lloyd's Register.



CE certificate of Adequacy for Gap Frame Mechanical Presses.



OHSAS Certificate for Occupational Health & Safety Management from DNV.



ISO Certificate for Environment Management from DNV.

We can offer third party inspection by TUV, Lloyd, SG or any other inspecting agency

# INFRASTRUCTURE



Waldrich Plano Miller

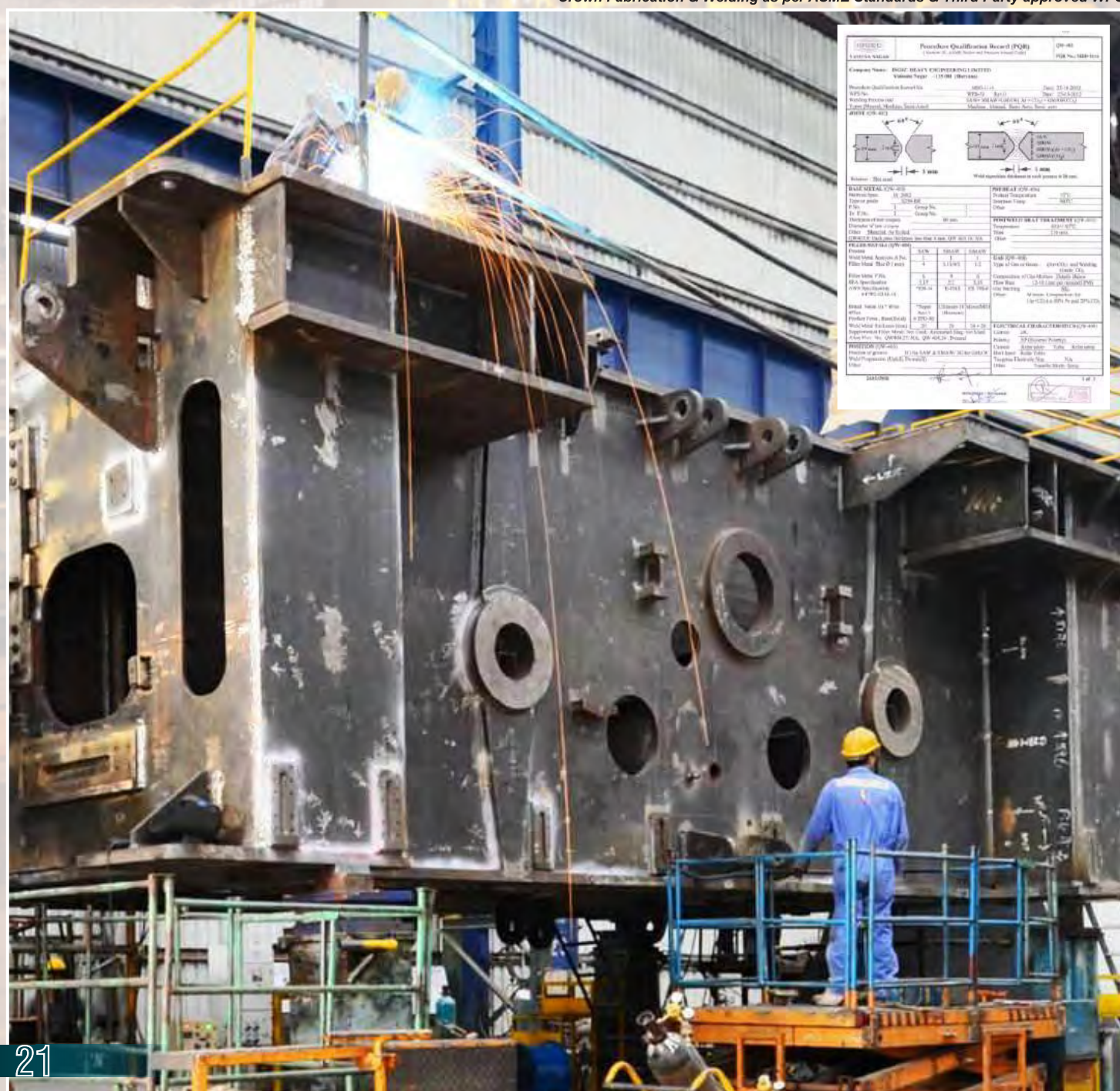


Crown Machining



Coordinate Measuring Machine

*Crown Fabrication & Welding as per ASME Standards & Third Party approved WPS*



Procedure Qualification Record (PQR)		QW-101
(ASME Section IX, QW-101) (Refer to Welding Symbols Manual)		Page No. 10089 Rev.01
Company Name:	DIGEST MEANS ENGINEERING LIMITED	
Procedure Qualification Record No.:	WPS-01	Date: 22.10.2012
Welding Position:	3 G	WPS No: 01
Material:	Carbon Steel	Machine: Universal
Welding Process:	Shielded Metal Arc Welding (SMAW)	
Welding Electrode:	E6010	

Parameter	Value	Requirement
Welding Process	SMAW	SMAW
Welding Position	3G	3G
Welding Electrode	E6010	E6010
Shielding Gas	None	None
Welding Speed	10-15 cm/min	8-15 cm/min
Welding Current	100-120 A	80-120 A
Welding Voltage	28-30V	20-30V
Welding Time	5-10 min	5-10 min

Welding Symbols:

Welding Symbols:

Welding Symbols:

# MANUFACTURING CAPACITY : 20 Lines per year

Each Equivalent to G1 Line (2400 T Head Press)

- Shop Area : 30,000 sq. m. (323,000 sq. ft.)
- Maximum Single Piece Handling Capacity : 300T Head Press
- Maximum Pit Size : 28 m x 10 m x 6 m
- Maximum Size of Stress Relieving Furnace : 14.5 m x 4.6 m x 4 m
- Maximum Size of Boring Machine : 16 m x 4.5 m x 2.4 m
- Large Floor Type Boring Machines : 15 Nos.
- Qualified Engineers : 180 Nos.
- Maximum Capacity of Gear Hobbing Machine : Diameter 2000 mm & module 20



Stress Relieving Furnace



Gleason Gear Hobbing Machine

Circular Seam Welding





One of the Customer Onsite Training Programs. Isgec provides many such Onsite & Offsite customer training programs



### Mechanical Presses



- Complete Press Reconditioning
- Health Check-up & AMC
- Restore Press Accuracy
- Machining of Bolster and Slide plate
- Reconditioning of Drive Components
- PLC System Upgrade
- Retrofitting of Die Cushion System
- Auto Die Change / Robotic interface

• Integration of Pick & Place Automation & Peripheral equipments with the Press

### Hydraulic Presses

- Complete Press Reconditioning
- Health Check-Up & AMC
- Restore Press Accuracy
- Machining of Bolster and Slide plate
- Reconditioning of Hydraulic system
- Upgrade Hydraulic System with Servo Hydraulics
- Retrofitting of Die Cushion System.
- PLC System Upgrade
- Die Cart System
- Integration of Pick & Place Automation & Peripheral equipments with the Press



# RANGE OF PRESSES

## Presses for Sheet Metal Working:

### MECHANICAL PRESSES:

- Servo Mechanical Presses
- Progressive Die Presses
- Tandem Line Presses
- Transfer Presses
- Blanking Press Lines
- High Speed Presses
- Standard Gap Frame Presses (40T to 400T)
- Standard 'H' Frame Presses MAX1 & MAX2 Series (200T to 630T)

### HYDRAULIC PRESSES:

- Servo Hydraulic Presses
- Single Action & Double Action Presses
- Die Spotting Presses
- Tryout Presses
- Hemming Presses
- Rubber Pad Forming Presses
- Standard Presses HSG Series
- Forging Presses

## Presses for other Applications:

### MECHANICAL PRESSES:

- Trimming Presses
- Presses for Hot and Cold Forging

### HYDRAULIC PRESSES:

- Coining & Calibration Presses
- Powder Compacting Presses
- Moulding Presses – Rubber & Brake Lining etc.
- SMC Composite Forming Presses
- Decorative Laminates & Plywood Presses
- Straightening Presses
- Hot Forming Presses
- Wheel & Axle Assembly Presses
- Refractory Presses

## Other Businesses

Process Equipment • EPC Projects • Boilers • Sugar Plants & Distillery • Castings • Contract Manufacturing



India



Canada

[www.isgec.com](http://www.isgec.com)



Follow us on:



**Sales Offices & Plants :** **Isgec Heavy Engineering Ltd.**  
Yamunanagar - 135 001 (Haryana) India  
Tel.: +91-1732-661 104, 661 140  
E-mail: [presses@isgec.com](mailto:presses@isgec.com)

Bawal - 123 501 (Haryana) India  
Tel.: +91-1284-302160  
E-mail: [smpbawal@isgec.com](mailto:smpbawal@isgec.com)

**Eagle Press & Equipment Co. Ltd.**  
Windsor (Ontario) Canada

**Regional Offices :** Chennai • Gurgaon • Mumbai • Noida • Pune

**Overseas Offices :** Chonburi, Thailand • Ontario, Canada • Tennesse, USA

**Corporate Office :** Isgec Heavy Engineering Ltd.  
A-4, Sector 24, Noida - 201 301 (U.P.) India  
Tel.: +91-120-408 50 01 / 02

**Sales Representatives :** Austria • Brazil • China • Egypt • Germany • Hungary • Indonesia • Italy  
Japan • Malaysia • Mexico • Poland • Russia • South Africa • Switzerland  
Spain • Thailand • Turkey • Vietnam