

## Stainless steel Polishing Line

### Rust Free, Rust Resistant Surface

The polishing of coils and sheets is one of the most added-value operations offered by Valgro India. Valgro has developed various model for sheet polishing in configuration of flexibility and lower operating costs. Sheet Polishing machines are available in dry and wet processing.

The Valgro-Hyzer precision Polishing Machine is suitable for surfacing of nonferrous and ferrous metals. Provides good quality of polishing effect with removal of micro scratch, Acid layer & Oxide from the surface with safe and economical way.

Our expertise provides you a unique and uniform surface finish from start to end.

#### One roof solution from design to final assembly

1. Non woven Abrasive Roll and Brush Mfg. division
2. Metal Finishing Machine building division
3. Metal Finishing Service center for Sheet, plates, Coil and Strip,
4. Application Engineering & Innovation Service center

#### Our Strengths are:

- More than 25 years Experience in metal finishing business
- Sturdy and latest technological state of art solutions provider.
- International quality standard at Indian price.
- Quick delivery schedules.



## Increase Profit Stock only 2B sheets!

Visit us

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# Polishing

**Aluminum, Brass, Copper and soft Metal Flat bus bar, Profile, Sheet & Circle**



**Aluminum** is VERY Soft metal, even though it is very durable and perfect metal for many products. So be careful during cleaning process not to scratch, dent, gouge or high concerted acidic cleaning your aluminum products.

Is used to have satin finish on aluminium extrusions prior to **anodizing**. Brushes made of waded metal wires clean the surface of aluminium and eliminate **extrusion lines, scratches, and marks**. The etching duration of satin brushed aluminium prior to anodizing is much less than the unbrushed counterparts resulting in less chemical consumption in etching and waste water treatment, therefore considerable decrease in production costs. The obtained finish is of fine mechanical satin type, with excellent appearance like Scotch-Brite. No polishing paste and no dust created during the work.

## Before



## After



**Corrosion attack on aluminum surfaces** is usually quite obvious, since the products of corrosion are white and generally more voluminous than the original base metal. Even in its early stages, aluminum corrosion is evident as general etching, pitting, or roughness of the aluminum surfaces.

## Aluminium Profile Polishing Machine

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# Stainless steel

**Polishing is value added operation in steel fabrications Industries. Uniform Surface finishing for Esthetic look, easy cleaning & rust resistant surface is most important parameters.**

Widely used for restaurant and kitchen equipment, Pharma & food processing, dairy equipment. Architectural wall panels, Beverage equipment, Boat fittings, Bus shelters, Elevator doors and interiors, Escalator trim, Hospital Furniture, Mass transit equipment, Water fountains, Metro and Railways, Shipbuilding, Automobiles

Available Model :

**Fabrika Series: SP32-1, SP50-1, SP62-1 Dry Polishing line**

SAMARTH Fabrika Series Stainless steel Sheet & Blank Polishing machine Suitable for Stainless steel Fabrication Industries for in-house Polishing work. Increase profit by reducing cost.

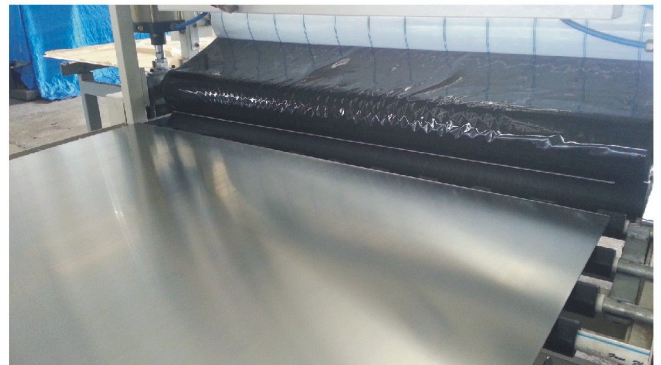
**Project Series: SP50-4, SP 62-4 & Wet or Dry High Speed Polishing Line**

SAMARTH Project series Sheet polishing machine is widely acceptable from Stainless Steel sheet and coil producer, service center and Big stainless steel products from a warehouse. **a**-Steel plant Service center **b**-Steel suppliers

Working thickness from 0.8mm to 3mm in single pass

**Working speed:** 0.5 mpm to 10 mpm

**Finish:** No.4, Hairline, Matt, Satin, 2J Finish



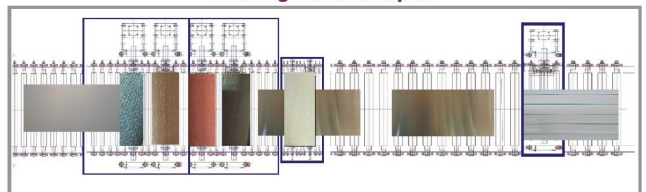
## Benefits of VALGRO Sheet polishing machine

- Finish Achieve : #4, Matt, Satin, Hairline in one machine
  - Save money and time by reduce inventory
  - Stock only 2B sheet with any thickness
  - Consistence uniform surface finish
- In-house polishing facility

## Polishing Machine Technical Features & Function

1. Single & Multi head Scotch Brite Polishing station
2. Each Polishing station work Horizontal axis rotating with Oscillation system which will keep the brush surface free from embedment.
3. Auto feed sheet speed Transport System
4. Synchronise with Complete Polishing line at one place operating system .
5. Each electrical system will be work separate electrical control.
6. Wet / Dry operation with Easy abrasives Roller brush replacement
7. Abrasive Brush up and down control system to give desired pressure on the sheet at operating Panel.
8. Different brush grits combinations are possible to perform different surface treatment

## Polishing Machine Layout



# Deburring

in sheet metal processing fabrication



**Valgro-Hyzer**<sup>®</sup>  
Precision Brushing Machines

## Sheet Edge Deburring machine



It is usually an unwanted piece of material and when removed with a deburring tool in a process called 'deburring'. Burrs are most commonly created after machining operation, such as turning, punching, shearing, cutting, grinding, drilling, milling,

## Burr Classification & Deburring Solution

Class of Burr	Definition of burr & Removing technique
	<b>Class 1 : Microburrs</b> Microburrs can only be observed using magnification. To the unaided eye, they appear as sharp edges. Grinding operations are a common source of this type of burr <b>How to Remove</b> deburr by nylox abrasives wire brush
	<b>Class 2 : Feather burrs</b> Feather burrs are readily visible without magnification and are characterized by extremely thin roots. They can be removed with a tip of a pencil <b>How to Remove</b> deburr by abrasive brush
	<b>Class 3 : Attached Burr</b> Class 3 burrs, are well-attached. The primary difference is size and root thickness. <b>How to Remove</b> Brushes can sometimes remove Class 3 burrs, but often a stock removal operation such as grinding is required for complete removal.
	<b>Class 4: Root Burr</b> are very large with thick, right roots. Burrs in this class different than conventional burrs because they are comprised of displaced base material which is still fully-attached to the parent part. <b>How to Remove</b> often a stock removal operation such as grinding or machining is required for complete removal.






## Long Belt Grinding & Finishing Machine



**VALGRO-LBF1550** long belt finishing machines have a flexible abrasive belt which enables finishing on flat surfaces of big dimensions. VALGRO-LBF machine is ideal for irregular shapes polishing as well as for weld removing. The flexible & adjustable table is useful when, because of the big dimension of the materials to be worked, you cannot move the piece.

**Finishing Hot Rolled Sheet, Square and Rectangle Tube, Flat bar, Flat product for deburring and surface finishing of No. 4, Matt, Satin Finish tubular structures, corners, edges or removing welding from the surface is easy with VALGRO - LBF machines.**

VALGRO-LBF machines are available with different working width, with single and double abrasive belt or Belt and Scotch abrasives roller Brush for Matt and satin finishing

**Valgro-Fynex**<sup>®</sup>  
Technological Advance Abrasives

  
**VALGRO INDIA LIMITED**  
EXPLORE OPPORTUNITY

## Mission statement

work together to enable our business to grow. Growth will be achieved by sharing our talents and resources to:

### The performance spectrum

- Consulting & Planning
- Projection & Realization
- Assembly and start-up
- Training & Production assistance
- After-Sales-Service

You  /valgroabrasives  /valgroabrasives  /valgroabrasives

[www.brushingmachine.com](http://www.brushingmachine.com) [www.ecopickledsurface.com](http://www.ecopickledsurface.com)



"We Say what we do  
and we do what we say"

# Stainless Steel Metal Finish Kit

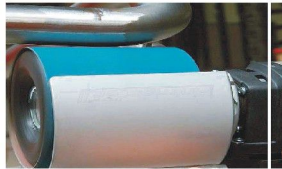
## Mobile linear polisher - Fight to Finish in 3 Step



### Work step -1

#### Machining Surface :

Removing of a welded seams, Handling scratch or require light machine on flat metal surface , you have to fulfill first coated abrasives grinding belt with expandable roller,



#### Rough Material sanding / removal

Sanding Sleeves with grain of 36, 40, 60, 80,120 offer effective surface grinding with very good surface result. This surface is basic surface of subsequent grinding pattern. Require 2500 RPM for high sanding operation(Level 5-6)



#### Result :

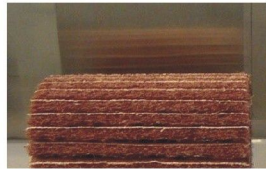
Surface grinding with a grain of 120 prior to satin-finish with the stainless steel set Rough – deep Hairline Finish on metal

**Belt :** 115 x 100 Grit 40, 60, 80, 120 Expander balloon

### Work Step -2

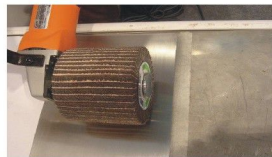
#### Scratch pattern Surface:

220% more volume of abrasive material in comparison with current wheels. Require 900-1200 RPM for grain finishing operation (Level 1-2)



#### Hairline Surface:

Combination brush with Coarser and Finer grade provide uniform texture finish, Require 1200-1500 RPM for fine graining operation (Level 2-3)



#### Result :

Kombi fine grade brush provide smooth hairline finish after sanding process

**Brush :** 115 x 100 Grit / grade KCR, KSM with accessory

### Work Step -3

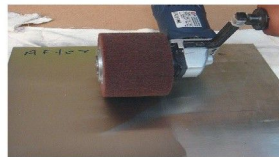
#### Matt Finish :

Pharma, Food, dairy and commercial Kitchen equipment manufacture demand matt finish, by use of plain Coarser wheel, Require 900-1200 RPM for Matt operation (Level 1-2)



#### Satin Finish :

Stainless steel surface get rusty due effect of weather, and regular use. Smooth satin finish provide rust resistance surface on stainless steel. Mostly use in architect fabrication. Require 2500-2800 RPM for Satin finishing operation (Level 5-6)



#### Result :

Valgro rust resistant flap brush provide smooth satin finish on stainless steel and protect the surface from rust and dust from the weather effect and regular use.

**Brush :** 115 x 100 Grit / grade PCR, PSM with accessory

## Result

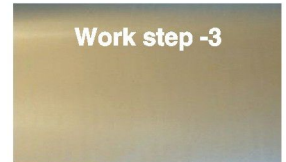
### Work step -1



### Work step -2



### Work step -3



## Comparison of current surface finish codes with BS 1449 (obsolete) and grit finish

The table gives an indication of how different surface finish specifying systems define similar finishes, in relation to BS EN 10088-2.

Description	Most Common name	BS 1449-2	DIN / En 1088-2 German	ASTM (A480)	Grit Finish	Definition	Ra (µm)	Rt (µm) <sup>2</sup>	RMS (in.) <sup>1</sup>
<b>Mill Finish</b>									
Hot rolled, heat treated, pickled	HRPO	1	1D	1					
Cold rolled, heat treated, pickled, skin passed	CRPO	2B	2B	2B		A bright cold rolled mill finish with skin passed	0.1-0.5		
Cold rolled, heat treated, pickled	CRPO	2D	2D	2D		A Uniform, dull silver gray mill finish on thinner coil, thickness reduced by cold rolling.	0.4-1.0		
Cold rolled, bright annealed	CRBA	2A	2R	BA		A uniform Gloss mill finish produce by control atmosphere furnace during annealing process	0.05-0.1		
<b>Mechanical Brush Finish - Valgro-Fynex SCS Process</b>									
Cold rolled, ground	Commercial #4 Finish	3A	2G	No.4	80-120	A semi polished surface achieved by finishing with 80-120 grit abrasives. This finish pronounced Hairline. Not very reflective	1.8 to 1.32	9.0 to 6.6	78 to 58
Cold rolled, brushed or dull polished	Biotech Finish	3B / #4	2J	No.4 S	150- 220	Called brush finish, directional or satin matt, This general-purpose finish is widely used for restaurant, kitchen equipment, food processing & dairy equipment.	1.06 to 0.48	5.3 to 2.4	46 to 21
Cold rolled, satin polished	Satin Finish :	5	2K	No.6	240-320	Finer grit lines and higher reflectivity then No. 4,	0.38 to 0.30	1.9 to 1.5	17 to 14
Cold rolled, satin brush polished	Super Satin Finish :	7	2K	#7	400-600	Smoothest of the special non-reflective finishes with corrosion resistance suitable for most external applications.	0.2 to 0.05	1.2 to 0.8	12 to 4.4
Cold rolled, bright polished	Mirror Finish high gloss	8	2P	No.8	800	Produce by 600 grit then sisal and color buffed to achieve mirror like finish	0.02 to 0.01	0.8 to 0.3	4 to 1

**Table 1.** Conversion chart for equivalent expressions of roughness.

**Notes:** 1. A factor of 1.1 X CLA is used throughout this table to calculate RMS(in.) 2. Typically, for values of Ra from 50µm to 3.2µm, the conversion factor for Rt (µm) is 4. As surface roughness decreases from 3.2µm, the conversion factor increases, reaching 12 at 0.025µm. This is reflected in the table above. 3. Finishing is slow and step-by-step process. Always select suitable wheels from rougher grade to gradually finer abrasive grade for better polishing effect. 4. Finish described by a particular industries designation. i.e No.4 Finish, may still vary from supplier to supplier and even from batch to batch from same supplier. This may be the result of differing manufacturing condition at mill finish. 5. The customer should define and agree acceptable levels of variations from the standard to minimize the problems caused by mill finish or semi finishing of base metal surface.