



An ISO 9001:2015 Certified

ARIHANT Super Finishing Attachment HT-50

Gala No. 1, Sanskruti, Sagar Signature Complex, Waliv Phata, Vasai (East), Palghar Dist. - 401208, Maharashtra, India. № +91 72190 79111 +91 82081 66156
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ARIHANT HONING & FINISHING TECHNOLOGY (I) Pvt Ltd

CIN No: U74120MH2014PTC255058

HT-50

Technical data

Tape widths in mm

Operating voltage

Power output

Frequency DS/min, Max	:	1500
Min	:	0
Amplitude in mm	:	+/-1.5
Air pressure in bar max	:	6
Unit weight in kg	:	13
Contact stroke in mm	:	60
Automated tape feed	:	10 – 50 mm/min.
Infeed move mm	:	Standard 30 mm,
		optional 40

Contact force in N max : 50-250





Accessories



Controllers enable the superfinishing attachment to be remotely controlled and set up, e.g. selecting the oscillation frequency and machining time.



: 0.2kW

: Standard 50mm, optional

Sizes available on request

: 240V / 50 Hz single phase

PERFECT GEOMETRY AND SURFACE FOR YOUR WORKPIECES

The Microfinish process is used wherever extremely high precision as well as optimum geometry and surface quality are important. The superfinishing procedure was further developed by Arihant under the brand name of Hone-Tech. It is based on a special micro-finishing method in which the tapes are optimized for the materials being processed in terms of their composition and hardness and of their oscillation movements.





Switch cabinet accessories, such as servo-amplifiers, PLC or CNC software solutions can be planned and quoted to order.



Contact rolls; the standard roll hardness supplied can be selected from 55, 65, 75, 85 Shore on request. Contact rolls can also be supplied with a floating bearing.



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ARIHANT'S Fully Automatic Horizontal Honing Machine model HONE-TECH 100 HA NC

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Arihant's Fully Automatic Horizontal Honing Machine Model Hone-tech 100 HA NC

Specifications:

- Diameter Range (ID):
 5 100 mm
- Stroke Travel:
 6 300 mm
- Spindle Speed:
 200 3000 RPM
- Spindle Power:
 4.1 kW (5.5 hp)
- Stroker:
 2 kW servo
- Stroker Rate:
 10 250 SPM
 (dependent on stroke length)
- Feed System: Servo
- Coolant Pump:
 0.5 hp
- Coolant Capacity: 200liters

TOOLS and ABRASIVES



The next generation auto stroking horizontal honing machines helps quick changeover of high volume production and with a higher level of control and new technology throughout.

- 9 inch colour display.
- Touch screens allows operators to run the machine efficiently and easily.
- Safe setup mode switch and safe speed limits ensure operator safety during setup.
- Time control, stone wear compensation ability to change speeds in process.

Horizontal honing machines are designed for speed, precision, and convenience. This is a very good option for work shops, factories having various small parts, these machines allow for quick changeovers and very high precision.





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ARIHANT SUPER FINISHING ATTACHMENT 50 LT / 50 LT x 2





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TECHNICAL SPECIFICATION

MODEL	ARISUP - 50 LT	ARISUP - 50 LT x 2
Mounting Job: diameter length clamping	Generally on lathe As per capacity of lathe – do – (i) Between centres (ii) Chuck (iii) Special fixtures	Generally on lathe As per capacity of lathe – do – (i) Between centres (ii) Chuck (iii) Special fixtures
Pneumatic power unit Amplitude Oscillations	2 - 5 mm 2000 - 2500 strokes / min	2-5 mm 2000 2500 strokes / min
Superfinishing head Number Feed Travel	1 Pneumatic Depend on lathe	2 Pneumatic Depend on lathe
Coolant system Use external coolant system	Use external coolant system	Use external coolant system
Pneumatic system requirement Air compressor Air consumption Air pressure Air quality Fittings FRL (std. accessories)	1 HP 8-12 Nm3/ Hr 4 Bar Dry & lubricated 1/4" BSP 1/4" BSP size	1 HP 14 - 18 Nm / Hr 4 Bar Dry Lubricated 1/4" BSP 1/4" BSP size

APPLICATION:

ARISUP 50 LT & 50 LT x 2 are very useful for finishing various Shafts, Automatic Rocker Shafts, Piston Rods, Hard Chrome - Cooper Plated/Aluminium Rolls, Rotogravure Rolls, Gear Shafts, Needles, Spindles & Contact area of Seals.

All ground or fine turned components can be superfinished. The working range will only be restricted by the capacity of the machine tool on which it is mounted. For large components and higher production ARISUP 50 LT x 2 would be more economical.

OTHER MODELS:

Arisup 50LT XL - Superfinishing Machine with extra long head available.

OPERATION:

It can be mounted on a lathe. A fine grit superfinishing stone (320 to 1000 grit or higher) is pressed against rotating component with the help of pneumatic cylinder. During superfinishing operation, the component rotates, superfinishing stone oscillates parallel to the axis of the component at a very high frequency generated by pneumatic power unit.

By Regular flushing action with the help of coolant, high degree of surface finish as fine as Ra-0.02um can be achieved. This also improves roundness & bearing contact area eliminating chatter marks, feed spirals resulted during previous operations.

Also taper superfinishing, plunge cut superfinishing and I.D superfinishing in special cases can be done.

OTHER MACHINES:

Manual / Autostroking Horizontal Honing Machines, Vertical Honing Machines, Centreless Throughfeed Superfinishing Machines, Lapping Machines, Die Polishing Machines, S. P. M Honing / Lapping / Superfinishing.

IMPORTANT:

• In keeping with our continuous programme of apdating technology, we reserve the right to change specifications without notice.







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CIN No: U74120MH2014PTC255058 ECITECH Super Finishing Film

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Through feed Superfinishing Machine ARIHANT 1200 TF NC



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Superfinish Machining of cylindrical rollers and tapered rollers

- Continuous Superfinishing process for high volume production of rollers
- Dynamically balanced mechanical oscillator
- Vertical Superfinishing unit adjustment for stone and roller change
- Optional superimposed stroke
- Connection of up to 12 stone guides with fast change system
- Infinitely adjustable and individually controllable stone pressure
- Stone wear indication supporting fully automatic operation
- · Infinitely adjustable transport roller gap, optionally automatic
- Transport rollers with an effective length of 900 and 1200mm
- · Profiled transport rollers available to generate specific workpiece geometries
- Automatic workpiece feed

	Arihant 500TF	Arihant 1200TF
Workpiece diameter	5-30mm	8-60mm
Workpiece length	upto 100mm	upto 400mm









Our system features - your benefit

Powerful mechanical oscillator carrving up to 12 stone guides

- High production output through large stock removal
- · Long service life and low wear
- No undesired vibrations
- Short set-up time due to quick change systems and automatic vertical adjustment

Flexible transport roller adjustment

- Large working area • The setting time can
- be further reduced by utilizing the optional NC adjustment

Transport rollers with an effective length of up to 1200 mm with optimized profiles

- Increased productivity with production speeds to 3 m/min and beyond
- Generation of fully crowned, cylindrical / convex and logarithmic workpieces

Safety and monitoring devices

- In case of stone wear, the machine stops automatically to avoid damage
- Parts with incorrect orientation or dimension can not enter the machine
- Operator supervision is reduced to a minimum

The Hone-Tech 900 TF & 1200 TF are the sprinters among the Super- finishing machines. Depending on the workpiece dimensions, multiple components per minute can be machined in the center-less through-feed process. At the same time, the highest demands regarding geometrical and surface quality are met.

Modular options available are designed for different levels

of automation. Through the intelligent use of NC controlled adjusting axes, very short set-up times are achievable. Transport rollers with an effective length of up to 1200 mm and specific profile designs open up new potentials.





Cylinder rolls

Roller ø approx : 13 mm Roughness Ra : 0.04µm Length approx : 18m

Production rate : 400 parts per min.

Roundness before/after Superfinishing (filter 1-15)



Roundness before/after Superfinishing (filter 15-500)









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ARIHANT HT-CNC SERIES

HORIZONTAL TUBE HONING MACHINE

POWERFUL, RUGGED & PRECISE





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Key Focus:

Cylinder Liners, Hydraulic Cylinders, Extrusion Cylinders, Aircraft Components, Compressor Components Designed for low- to mid-volume production, the ARIHANT HT-CNC is the first competitively priced large-part honing machine on the market. With servo stroking system, the ARIHANT HT-CNC produces precise bore geometries on Hydraulic tubes, oil field components, multi-bore, turbiness shaft and other similar applications.

Ideal for both job shops and repair facilities, the ARIHANT HT-CNC is available with a variablespeed spindle motor, powerful enough to drive metal-bond, diamond abrasives for short cycle times with high accuracy and minimal labor.

The ARIHANT HT-CNC is the latest industry-leading honing system. It is built to make your honing faster, easier, more precise, more productive and more profitable.

- Designed for bores with an ID of 25-350 mm
- PLC controlled with a large color touch screen for ease of use and setup.
- Built to handle large parts.
- Servo stroking mechanism improves geometry over previous generation, similarly priced machines.

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The ARIHANT HT-CNC drives diamond abrasives in the production or job shop. Standard & Optional Features



Models Available:

2000 HT	2000 mm length capacity
4000 HT	4000 mm length capacity
6000 HT	6000 mm length capacity
8000 HT	8000 mm length capacity
10000 HT	10000 mm length capacity
12000 HT	12000 mm length capacity

Specifications:

Spindle Speed:	15-600 RPM
Spindle Power:	5/10hp options
Stroker:	Servo
Expansion:	Servo
COMPONENT:	Min ID-25mm, Min OD-60mm, Min length-500 mm, Max length-12000mm
Maximum Workpiece Weight:	1000 kg
Machine Weight:	Dry Weight: 2000 kg, Shipping Weight: 2823 kg.
Honing Fluid/Filter System:	Honing Oil Reservoir: 284-litre capacity with standard canister filters
Voltages Available:	Electrical System: 400 VAC 50 Hz 3 phase:

*Diameter range, length range and workpiece weight are contingent on workpiece and application.

Variable speed 15-600 rpm, spindle motor is powerful enough to drive two-stage, metal-bond, diamond abrasives for short cycle times with high accuracy and minimal labor and has more torque than previous machines.

The front loading design and weight capacity of up to (1000 kg) combine in versatility in honing a wide range of parts.

PLC-controlled with a large 8 inch color touch screen that is rugged and eliminates cumbersome buttons that collect oil, dirt and grime. The swiveling operator panel can be adjusted for viewing from a variety of positions.

Standard coolant system is equipped with two standard canister filters on the back of the machine, saving valuable floor space. Proven servo stroking system allows for increased flexibility and performance. Heavyduty welded base for durability. Easy to remove pans for cleaning and longer filter life.

The ARIHANT HT-CNC puts you in complete control for increased precision, consistency, productivity and quality.

Easy & Economical

The ARIHANT HT-CNC is simple to operate... even an inexperienced operator can learn to run it in a few hours because of the intuitive, easy-to-use screens and machine recommended settings. Setup is quick and easy using the menu-driven PLC control. Stock removal is preset and the machine shuts off automatically when the honing cycle is completed. Stroke and spindle operation are computer controlled for consistent geometry and finish from bore to bore. No continual adjusting to maintain accuracy. All controls are easy to reach, out front, and at eye level. And, you can change stones in seconds.



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Through feed Superfinishing Machine ARIHANT 500 TF-NC

Machining of cylindrical and tapered rollers

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HONE-TECH

500

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Through Feed Super Finishing Machine ARIHANT-500 TF-NC Super finish Machining of Cylindrical Rollers & Tapered Rollers

- · Continuous Superfinishing process for high volume production of Rollers
- · Dynamically balanced Servo controlled oscillator
- · Vertical Superfinishing unit adjustment for stone and Roller change
- · Connection of up to 8 stone guides with fast change system
- · Infinitely adjustable and individually controllable stone pressure With pneumatic servo valves
- Stone wear indication supporting fully automatic operation-option
- · Infinitely adjustable transport roller gap, optionally automatic
- Transport rollers with an effective length of 500mm,800mm and 1200mm
- · CNC Profile ground transport rollers available to generate specific workpiece geometries
- Automatic workpiece feed as option

	Arihant 500TF	Arihant 1200TF
Workpiece diameter	5 - 30mm	8 - 60mm
Workpiece length	upto 100mm	upto 400mm





H/VNE-TECH Passion for Precision

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Maharashtra, India. CIN No: U74120MH2014PTC255058 CITECH Super Finishing Film

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ARIHANT HT VERTICAL HONING MACHINE

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HT VERTICAL MACHINE POWERFUL, RUGGED AND PRECISE

Designed for low- to mid-volume production, the Arihant HT is the first competitively priced small to medium part honing machine on the market. With aproven ball screw servo stroking system, the HT produces precise bore geometries on compressor blocks, oil field components, multi-bore gas/diesel engine blocks and other similar applications. Ideal for both job shops and repair facilities, the PT is available with a variable-speed spindle motor, powerful enough to drive two-stage, metal-bond, diamond abrasives for short cycle times with high accuracy and minimal labor.

The HT drives diamond abrasives in the production or job shop.

Standard & Optional Features

Variable speed 15-600 rpm, spindle motor is powerful enough to drive two-stage, metal-bond, diamond abrasives for short cycle times with high accuracy and minimal labor and has more torque than previous machines.

The front loading design and weight capacity of up to (680 kg) combine in versatility in honing a wide range of parts.

PLC-controlled with a large 8 in. color touch screen that is rugged and elminates cumbersome buttons that collect oil, dirt and grime. The swiveling operator panel can be adjusted for viewing from a variety of positions.

Servo rotary tool feed system can be used with two-stage hone heads to complete roughing and finishing without stone changes for faster processing times. Rough to finish changeover is four times faster than previous models.

Proven servo ball screw stroking system allows for increased flexibility and performance.

Heavy-duty welded base for durability.

Easy to remove pans for cleaning and longer filter life.

The HT Vertical Honing Machine puts you in complete control for increased precision, consistency, productivity and quality



The HT is the latest industry-leading Arihant vertical honing system. It is built to make your vertical honing faster, easier, more precise, more productive and more profi table.

- Designed for bores with an ID of 20-100mm
- PLC controlled with a large color touch screen for ease of use and setup.
- Vertical stroking mechanism improves geometry over previous generation, similarly priced machines.

Specifications:

Spindle Speed: 15 - 800 RPM

Spindle Power:

5/3/2 hp options

Stroker: servo

Expansion: servo

COMPONENT:

 $\begin{array}{l} \mbox{min} \Phi \ \ - \ 20\mbox{mm} \\ \mbox{max} \Phi \ \ - \ 100\mbox{mm} \\ \mbox{min} \ \ \ length \ - \ 50\mbox{mm} \\ \mbox{max} \ \ \ \ \ length \ - \ 500\mbox{mm} \\ \end{array}$

Machine Weight:

Dry Weight: 1329 kg (2930 lbs.) Shipping Weight: 1823 kg. (4020 lbs)

Honing Fluid/Filter System:

Honing Oil Reservoir: 200-liter capacity with standard canister filters.

Voltages Available:

Electrical System: 400 VAC 50 Hz 3 phase: 25.1 amps

* Diameter range, length range and workpiece weight are contingent on workpiece and application.

The photo given in this brochure is indicative. can vary by model, and request of customer

Easy and economical to run

The Arihant HT Vertical Honing Machine is simple to operate ... even an inexperienced operator can learn to run it in a few hours because of the intuitive, easy-to-use screens and machine recommended settings. Setup is quick and easy using the menudriven PLC control. Stock removal is preset and the machine shuts off automatically when the honing cycle is completed. Stroke and spindle operation are computer controlled for consistent geometry and finish from bore to bore. No continual adjusting to maintain accuracy. All controls are easy to reach, out front, and at eye level. And, you can change stones in seconds.



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Super Finishing for Flat Surfaces



Cost-effective

Small footprint

Super Finishing Task

Cost-effective Super Finishing machine for flat or crowned surfaces able to meet production demands

Super Finishing Advantages

The optimal micro-geometric and macro-geometric peak-to-valley height for your application, removal and measurement adjustable in small tolerances

Special Machine Features

- Very stable flatness and material removal via MicroSens technology
- Short cycle time, all operations run simultaneously
- Small space requirement
- Excellent accessibility for maintenance
- Selective setting of surface shaping (convex/concave)



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Hone tech Flat-Fin

Concept

- Indexing table with vertically arranged units
- Loading and unloading within cycle time via automation
- In-process measuring (IPM)
- Two-step process (roughing/ finishing)

Optional

- Pre- or post-process measuring
- Brush deburring within cycle time
- Internal flip unit for A and B side machining

Machine Data

Workpiece spindles:

4 pcs. max. 2,000 rpm

Machining stations:

3 pcs. max. 15,000 rpm

Coolant oil requirement:

Machine weight: 40 l/min.

approx. 3,000 kg





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ARIHANT Shaft-Fin Series



- Easy set up change
- µ Suitable for all type of shafts, like camshaft, crank shaft, turbo charger shaft, Balancer Shaft, Gear shaft, Transmission shaft etc.

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ARIHANT Shaft-Fin Series

- Customized to meet your desired results for your shaft types & sizes
- Stable and reliable process and short cycle times
- Covers components out of different types of material including steel, cast iron, hard metal
- Machine supports integration of various machining processes such as stone-, tape-, CAB- and flat finishing as well as brush deburring
- Excellent accessibility

Cams	Rz <u><</u> 0.5 μm
Journals	Rz <u><</u> 1.0 μm
Drive shafts	Rz <u><</u> 1.5 μm
Pump shafts	Rz <u><</u> 1.1 μm
Compressor shafts	Rz <u><</u> 0.8 μm

The **Arihant Shaft-Fin Series** entails a modern and trendsetting system with numerous improvements for proto types.

The new design ensures highest quality while significantly reducing idle times. Extra-large, quickly changeable tape cassettes are easily accessible and change-over times reduced to a minimum. Intelligently designed tooling units permit the machining of shafts with journal distances of just 33 mm and lengths of up to 1600 mm. Flexible configuration options ensure that a broad range of part specifications can be met.

Between Centre	500 / 750 / 1000 / 1500mm
Max Diameter	200 mm
Spindle	Servo
Axis	Servo
Total Power	15 kW
Pneumatic	5 bar







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