



- Stainless Steel HF Welding Technology & Mills
- Coil Processing Lines & Finishing Equipment
- Tube Finishing Equipment
- Roll Tooling



GALLIUM HOLDINGS

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SALES & TECHNICAL SUPPORT

INDIA
DUBAI, U.A.E
MALAYSIA
SHANGHAI, CHINA

About Us

With a legacy spanning four decades, Gallium has been a trusted provider of steel processing equipment to the global steel industry.

Over the years, Gallium has been transformed from an equipment provider into a technology leader providing end-to-end engineering, procurement, consultancy and manufacturing services to its clients in the steel sector.

With ever growing demand for high productivity systems and modern manufacturing practices, Gallium has also been instrumental in developing proprietary applications and technologies including high-end ERW tube forming, tube finishing equipment, coil processing machinery and tooling with customized features.

Geographical Presence

Gallium has corporate offices, manufacturing facilities, technology development & design centers and sales representative offices in multiple countries across South-Asia, South-East Asia, Middle-East and Latin America.

Furthermore, Gallium has created a vast network of representatives around the world who remain in close contact with our valued clients and fulfill their technical requirements.

Gallium Expertise

Gallium expertise spans across manufacturing & services verticals. Key Equipments provided by Gallium have been incorporated in the subsequent pages

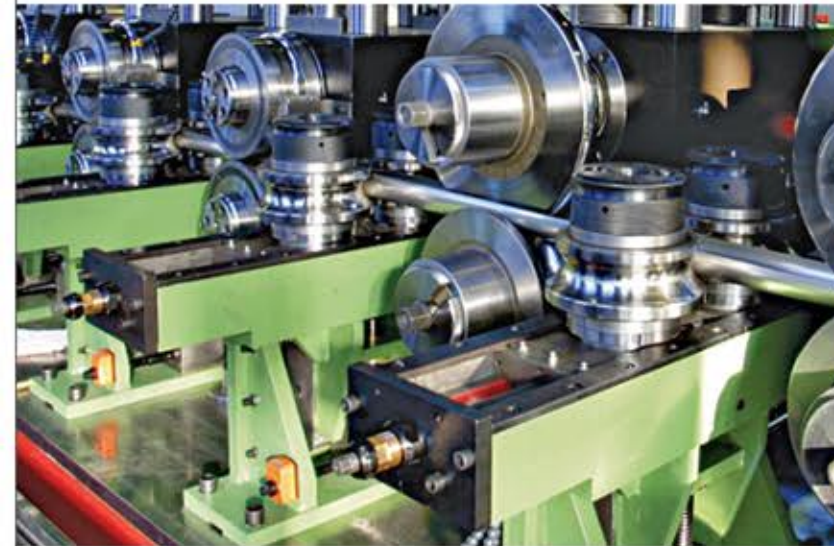
- Steel Plant Engineering and Site Survey
- Custom Manufacturing and Technology for Steel Plant, Coil Processing Lines, In line Galvanizing, Cold Roll formed Welded Steel Tube Plants and Equipment
- Galvanizing Lines, Color Coating Line and Rolling Mills
- Custom Engineering and Tool Design/Development
- Plant Layout Assistance
- Plant Productivity Assessment and Improvement Studies
- Manufacturing Production Assistance
- Equipment Installation and Commissioning
- Equipment Retrofitting and Revamping
- Feasibility Reports and Detailed Project Reports



Speciality Solutions For Stainless Steel Tubes, Profile, Sheet & Coils.



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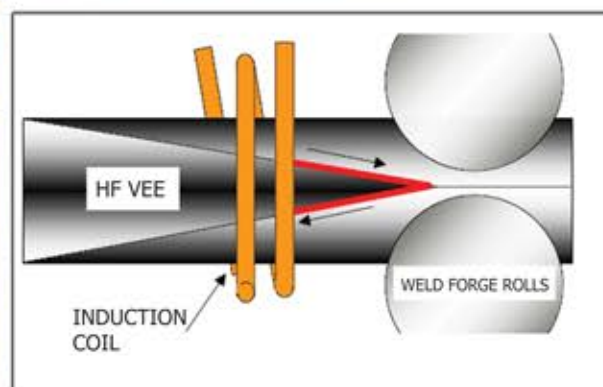
- ERW SS HF Tube Mills
 - Laser Welding Tube Mill
 - Cassette Type Mills
 - Tig Mills & Online BA
 - Tube Polishing Lines
 - Section Polishing Lines
 - Tube Bundling & Packing Lines
- Equipment Range:
9.5 mm OD upto 406.4 mm OD

- High Speed Slitting Lines
 - Quick Change Type Slitter
 - Mini Slitting Lines
 - Coil Packaging Lines
- Equipment Range:
Thickness:
0.2 mm THK upto 16 mm THK
Width:
400 mm 2000 mm
Coil Weight:
upto 40 MT



- Cut To Length lines
 - Sheet Stacker system
 - Sheet Packaging lines
 - Sheet Polishing Lines
- Equipment Range:
Thickness:
0.2 mm THK upto 16 mm THK
Width :
400 mm ~ 2000 mm
Coil Weight :
upto 40 MT

ERW HF Welding Technology & Mills

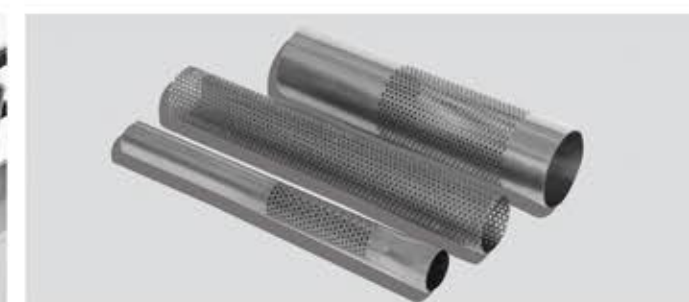
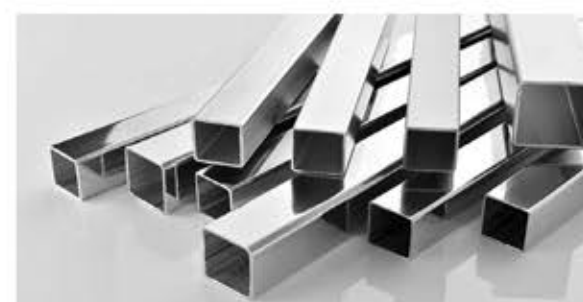


| Model No. | Pipe Range OD | Thickness(mm) | Line Speed(mpm) |
|-----------|----------------------|---------------|-----------------|
| GEPL-1 | 9.5~25.4 MM OD | 0.3~1.5 MM | 60/100 MPM |
| GEPL-2 | 12.7~50.8MM OD | 0.8~3.0 MM | 60/100 MPM |
| GEPL-3 | 19.05~76.0 MM OD | 0.8~4.0 MM | 40/60/100 MPM |
| GEPL-4 | 21.3 MM~114.3 OD | 1.0~4.5 MM | 30/60 MPM |
| GEPL-5 | 88.9 MM~ 168.2 MM OD | 1.5~7.0 MM | 20/50 MPM |
| GEPL-6 | 219 MM~406.2 MM OD | 2.0~10.0 MM | 10/25 MPM |

ERW HF WELDING TECHNOLOGY & MILLS

- ASTM A554 (304/304L, 316/316L, 201, 202)
- ASTM A312/A358/409
- ASTM A554 (304/304L, 316/316L, 201, 202)
- Special Pipes & Profiles
- Industrial Pipes
- Clad Pipes /Double Walled & Duplex Pipes

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Stainless Steel Tube Forming Mill

SS Forming Mill

We provide tube forming mill for tube of ASTM A- sanitary tub, ASTM A- 312 industrial pipe, ASTM A -249 heat exchanger tube, JIS G -3468 large diameter pipe and etc.

Bright annealing equipment gives bright annealed tube for heat exchange, food/dairy, instrument industrial application. Our stainless steel tube forming mill also comes with in-line bright annealing equipment, inside bead rolling system.

| Model | Driven/ Idle Shafter | Speed | Thickness |
|--------------|----------------------|------------|--------------|
| GEPL-30 | 30mm/25mm | 15m/min | 0.2mm-1.0mm |
| GEPL-40 | 40mm/30mm | 7/3.5m/min | 0.5mm-2.0mm |
| GEPL-50 | 50mm/35mm | 7/3.5m/min | 0.6 mm-3.5mm |
| GEPL-65 | 65mm/45mm | 6/3m/min | 0.8mm-5.0mm |
| GEPL-80 | 80mm/55mm | 5/2.5m/min | 1.0mm-6.0mm |
| GEPL-100 | 100mm/60mm | 4/2m/min | 1.5mm-8.0mm |
| GEPL-120 | 120mm/65mm | 4/2m/min | 2.0mm-9.0mm |
| GEPL-130 | 135mm/70mm | 4/2m/min | 3.0mm-10.0mm |
| GEPL-150-20" | 150mm/75mm | 3/1.5m/min | 3.0mm-13mm |
| GEPL-150-24" | 150mm/75mm | 3/1.5m/min | 3.0mm-14mm |



Dull Annealing



Eddy Current Tester



ECT

- Plasma + Tig welding system
- GEPL TPT torch
- GEPL TTT torch
- 6M Automatic welding seamer
- P+T Automatic welding

- Welding monitor
- Plasma vertical welder
- Laser welding
- Tig Welding

- Bright annealing tube forming mill
- Inside bead rolling/seam polishing
- Accumulator & strip joinder
- Inline eddy current testing equipment



PSA



Bead Rolling & Polishing Unit



Online Bright Annealing

Special purpose tube mill with D/T ratio according to the customer requirement can be given and the speed matching with customer requirement accordingly

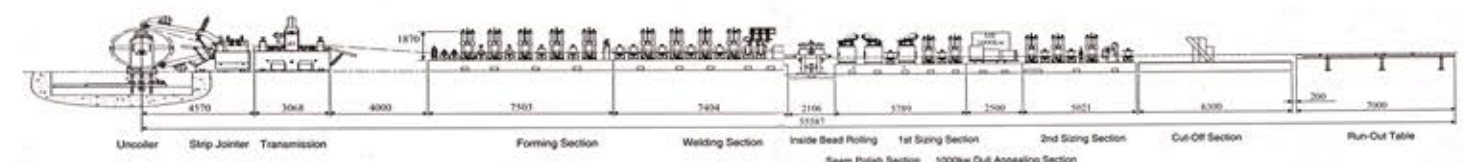
| Model | AC Vector (HP) | O.D. Range | Thickness |
|-----------|----------------|-------------------|------------|
| GEPL-40BA | 10+10+10 | Dia 9.5 -38.1mm | 0.5T -2T |
| GEPL-50BA | 20+15+15 | Dia 19mm -63.5 mm | 0.7T -3T |
| GEPL-65BA | 30+20+20 | Dia 38mm -114.3mm | 0.8T -3.5T |

Plasma/ TIG Welding System
TRI Cathode 500cw TTTT

| Thickness Range | 0.9~2.5 mm | Wall Thickness | 1.0mm | 1.2 mm | 1.5 mm | 2.0 mm |
|-----------------|------------|----------------|---------|-----------|-----------|---------|
| Torch | TTT Torch | Welding Speed | 8 M/Min | 5.5 M/Min | 4.5 M/Min | 3 M/Min |
| Welding Current | 300A X 3 | | | | | |

TRI-Cathode 500cw TPT

| Thickness Range | 2.0~9.0mm | Wall Thickness | 2.5 mm | 3.0 mm | 4.0 mm | 6.0 mm |
|-----------------|-----------|----------------|---------|---------|-----------|----------|
| Torch | TPT Torch | Welding Speed | 3 M/Min | 2 M/Min | 1.5 M/Min | 1 M/ Min |
| Welding Current | 500AX 3 | | | | | |



Inline/Offline Annealing Equipment

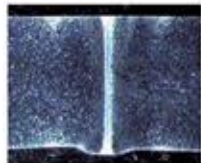


Bright Annealing



Offline Dull Annealing

Welding technologies
High frequency induction
welding



Laser welding
34% of manufacturing capacity
production speed 15 m/min



Tig welding
1% of manufacturing capacity
production speed 4 m/min



In-Line / Off-Line Annealing Equipment

| Kw | Hz | KVA | O.D. Range |
|-----|------|-----|---------------|
| 75 | 30K | 90 | 1/4" - 1 1/4" |
| 150 | 30K | 180 | 1/4" - 2" |
| 300 | 1-6K | 360 | 1" - 3" |
| 400 | 1-3K | 480 | 1" - 4" |
| 500 | 1-3K | 600 | 5" - 8" |

In-Line Bright Annealing Plant

| Model | Tube O.D. Range | Power Kw | Frequency Khz |
|---------|-----------------|----------|---------------|
| BA -40 | Dia 9 -40 mm | 75 | 30 |
| BA -65 | Dia 19 -65 mm | 150 | 30 |
| BA -80 | Dia 25 -80 mm | 200 | 6 |
| BA -120 | Dia 38 -120mm | 300 | 6 |



Sealed Welding Box



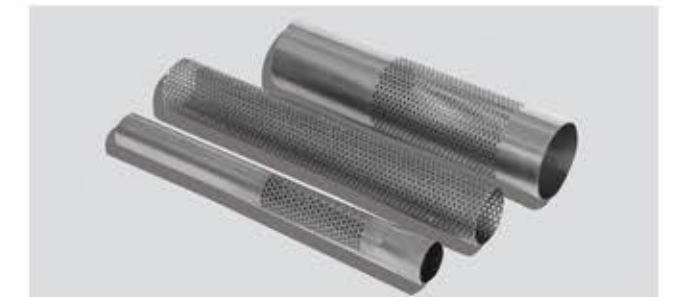
Bead rolling and Bead Publishing



Sealed Welding Box For HF

STAINLESS STEEL TIG MILLS STAINLESS STEEL ONLINE BA MILLS

- ASTM A554 (304/304L, 316/316L, 201, 202)
- ASTM A312/A358/409 L
- ASTM A554 (304/304L, 316/316L, 201, 202)
- Special Pipes & Profiles
- Industrial Pipes
- Clad Pipes /Double Walled & Duplex Pipes



Stainless Steel Finishing Equipment

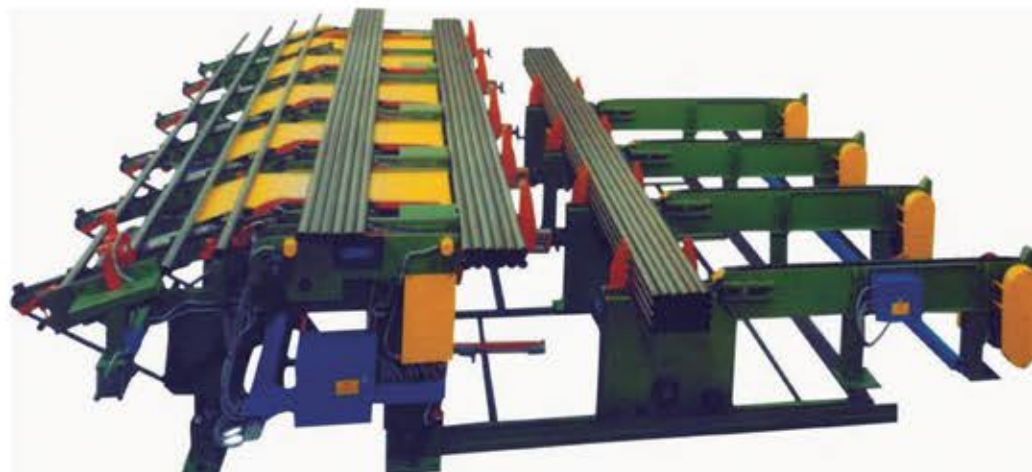


Stainless Steel

Tube Polishing Lines – High speed

Section Polishing Lines

Pipe Packing Lines



Round Tube Polishing Machine

Round Tube Polishing Machine is easy to operate and high surface finish accuracy with high quality polishing standard.

| Model | Size Range(MM) | Length(Meters) | Space Required | Power (KW) | Polished |
|--------|-----------------------|----------------|----------------|------------|----------|
| RTP-10 | Dia -31.8 mm- 11.3 mm | 3M - 7 mtr | 3.5x1.8x2 | 50 | 8 |
| RTP-20 | Dia -25.4 mm- 114 mm | 3M - 7 mtr | 2.3x1.5x1 | 25 | 12 |

Square Tube Polishing Machine

It's a high speed polishing machine for high productivity. Square polishing machine is easy to operate all the square section tubes can be polished to the high quality polishing standard.

| Model | Size Range(MM) | Length(Meters) | Space Required | Space Required | Polished |
|--------|------------------|----------------|----------------|----------------|----------|
| STP-10 | 20x20 100x100 mm | 1.5 -6 mtr | 3m-10m/min | 3x1.5x20 | 40 |

High Speed Stainless Steel Sheet Polishing Lines

Polishing Machine is used to Polish Sheets or Plates of Stainless Steel up to Highly Reflective Mirror Effect. The surface receives a uniform and directionless gloss with a magnificent brilliance.

After Grinded in Grinding Section, Sheets will feed into the polishing section. Polishing compound is evenly distributed to the flat surface of the sheets or plates, which will be polished with Rotating Buffing Felts until the surface reaches a highly reflective level.

Polishing Compound feeds the work pieces continuously from the source and then is filtered & recycled by the assistant filtering system, which will afterwards, feeds the cleaned compound back to its source for reuse.

After Polishing is done, work pieces will be processed by the following cleaning & drying unit before they are laminated with Protective Film for usage or further treatment. Super Mirror Finishing can be processed in this machine in single pass.

Model No.

GEPL - 450 - 15 MPM/30MPM/60 MPM

GEPL - 1650 - 15 MPM/30MPM/60 MPM



Automatic Stainless Steel Weld Pipe Pickling Line

Includes:

- DESIGN, MANUFACTURING, INSTALLATION & COMMISSIONING FOR 5000 T/MONTH SS WELDED PIPES PICKLING LINE.
- ACID MIST/FUME EXTRACTION, TREATMENT/PURIFICATION SYSTEM
- WASTE WATER TREATMENT/PURIFICATION SYSTEM.

B) Process: Pickling→Rinsing→ Artificial flushing

Acid Fume/ Mist Purification

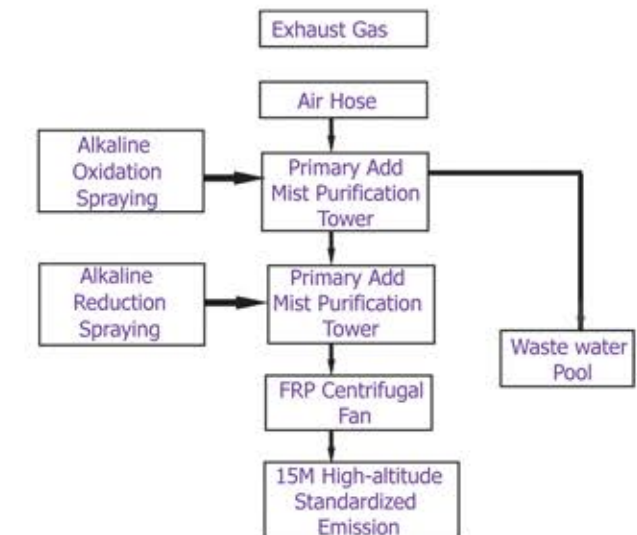
Treatment Technology Introduction:

The exhaust gas enters into the bottom of primary acid fume purification tower via connection air duct under the negative pressure of fan and convey to the tower top along tower, the wet acid mist has countercurrent contact with packing course in the tower, spray alkaline and oxidizing absorption liquid in the tower, react fluoride and part of oxynitride to generate soluble salt which can enter into absorption liquid, the secondary purification tower is reduction spraying tower, spray alkaline and reduction absorption liquid in the tower, part of oxy nitride which has insufficient reaction reverts to nitrogen, reach the purpose of purification treatment.

The acid mist tower is equipped with PH detector (imported) in the tower and automatic dosing system, automatically detect the spraying liquid in the tower and dosing, the absorption efficiency of oxy nitride and fluoride reach more than 90%, both concentration and rate can reach secondary standards of integrated emission standard of air pollutants after treatment.



This acid mist purification system adopts "TWIN TOWER TANDEM TYPE OXIDOREDUCTION+ ALKALINE LIQUOR ABSORPTION COMBINED WASHING METHOD", the process flow diagram is as follows:



System Treatment Capacity

Waste water amount 5m3/h, the capacity of the facility is designed according to 6.0m3/h.

The running time is designed according to 20hr/d. Pickling waste water and combine the practical situation of construction side, compare the technology and economy of each treatment process.



Stainless Steel Coil Process Equipment

- Slitting Line
- Cut To Length Machine
- Stamping Lines
- Mini Slitting & Cut To Length Line
- Embossing Lines
- Coil Packaging Lines
- Sheet Polishing & Pickling Lines

Slitting Line

Gallium specializes in designing and manufacturing Slitting Lines for steel service centers and manufacturers who demand precision, reliability and maximum productivity.

Our range of Slitting Lines is divided into various categories on the basis of dimensions and thickness of the material to machine and production quantities.

Mini Slitting Lines

15 ton, 950mm, Thickness 0.2 mm to 3 mm, Speed up to 120 m/min

Medium Slitting Lines:

Up to 30 Ton, 1600 mm, Thickness 1.5 mm to 16.0mm, Speed up to 100 m/min

Heavy Slitting Lines:

Up to 40 Ton, 2200 mm, Thickness 2.5 mm to 12 mm, Speed up to 40 m/min



Coil Processing Lines



| Slitting Lines Model | Sheet Thickness (mm) | Coil Width (mm) | Line Speed (m/min) | Coil Weight |
|----------------------|----------------------|-----------------|--------------------|-------------|
| GEPL-SL-950 | 0.2-2.5 | 300-950 | 0-120 | 5, ^10 |
| GEPL-SL-1550 | 0.5-4.5 | 300-1550 | 0-100 | 5, ^10 |
| GEPL-SL-1800 | 1.2-8.0 | 900-1800 | 0-80 | 25,30,40 |
| GEPL-SL-2000 | 2.5-10.0 | 950-2000 | 0-60 | 25,30,40 |
| GEPL-SL-2000 | 2.5-16.0 | 950-2200 | 0-40 | 25,30,40 |

Cut To Length Lines

Gallium Precision range of Cut To Length Lines is divided into various categories on the basis of dimensions, productivity and thickness of the material to be processed.

Automatic Mini CTL

For strip width range 100 to 750 mm, thickness up to 3.5 mm

Operation- START STOP SHEAR / FLYING SHEAR

| Cut To Length Lines Model | Sheet Thickness (mm) | Coil Width (mm) | Line Speed (m/min) | Coil Weight |
|---------------------------|----------------------|-----------------|--------------------|-------------|
| GEPL-CTL-850 | 0.3-3.0 | 300-850 | 40 | 5, 10 |
| GEPL-CTL-1300 | 1.2-4.5 | 400-1300 | 40 | 10, ^15 |
| GEPL-CTL-1600 | 1.2-6.0 | 400-1600 | 40 | 15, ^20 |
| GEPL-CTL-1650 | 1.5-8.0 | 400-1650 | 40 | 15, 20, 25 |
| GEPL-CTL-1800 | 2.0-10.0 | 650-160 | 40 | 25, 30, 40 |
| GEPL-CTL-2000 | 3.0-16.0 | 950-2000 | 40 | 25, 30, 40 |

High Speed Polishing Lines For SS Tubes /Sections & Sheets

- Levelling lines
- Offline polishing of OD & ID of SS tubes
- Tube handling systems & conveyors
- Section polishing machines
- ID polishing lines for process tubes



Round Tube Polishing Lines :

The tube polishing machine series including round OD & ID SS Tube polishing machine and stainless steel pipe polishing machine. Round tube polishing machine is easy to operate and will produce top quality of round polish tube at high quality polishing standard.

Square /Rectangle profile polishing lines :

- Square Tube Polishing Machine : In line & Off line
- Forward convey table & stacking racket
- Polishing machine
- Backward convey table & stacking racket
- Electric control system
- Manual polish stick or automatic spraying the wax apparatus

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Finishes Achievable:

- Grinding finish: By 60#-80# grit abrasive belt or flap wheels.
- Brushed finish: By 120#-180# grit abrasive belt or flap wheels.
- Sanitary finish: By 180#-240# grit abrasive belt or flap wheels.
- Buffed finish: By 240#-320# grit abrasive belt or flap wheels, then use sisal wheel.
- Glossy finish: By 400#-600# grit abrasive belt or flap wheels, sisal wheel, common cloth wheel.
- Mirror finish: By 600#-800# grit abrasive belt, then use sisal wheel, hard cloth wheel, & cotton wheels to get Mirror finishing.

Finishes Achievable:

No.1, 2B, No.4, HL, BA & No.8

Input Pipe Sizes: Min 10 mm/ 12.7 ~ 114.3 mm OD Max

Section: 12x12 mm ~80x80 mm Max

Rectangle: 10x15 ~ 100x50 mm Max

This stainless steel auto polishing line have advanced grinding technology, can machining stainless steel (2B, BA) sheet. Whole production line includes Sheet Entry, Sheet Pre Cleaning drying machine, control center, grinding machine, film laminator and specialized Buffing & Finishing Heads.

Custom Made Inlet & Outlet Roller Table, Polishing Main Machine, Cleaning & Drying Unit, Laminator and electrical Control Unit etc.

Machine Features:

- Environment Friendly, Liquid compound will be recycled and reused
- High Working efficiency, Low Operation Cost
- Compact Design, Machine parts are free from being etched by Polishing Compound.
- Stable Oscillation System
- Adjustable Transmitting Speed, Forward and Backward Transmission
- Adjustable Polishing Pressure
- Fast Change of the Polishing heads
- Large Polishing head with High RPM
- Automatic thickness Adjustment, With Motorized Manual Push button Control
- Perfect Cleaning & Drying Unit, No Water mark or dirt is left after Laminating
- Sheet Collection, Stacking & Automatic Packing Unit can be integrated online after sheet polish operation.
- Decoiler & Recoiler System would also be added for Coil to Coil Solution if needed.

Finishes Achievable:

No.1, 2B, No.4, HL, BA & No.8

Input Sheet Widths : 500 mm, 650 mm, 800 mm, 1250 mm, 1550 mm, 1600 mm

High Speed Precision Cut Off Machines



GALLIUM FLYING COLD SAW CUT OFF



FLYING COLD SAW

CUT OFF SYSTEMS

Integrated HSS & TCT Blade Mounting Feature

Gallium Developed cold saw cut off system for SS Tubes, MS Tubes & Sections by implementing Custom engineered Gear Box, Servo Controlled Saw feed rate & Efficient Programming considering torque limiting feature which protects blade from damage in case excess load is applied due to material hardness & chip contamination.

Inbuilt safety feature for abrupt power failure & Blade retraction mode.

Cold Saw Cut off Machine operates in Milling cut off principle, offering unmatched burr free cutting at high speed operation.

Features

- SERVO Tracking technology cutting length accuracy is higher.
- Dynamic Home Position feature in Programming reducing travel & cutting cycle time.
- Dust & Noise pollution is reduced significantly.
- Servo controlled Variable Saw Blade feed rate & Carriage Track Position .
- Can be used with Both TCT & HSS Blade in single Cut Off Machine.
- Inbuilt safety feature for abrupt power failure & Blade retraction mode.
- Operating Line speeds: 30 MPM up to 150 MPM Max.
- Thickness Range: 0.3 mm Upto 6 mm Max & OD :12.7 mm OD 114.3 mm OD

HSS Saw Blades are suitable for Structural Steel or non alloy tool steel with tensile strength upto 550 Mpa .TCT Blades are used for high hardness & high density material with tensile strength Upto 950 Mpa or higher. The Feed rate of HSS & TCT Blades are different & can be programmed in the operating software.



HSS Blade



TCT Blade





Rolls, Tooling & Dies

Gallium specializes in manufacturing forming rollers, spacers, Templates & Tooling for ERW Tube mills, Cold Roll forming Mills & Auxiliary Equipment. In-house Design & Manufacturing capability allows us offer unmatched quality & accuracy in Finish Rolls.

Gallium offers customized solutions for roll tool design manufacturing and supply for all Gallium scope of equipment and also for retrofitting to existing equipment. In-house rapid tool prototyping, Coprra software simulation and modern in-house manufacturing facility allow us to cater to wide variety of industries Gallium partners with its clients for roll tool development, consultancy for selection of raw material and offers retrofitting service.



Straightener Rolls



Open Profile Rolls



Bicycle Rim Rolls



Furniture Profile Rolls



Reduction Rolls



Tube Mill Rolls

Scope of Equipment

- Roll tools for tube & pipe mills
- Roll tools for open section forming
- Contour rolls for straightening machine
- Coil tool for re-profiling and grinding
- Retrofitting and tool/die development
- Forming, sizing, shaping and contouring
- Mill shafts, shear blades, cutting inserts
- Scarfing tools and facing heads
- Punching, marking, embossing and shearing tools
- Slitting cutter/ knives and spacers

