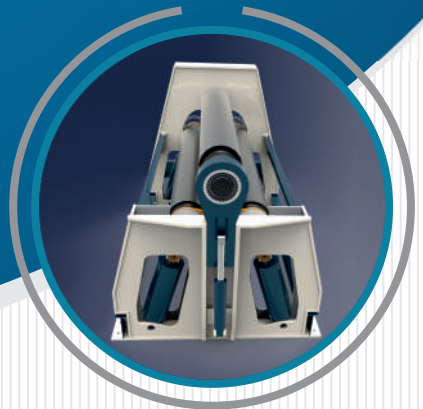




Force Behind Metal Forming



- Hydraulic Plate Rolling Machines
- 4 Roll Plate Rolling Machines
- Dish End Hydraulic Press
- Pipe & Section Bending Machine



**INFORCE ENGINEERING**



[www.platebendingmachine.in](http://www.platebendingmachine.in)



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# Who we are

INFORCE journey started from machine maintenance to manufacturing of latest technology NC Plate Rolling machines backed by an experienced and dedicated team with a vision to provide the world class customer centric solutions for multiple industry segments.



## APPLICATION

Pressure Vessels



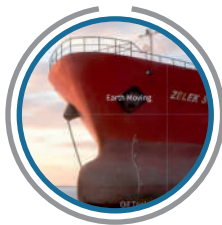
Cement Plants



Earth Moving



Railway Tankers



Shipping



Aero Space



Wind Mills



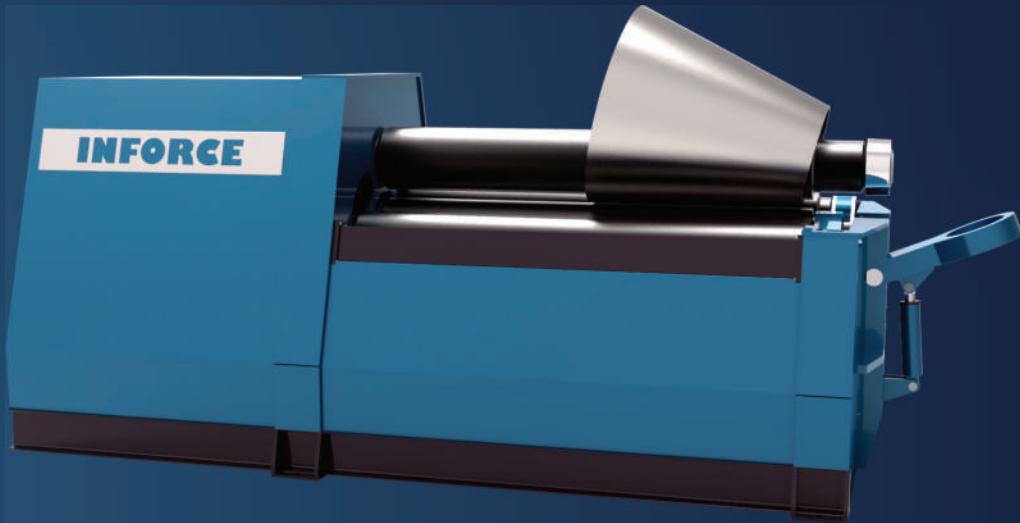
Silos



Storage Tanks



# 3 ROLL FULLY HYDRAULIC NC PLATE ROLLING MACHINE



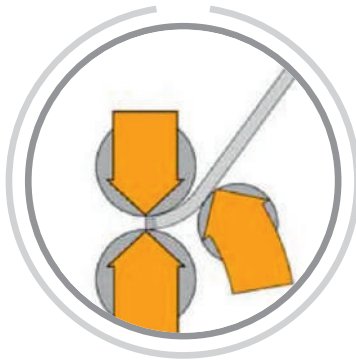
## Inforce Planetary Swing Guide Technology Advantages

As per the latest industry trends all European leading manufacturers make the machine using swing guide technology however some Indian suppliers still making with their old design. We at INFORCE always ready to accept the challenges and adopt the latest trends and technologies for optimum machine performance.



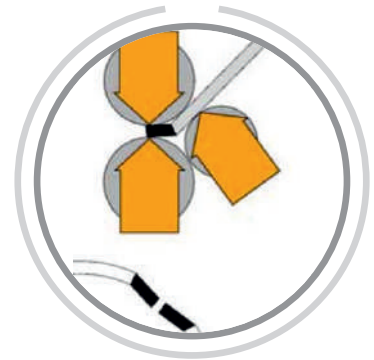
### HOW IT WORKS

The two side rolls pivot around a very heavy solid pin. They pull from “inside” The outboard pushing of the plate during the forming process is “retained” by the inside of the structure.



### THE ADVANTAGES

They allow getting the absolute best pre bending experience. The edge is “prebent” by “elastic” rounding of its fibers (and not “folded” as on the linear guides)



### THE PERFECT PRE BENDING

It makes the radius, without angles, or straight portion. Flat end is virtually removed and reduced by 40-50% compared to the linear guides

# 3 ROLL FULLY HYDRAULIC NC PLATE ROLLING MACHINE

## INFORCE ADVANTAGES

- Heavy duty reinforced welded steel frame.
- Solid Rolls of EN 8/9 with material TC
- Epicyclic Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Bottom rolls hydraulically driven independently.
- Easy Conical Bending
- Push button control of forward/reverse.
- Digital Display of roll position HMI color display

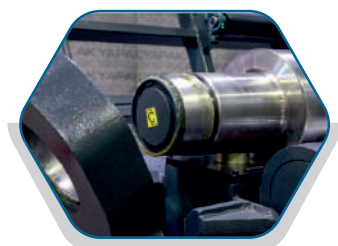


## STANDARD ACCESSORIES

- Solid Rolls of EN 8/9 with material TC
- Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Sophisticated Hydraulic Power Pack
- Movable Operating Panel Desk
- Push button Hydraulic swing arm for finished part removal.

## OPTIONAL ACCESSORIES

- Hardened & Ground Rolls
- Variable Speed of Rotation
- Material Feeding Table
- Side Support for large diameter shells
- Hydraulic Top Support for large diameter shells.
- Auto Ejection System for removing bending parts
- Oil Air Cooling System
- Automatic Lubrication System



Hydraulically Opened Swing Arm for the Shell Removal



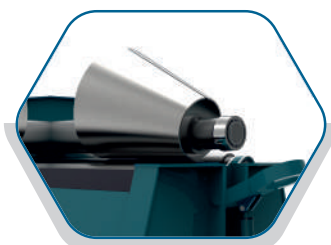
Planetary Gearbox for Maximum Torque



Self-Aligned Spherical Roller Bearings.



Specially Designed Sophisticated Hydraulic System



Accurate Conical Rolling



Touch Screen Color HMI



# OPTIONAL ACCESSORIES FOR PLATE ROLLING MACHINE

## Plate Feeding Support Table

- Plate feeding table can be made by roller assembly, auto self-alignment and automatic plate feeding.
- It reduces your cycle time and gives fast production and removes the alignment errors.



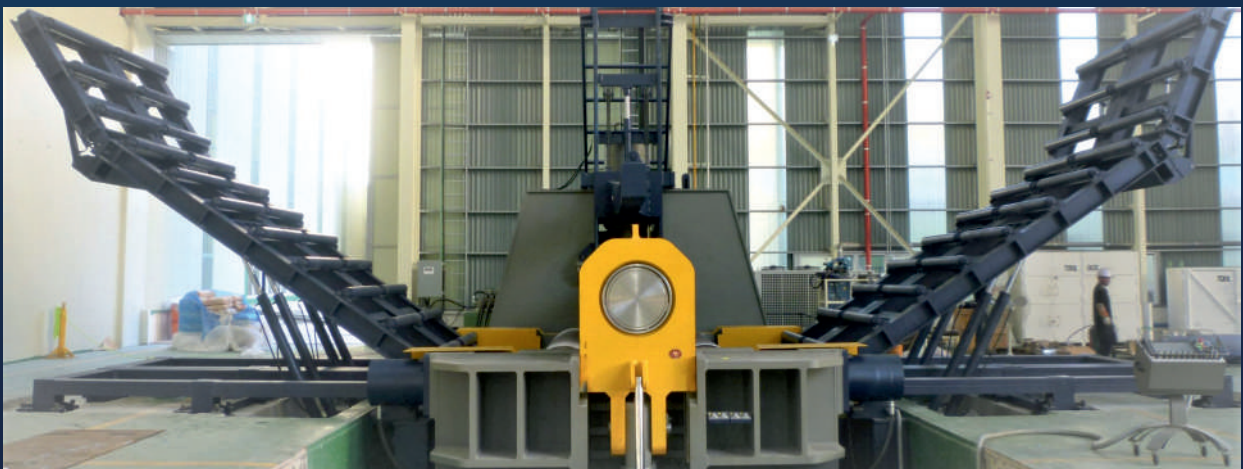
## Hydraulic Top Support for Large Diameter Shells

- While making the large diameter shells the shape is deformed by the self weight.
- Hydraulic Top Support holds the shell at the top and can be adjusted at the required height.

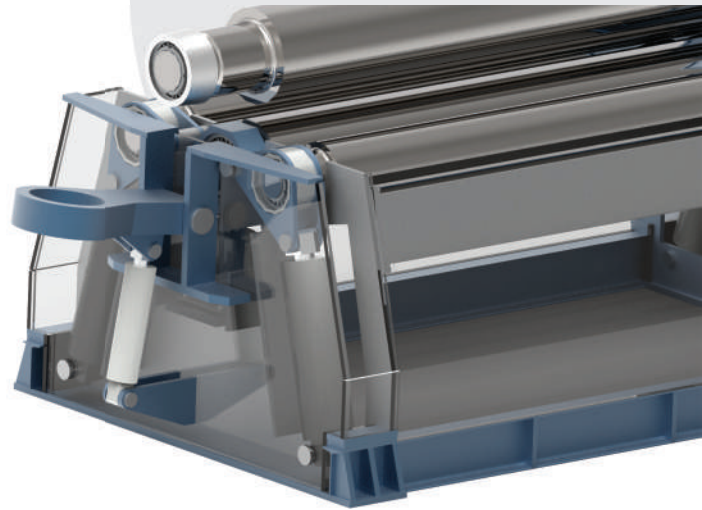
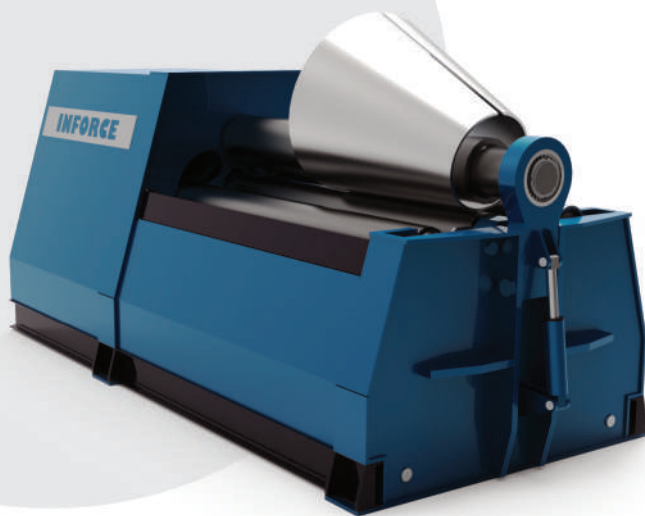


## Hydraulic Side Support for Large Diameter Shells

- While making the large diameter the shape is deformed by the self weight.
- Hydraulic Side Support holds the shell at both the sides and can be adjusted at the required height.



# 4 ROLL FULLY HYDRAULIC NC PLATE ROLLING MACHINE



## INFORCE 4 ROLLS STANDARD FEATURES

- 1 Solid Rolls of EN 8/9 with material TC
- Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Sophisticated Hydraulic Power Pack
- Movable Operating Panel Desk
- Hydraulic swing arm for finished part removal by Push Button
- Conical Bending Attachment

## INFORCE 4 ROLLS OPTIONAL FEATURES

- Hardened & Ground Rolls
- Variable Speed of Rotation
- Material Feeding Table
- Side Support for large diameter shells
- Hydraulic Top Support for large diameter shells.
- Auto Ejection System for removing bending parts
- Oil Air Cooling System
- Automatic Lubrication System

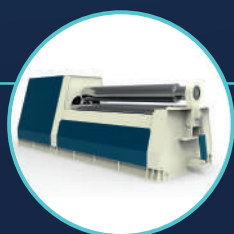
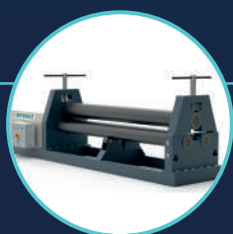


# HOW TO SELECT A PLATE ROLLING MACHINE

- Right selection of Plate Rolling Machine for your need is depending up on the various factors like, your application, your production requirements and your budget.

## WHAT TYPE OF PLATE ROLLING MACHINE BEST FIT YOUR NEEDS....???

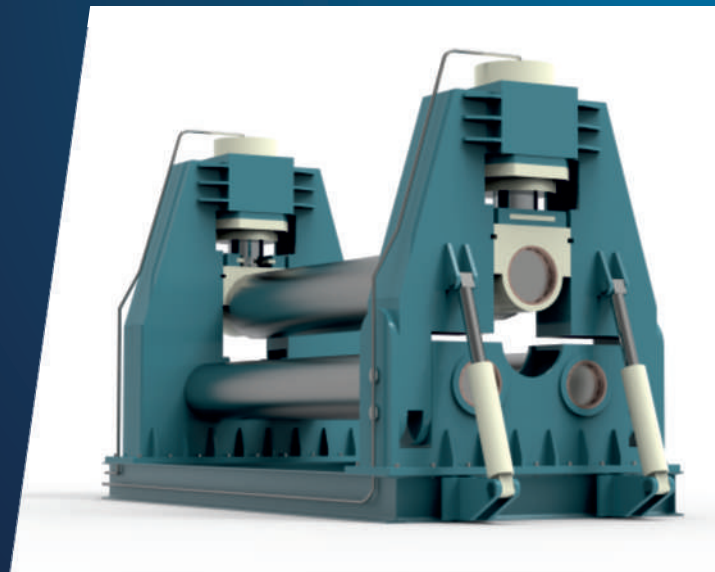
Plate Rolling Machine Features Comparison			
Mechanical Screw Type	Semi Hydraulic Without Pre Pinch (Hydro Mechanical)	Fully Hydraulic with Pre Pinch and NC (3 Roller)	Fully Hydraulic with Pre Pinch and NC (4 Roller)
Basic Model with Basic Features	Economy Model with Additional Features	High Range Model with Pre Pinch & NC	High Range Model with Pre Pinch & NC
Top Roll movement Manual	Top Roll movement by Push Button with Hydraulic System	Bottom 2 Rolls movement by Push Button with Hydraulic System	Bottom 3 Rolls movement by Push Button with Hydraulic System
Without Hydraulic System	2+1 Hydraulic Cylinders and Power Pack	4+1 Hydraulic Cylinders and Power Pack	6+1 Hydraulic Cylinders and Power Pack
Pre Bending (Edge Bending) Not Possible. So 6"-8" Part at Both Ends are straight	Pre Bending (Edge Bending) Not Possible. So 6"-8" Part at Both Ends are straight	Both the ends are bent within the machine easily to get the round shape.	Both the ends are bent within the machine easily to get the round shape
Both side Flat ends to be cut after rolling	Both side Flat ends to be cut after rolling	Both ends are bent in the machine. (Pre Bending)	Both ends are bent in the machine. (Pre Bending)
Extra Material is required to cut the both ends	Extra Material is required to cut the both ends.	No extra material is required so no material wastage or scrap	No extra material is required so no material wastage or scrap
Low Production Rate with material wastage	Medium Production rate with some material wastage	Better Production rate with No material wastage	Highest Production rate with No material wastage



# 3 ROLL SEMI HYDRAULIC NC PLATE ROLLING MACHINE

## INFORCE ADVANTAGES

- Heavy duty reinforced welded steel frame.
- Solid Rolls of EN 8/9 with material TC
- Epicyclic Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Top Roll is hydraulically driven with fix bottom rolls.
- Push button control of forward/reverse.



## STANDARD ACCESSORIES

- Solid Rolls of EN 8/9 with material TC
- Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Sophisticated Hydraulic Power Pack
- Remote Type Push Button Control
- Push button Hydraulic swing arm for finished part removal.

## OPTIONAL ACCESSORIES

- Hardened & Ground Rolls
- Variable Speed of Rotation
- Material Feeding Table
- Side Support for large diameter shells
- Hydraulic Top Support for large diameter shells.
- Auto Ejection System for removing bending parts

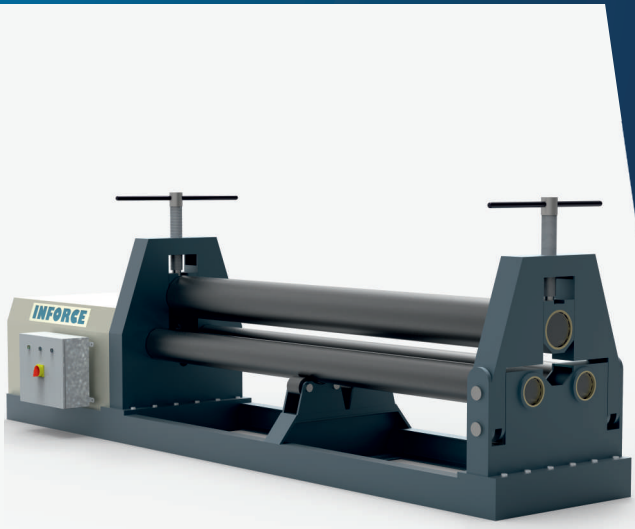




# 3 ROLL MECHANICAL PLATE ROLLING MACHINE

## INFORCE ADVANTAGES

- Heavy duty reinforced welded steel frame.
- C45 Solid Solid Shafts of Alloy Steel
- Epicyclic Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Top Roll is hydraulically driven with fix bottom rolls.
- Push button control of forward/reverse.

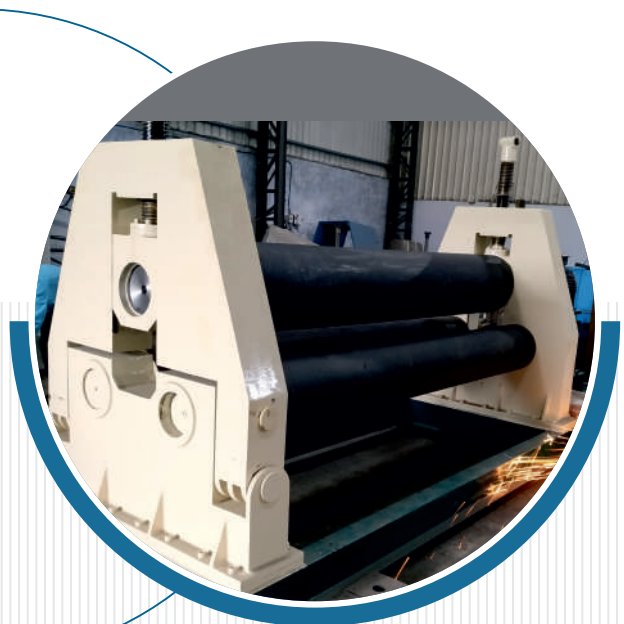
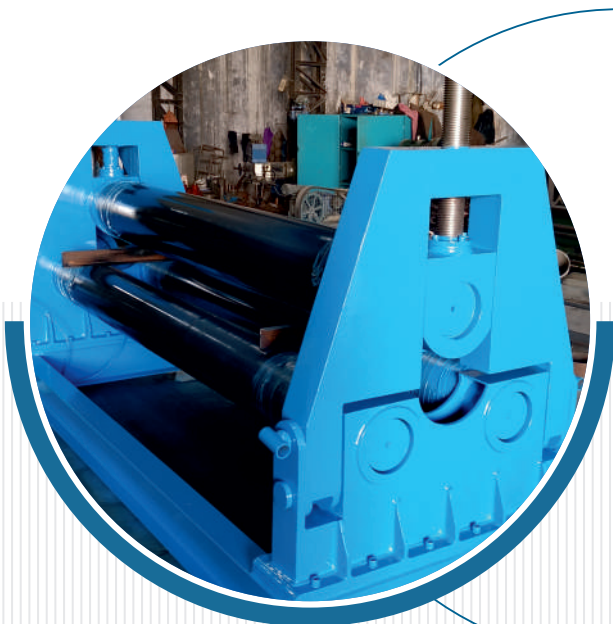


## STANDARD ACCESSORIES

- Solid Shafts of EN 8/9 Planetary Gearbox for higher torque
- Spherical roller bearings on all 3 roll shafts.
- Sophisticated Hydraulic Power Pack
- Remote Type Push Button Control
- Push button Hydraulic swing arm for finished part removal.

## OPTIONAL ACCESSORIES

- Hardened & Ground Rolls
- Variable Speed of Rotation
- Material Feeding Table
- Side Support for large diameter shells
- Hydraulic Top Support for large diameter shells.
- Auto Ejection System for removing bending parts



# DISH END HYDRAULIC PRESS MACHINE

## INFORCE ADVANTAGES

- Heavy duty reinforced welded steel structure.
- The main cylinder will be double acting type manufactured in carbon steel seamless pipe.
- The piston will be E.N.9 with hard chrome plated & ground finished.
- Latest Design Sophisticated Hydraulic Power Pack with suitable Hydraulic Pump & Valves.
- Push button control of cylinder Movement.



## STANDARD ACCESSORIES

- Sophisticated Hydraulic Power Pack
- Hydraulic Tank with Oil Level Indicator
- Remote Type Push Button Control
- Push button Hydraulic swing arm for finished part removal.

## OPTIONAL ACCESSORIES

- Dish End Making Dies as per your requirements.
- Hoist Structure for Holding the Dish End



# DIS END FLANGING MACHINE DISH END SPINNING MACHINE

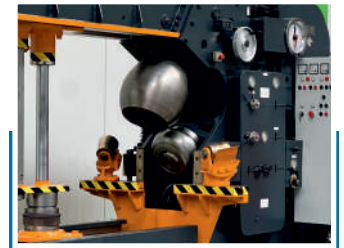
## INFORCE ADVANTAGES

- Heavy duty Body structure of IS 2062 Steel Plates.
- Flanging Head is driven by Planetary Gearbox.
- Flaning Roll Roatation by Hydro Motor for Higer Torque.
- Flaning Roll is made of Alloy Steel & Hardened.
- Thickness up to 32 mm and Diameter Up to 5000 mm



## STANDARD ACCESSORIES

- A set of Flanging Rollers
- A set of Supporting Rollers
- Specially Designed Planetary Gearbox
- Overload Protection
- Push Button Control



# INFORCE



## OUR EXPORTS

- UAE
- OMAN
- QATAR
- NEPAL
- EGYPT
- NIGERIA
- UGANDA
- IVORY COAST
- GUINEA
- TANZANIA
- UZBEKISTAN

## INFORCE ENGINEERING

### UNIT - 1 (Main Assembly Unit)

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Ahmedabad-382430. Gujarat (INDIA)

### UNIT - 2 (Machining Unit)

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# HYDRAULIC PIPE & SECTION BENDING MACHINE (Top Roll Movement)

## INFORCE ADVANTAGES

- Heavy duty welded steel structure.
- Two Driven Rolls
- Horizontal & Vertical Working Positions
- Foot Padel With Safety Device.
- Top Roll is moved by Hydraulic Cylinder
- Suitable Dies for Angle / Channel / Profile & Section Bending.



## STANDARD ACCESSORIES

- ISO Reputed Electric Motor
- Remote Type Push Button Control
- Foot Padel With Safety Device
- Angle / Channel / Profile & Section Bending Dies Included.

## OPTIONAL ACCESSORIES

- Pipe Benidng Dies
- Angle Bending Guide Rolls
- Double Speed Drive
- Digital Readout System (DRO)
- NC Controlled

