



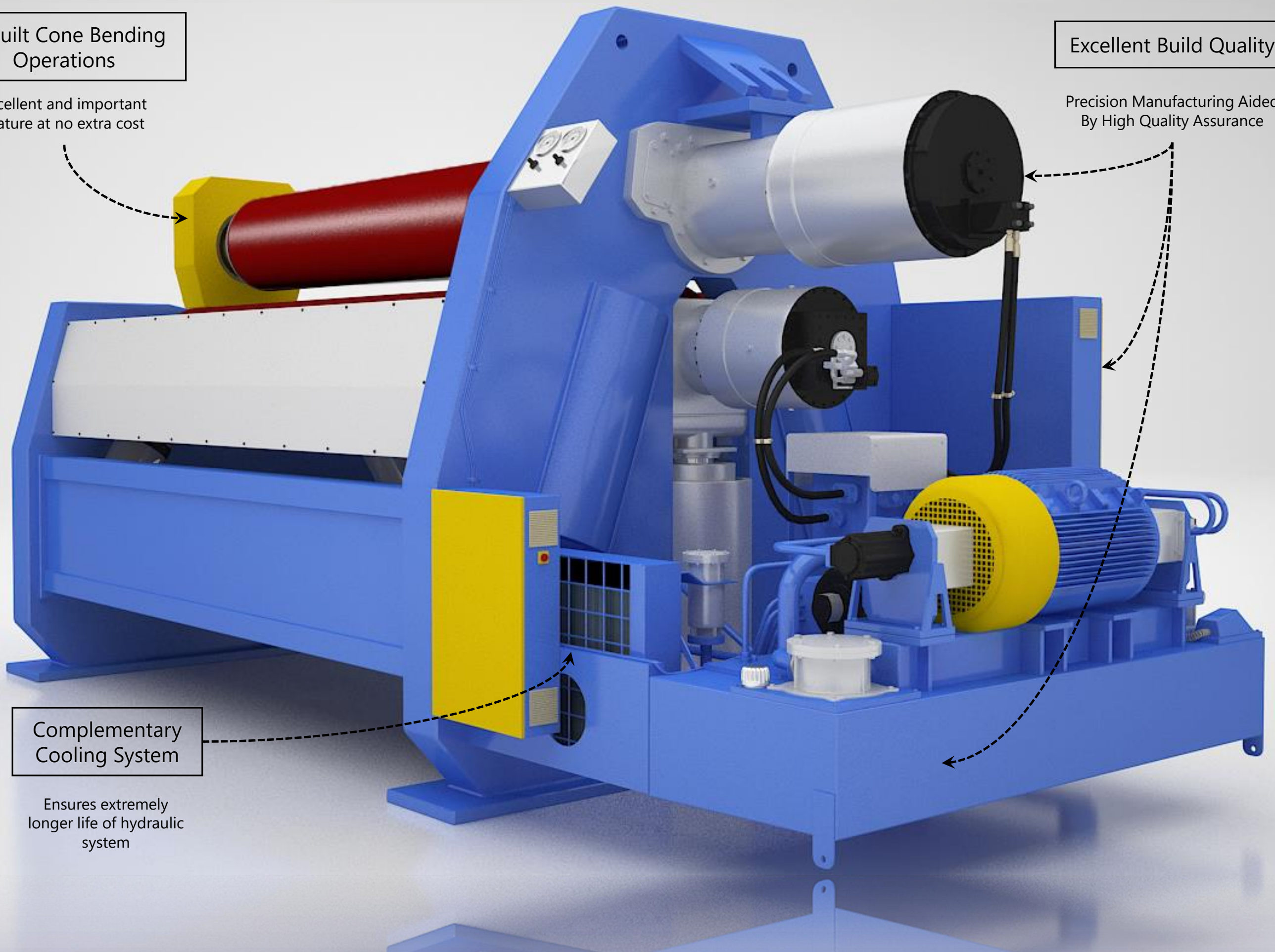
# F-SERIES FOUR ROLL PLATE BENDING MACHINE

In-built Cone Bending Operations

Excellent and important feature at no extra cost

Excellent Build Quality

Precision Manufacturing Aided By High Quality Assurance



Complementary Cooling System

Ensures extremely longer life of hydraulic system

**16 DIFFERENT MODELS**

Supporting The Widest Range Of Applications

**UNBEATABLE DESIGN**

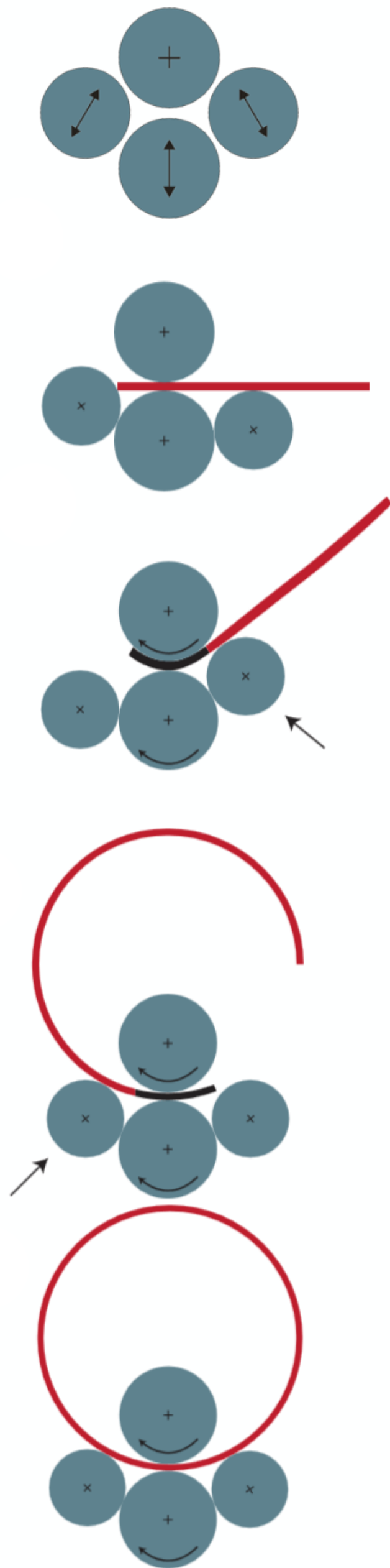
Perfected Over 40+ Years Of Design Excellence And Innovation

**HIMALAYA ASSURANCE**

Underpinned By Experience Of 2500+ Machines

# ADVANTAGES OF FOUR ROLL DESIGN

## ROLL MOVEMENT IN FOUR ROLL DESIGN



Himalaya's Four Roll Machines deliver par performance and flexibility. They are also extremely durable and accurate, and are therefore ideal for medium-to-heavy duty rolling.

- ✓ These Plate Bending Machines have four rolls and liner guidance for the side rolls.
- ✓ The Top roll remains fixed, the bottom roll moves vertically, and the two side rolls move in liner guide way to form the shell.
- ✓ The top and bottom rolls are power driven by planetary gearboxes with hydraulic motors.
- ✓ Thin Plates need closely spaced rolls to avoid driving slippage.
- ✓ Location of the bottom roll directly below the top roll ensures very good grip on such jobs.
- ✓ Due to the high productivity of low thickness shells, the four roll machines prove to be an attractive investment for mass production of pipes and shells.
- ✓ Over and above the cones, other non-circular shapes like oil tankers & elliptical shells can be made.
- ✓ This type of roll configuration also facilitates CNC operation.
- ✓ 20-30% higher Investment for the same thickness capacity and span compared to similar three roll machine.

Himalaya's four roll plate bending machines deliver a multi-fold advantage to your fabrication infrastructure - a remarkably efficient and lasting performance, an unbeatable edge bending precision, reduced capital expenditure, and lower ongoing operational and maintenance costs.

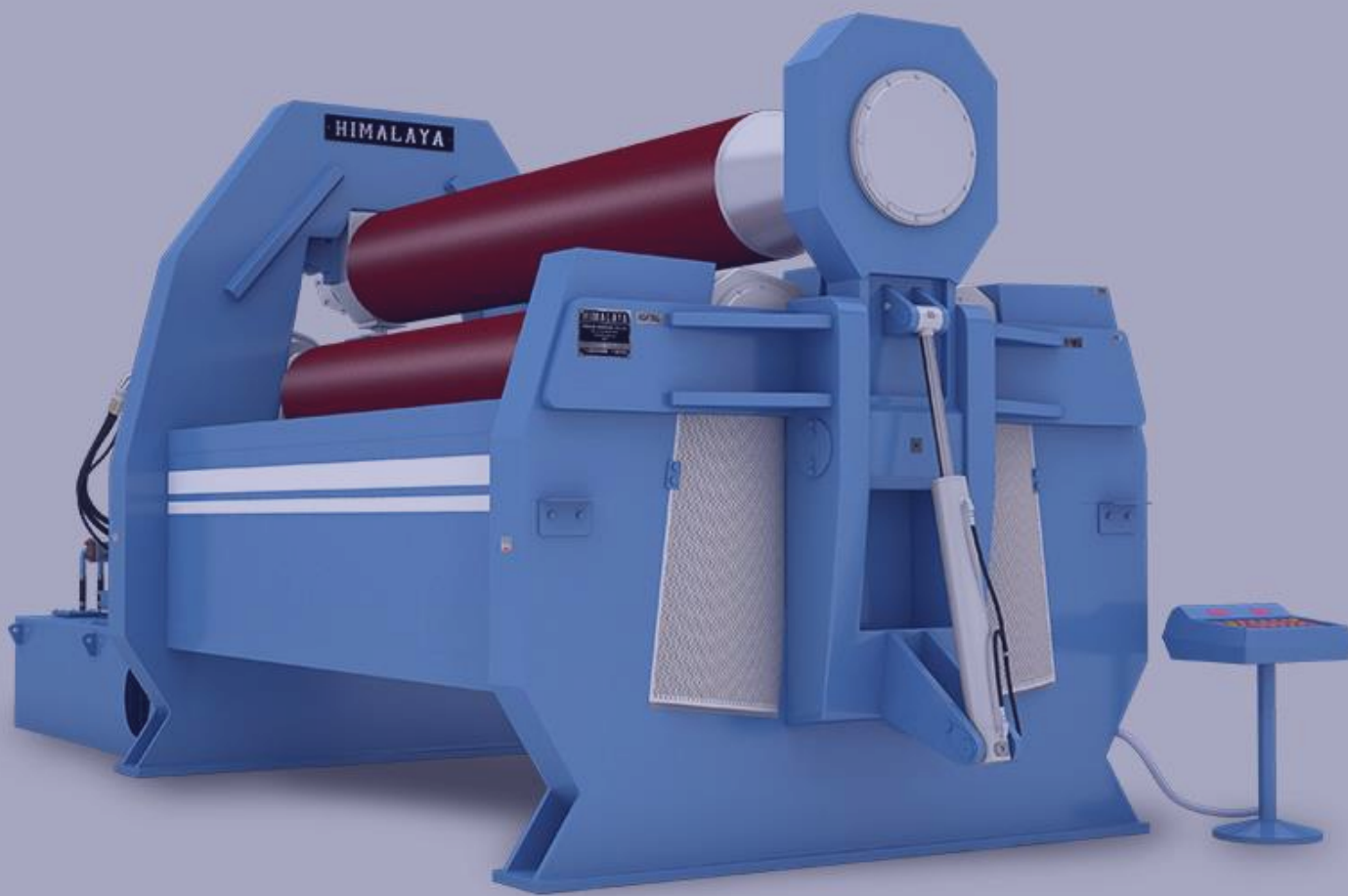
# THE HIMALAYA ADVANTAGE

## Extensive Manufacturing Complex

16,000 square meters of manufacturing facility in Vadodara, India's Engineering Hub that strategically allows us easy access to infrastructure facilities like transport, raw materials, skilled workforce, power supply etc.

## 40+ Years Of Excellence

Our manufacturing excellence is underpinned by continuous product development. We have been leading the industry since over 40 years in design, build quality, performance and value for money. All our designs have been developed in-house and are fully supported by us.



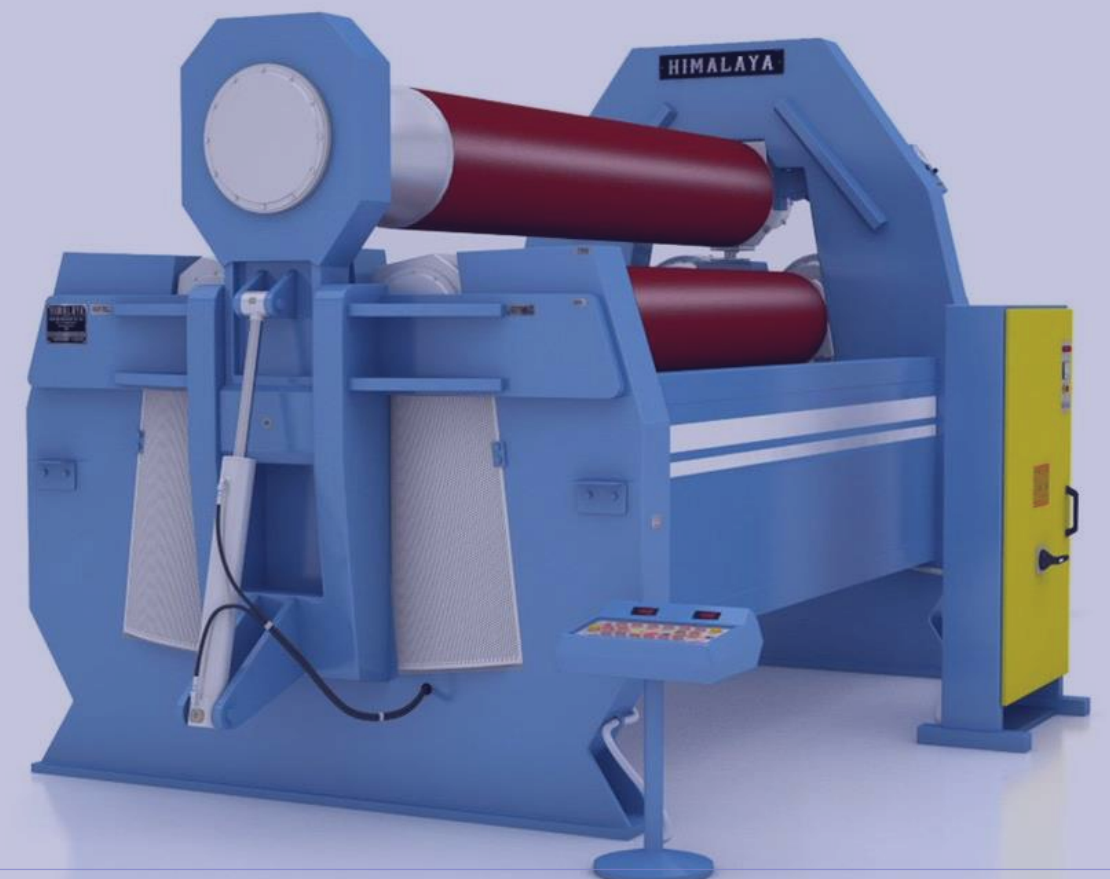
## Over 2500 Machines In Operation

We have manufactured and commissioned over 2500 machines across India and overseas. The first machine we ever sold is still in operation and is proudly supported by us.

## 400+ Repeat Customers

We enjoy loyalty of over 400 delighted customers. Beyond excellent performance of our machines, they also enjoy our on-demand service and our ever-ready inventory of a full set of spares for all machines we manufacture.

This gives you tremendous peace of mind that you are in good hands.



# F-SERIES PRODUCT RANGE

All Sizes in mm

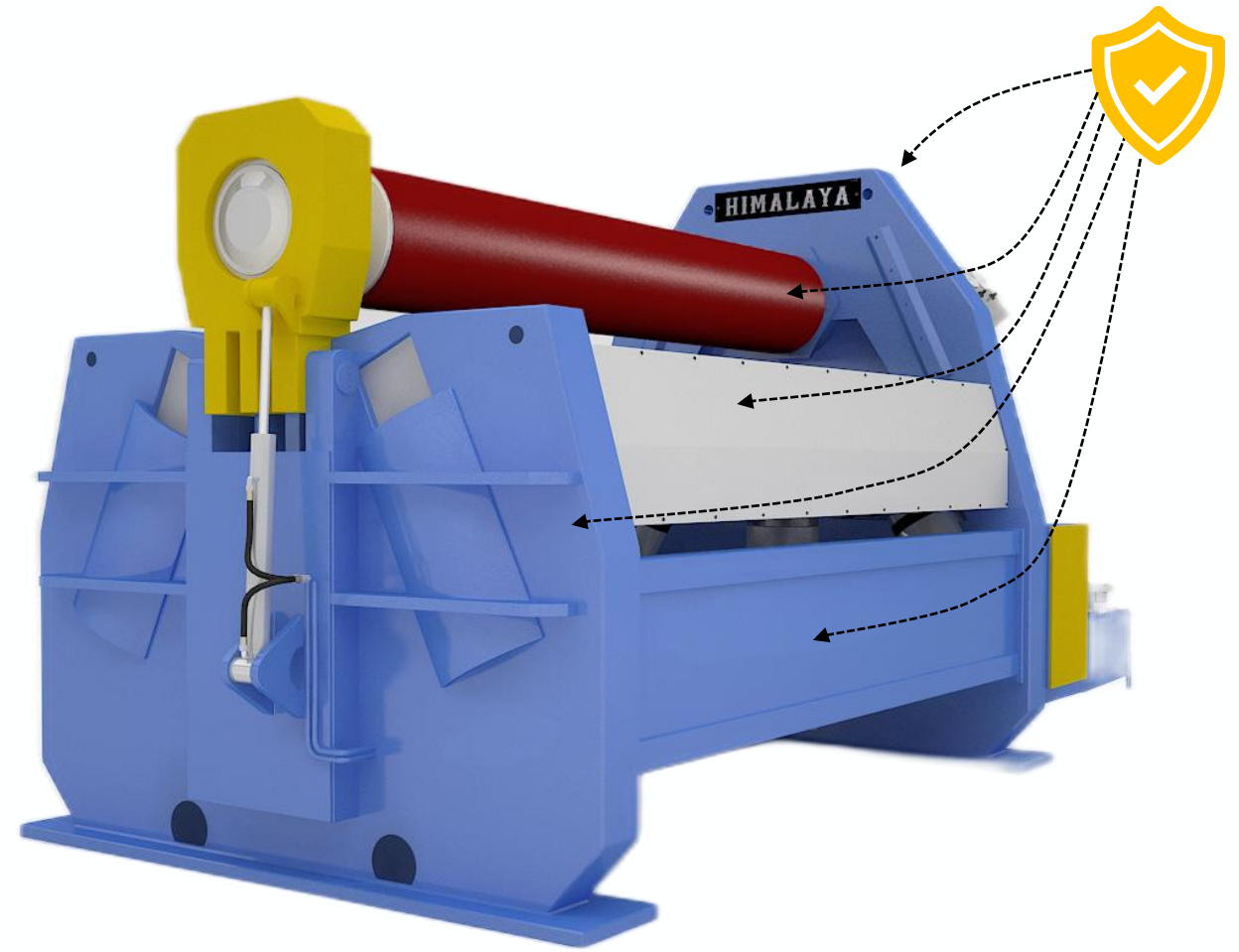
Model	Top Roll Size	Bottom Roll Size	Side Roll Size	Rolling 2.5 BR	Rolling 5 BR	Pre-pinching 2T	Pre-pinching 3T
<b>FULLY HYDRAULIC MACHINES IN 2500 MM WIDTH</b>							
FDC/25/2	250	250	215	12	14	07	08
FEC/25/2	280	280	245	15	18	09	12
FGH/25/2	330	330	270	18	23	12	15
FHH/25/2	360	350	290	23	28	15	19
FJH/25/2	400	390	320	28	37	19	23
FKH/25/2	450	440	370	37	46	23	28
FLH/25/2	490	480	400	43	52	28	37
FMH/25/2	540	520	440	50	58	37	43
<b>FULLY HYDRAULIC MACHINES IN 3000 MM WIDTH</b>							
FDC/30/2	250	250	215	09	12	05	07
FEC/30/2	280	280	245	13	16	07	09
FGH/30/2	330	330	270	14	19	09	12
FHH/30/2	360	350	290	21	25	12	15
FJH/30/2	400	390	320	25	32	15	19
FKH/30/2	450	440	370	32	40	19	25
FLH/30/2	490	480	400	37	46	23	31
FMH/30/2	540	520	440	43	53	31	38

We offer machines with fixed as well as variable speeds according to your application and feed requirements.

# BUILD QUALITY & BENEFITS

## STURDY STEEL STRUCTURE

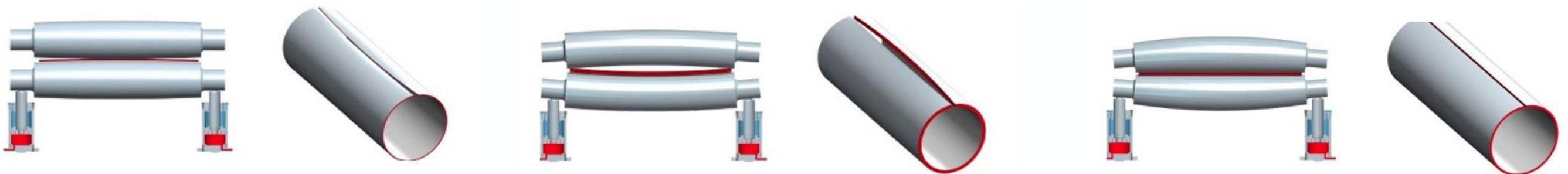
Himalaya machines have a robust steel structure made from heavy metal plates. The frames are connected to each other by a strong box design chassis. The frames have interlocks & strengthening ribs. The roll guideways are machined together utilizing a fixed single reference point which allows for parallelism of all axes and precise surfaces, as well as longevity and precision of the critical characteristics of the machine.



## ROLLS

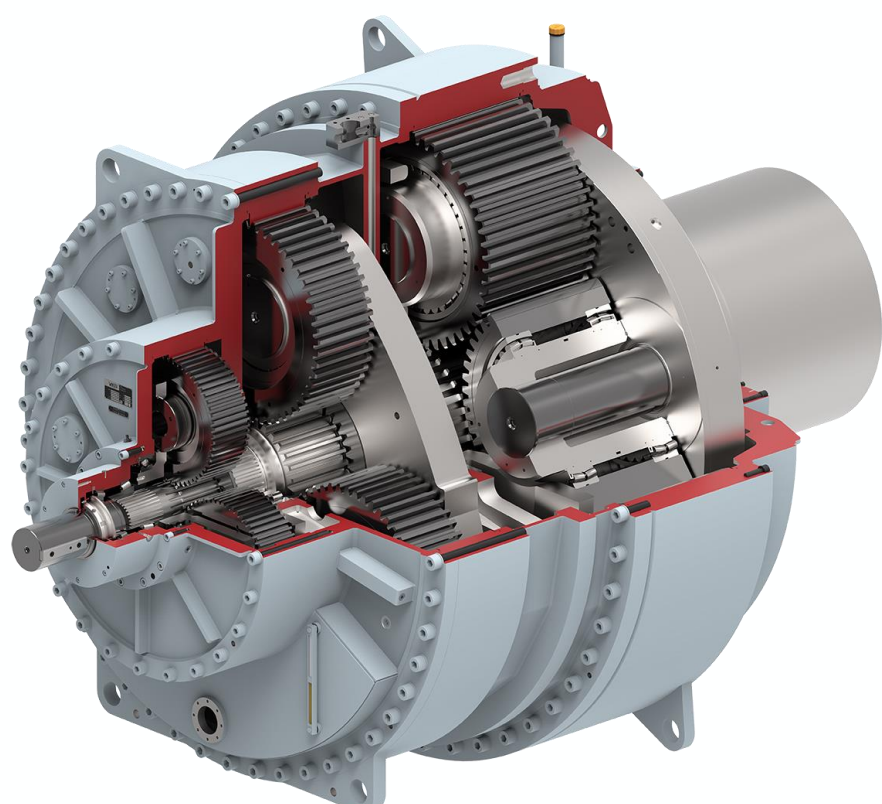
The rolls are the most important elements of our machines. Himalaya designs the rolls with optimal diameter and uses forged carbon steel rolls that are machined by high precision CNC lathes. Our rolls have a special spline-based design that is extremely efficient in connecting the rolls with the planetary gear system. This diminishes points of roll failure compared to welded connections provided by other manufacturers.

## CROWNING



Our rolls are crowned to compensate for roll deflection during the bending process. Custom crown-machined rolls for different materials or thickness can be selected when ordering.

## HYDRAULIC GEAR SYSTEM



Additional energy saving is ensured in our variable geometry machines by a hydraulic system which can work at less than full capacity when jobs less than maximum thickness are rolled. Twin speed operation also reduces the energy consumption up to 50% when slower operating speed is selected.

**Himalaya Planetary driving system™** used in our machines is efficient and eliminates energy wastage associated with heavy-transmission systems and yet achieves the goal of speed reduction by increasing the stages in gears and pinions.

# OPERATIONAL BENEFITS

## Easy Cone Bending

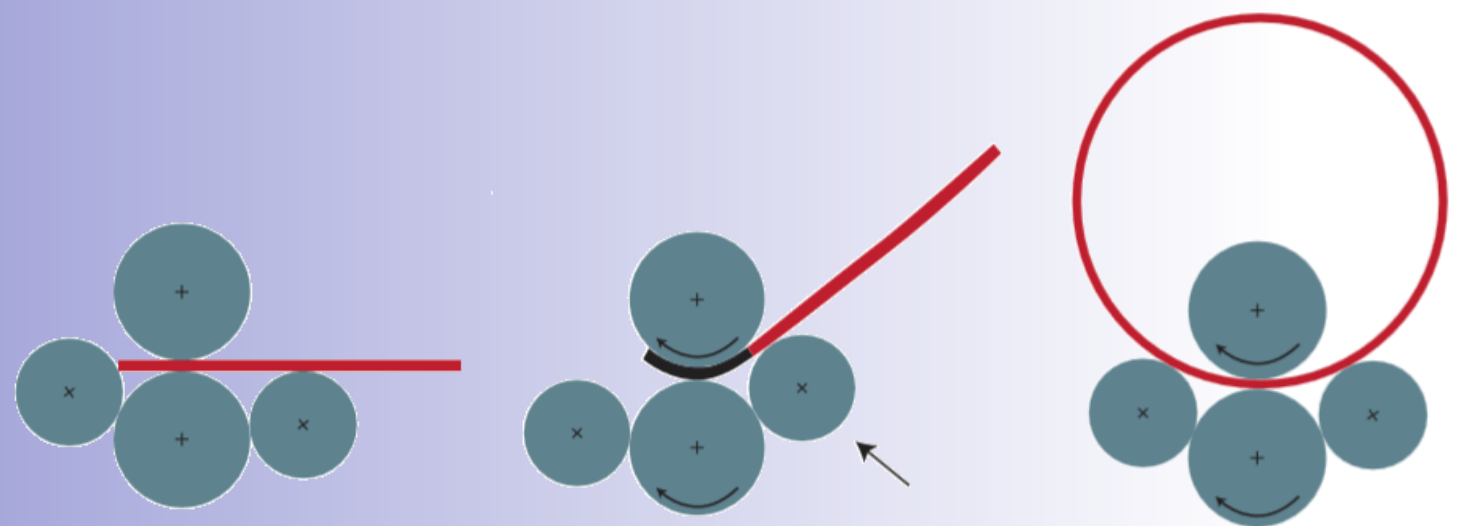


The cone bending process with the F series is simple. The bottom roll needs to be inclined to achieve cone bending geometry. This is controlled and monitored by electronic microprocessor (on some select models).

Our control system also ensures easy and accurate return to parallel setting after cone bending resulting into precision on repetitive jobs.

## Pre-Pinching (Pre-Bending)

Edge bending can be done before or after shell rolling depending on operator skill and choice. Thin plates can be rolled and edge-bent in a single pass.



## High Productivity

Our machines are state-of-the-art in forming cylinders and cones.

They are easy to install, extremely user-friendly and convenient to service. Our machines are simple to learn and operate. They don't require extensive operator training due to simplistic design.

Spare parts are rarely needed due to robust construction and readily available with us.

Tropicalized oil cooling system ensures non-stop operations in hot working conditions.

Easy to understand hydraulic and electrical system reduce unwanted down time.

## Versatility

Other than cylinders and cones, other non-circular shapes like oil tankers and elliptical shells can be made using a PLC version. The machine can also be used as a heavy-duty press brake for other forming operations.

## Economy

Due to the exceptional build quality, failure-resistant linear guideway design, high operational precision, and a wide range of jobs that can accurately rolled, the F series machines prove to be the most attractive investment for any type of industry, regular production or a job shop.

Due to a variety of accessories that are available to enhance the machine capability, the investment is justified in more than one way. The energy saving features and negligible maintenance cost also promise a low running cost.

# ADDITIONAL FEATURES

Alongside our excellent design and build quality, we provide the following additional features and accessories upon request from our client.

1

## SURFACE-HARDENED ROLLS

Induction Hardened Rolls having Surface Hardness between 42 to 55 HRC for additional durability and longevity.

## COMPLETE WINDMILL TOWER MFG PACKAGE

Including central and side shell support, tilting conveyors, hardened rolls and PLC/CNC capabilities.

2

3

## HARD CHROME PLATED ROLLS

Hard chrome plated rolls for special applications in Pharma and Dairy Industry.

## CENTRAL & SIDE SHELL SUPPORTS

Central & side shell supports provide ease of operation, operational cost saving and productivity while increasing safety of workers.

4

5

## TILTING TABLE

Tilting tables for support while feeding plates at specific angles. Specially useful for plates of larger lengths.

## CONVEYORS

Powered Conveyors that provide ease of plate feeding in case of longer plate lengths, improved machine performance and longevity.

6

7

## PLC CONTROL

PLC Controllers provide precision, ease of operation, while identifying needs for preventive maintenance to increase machine life and optimize productivity.

**HIMALAYA**

*Unmatched* capacity.

*Superlative* precision.

*Optimal* turnout.

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