

Horizontal Honing Machine - HHM

General Introduction & Selection guide

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Horizontal Honing Machine being one of the most sorted after products from our product portfolio for Hydraulic cylinder manufacturing , Oil and Gas industry and Hydraulic cylinder repair industry ideal for cylinders of length above 2000mm upto 10000mm.

Honing inner diameters from 40 mm upto 800mm

Outer diameter clamping capacities upto 1000mm.

Since this product is catering to a wide range of cylinder sizes and types we have divided the standard product offering into mainly 3 types of models for all the strokes as explained in the pages below.

Our Horizontal Honing machine Models

HHM Hydraulic

HHM H- Schlau Hone

HHM SS - Schlau Hone

Available in stroke lengths : 4000mm, 6000mm, 8000mm, 10000mm.

HHM INTRODUCTION

1. HHM Hydraulic

One of the first models developed by KMT over 18 years back is till date one of the best options for a job shop setup , for higher material removal and entry level option with limited automation functions:

Salient Features :

1. Scrapped LM Base and Job clamping base.
2. Digital stroke setting from touch screen no sensors required.
3. 7 inch touch screen with Inbuilt IOT features (optional)
4. Basic 30 IO OMRON PLC controlled
5. Diameter ranges upto 700mm OD clamping, Ideal for Honing upto 500mm.
6. Tool Support guide for easy installation of the tool into the job
7. Heavy duty Hydraulic Spindle 15 Hp , Hydraulic stroking 7.5 Hp along with Hydraulic Tool Expansion 1.5 Hp system
8. Basic magnetic drum with paper band filtration 120 ltrs capacity .
9. 4 axis Scrapped Heavy duty Job clamping Pillar and chain type clamping.
10. Single button Dwell Override function for taper correction and cylindricality corrections.

“Ideal for Basic Job shop set up with Open bore Cylinders to be honed.”

Additional Options available .:

1. Optional Coolant chiller with 6000Kcal /Hr. Daichi chiller
2. Optional 10 inch touch screen
3. Optional VPN connectivity and Data monitoring
4. Hybrid tool expansion from 300mm upto 500mm



This is the most entry level product for HHM with basic level of Automation as much as necessary.

However this is the base machine all other model are extensions of feature above this machine

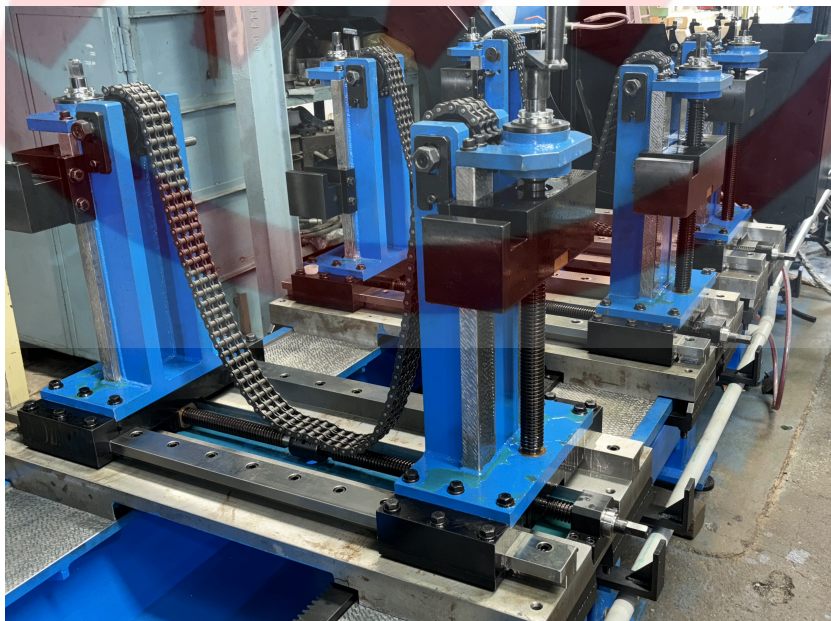
2. HHM H - Schlau Hone

This model features all the features included in the above model and has additional below salient features as standard offerings

Salient Features :

1. **First in class - Automated taper detection and programmable automated correction** function.Achieved results within H7 tolerances automatically.
2. **High Speed Graphical representation the bore geometry in process,** for better visual display and control.
3. Differential based in process correction helps in reduced cycle time and manufacturing costs.
4. Ethercat based PLC control for high speed communication and control.
5. 10 inch Touch screen with IOT capabilities with OEE tracking
6. **Job Slip safety sensor for operator safety.**
7. **Emergency rope break system for all around machine operator safety.**
8. **Remote pendant fro easy job setting.**
9. 20 HP hydraulic Spindle motor for increased honing performance
10. Drive based Stroke and Spindle Speed control,
11. Programmable Secondary home function and Homing speed.
12. Basic magnetic drum with paper band filtration 250ltrs capacity, with 600Kcal chiller unit along with auxiliary tank.
13. **Auto dwell over ride function for manual intervention taper correction if required.**
14. Additional 2 nos Screw

“Schlau means Smart in German as the machine smartly detects and corrects the bore imperfections with out human intervention”



3. HHM SS - Schlau Hone

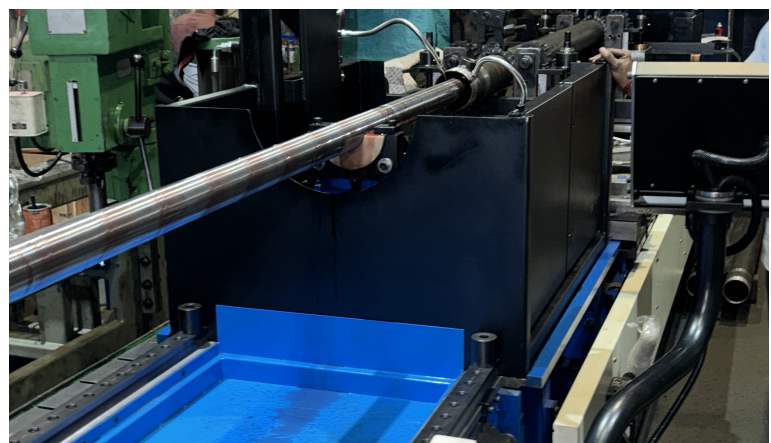
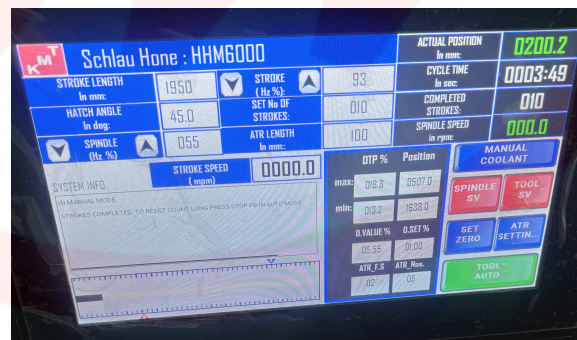
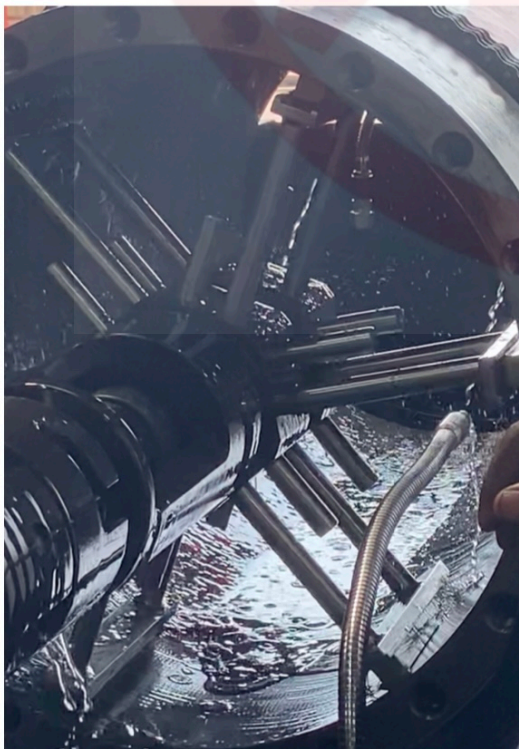
SS - Schlau Hone stands for Servo Stroking .

One of the top spec in our Horizontal honing portfolio, best suitable for blind bore honing, this machine *includes all the above features of the Schlau hone along with these list of features additional*

Salient Features :

1. **Blind bore cylinders as can be inspected only from one end we have made the taper mapping as a standard feature.**
2. **Only horizontal honing machine with stroke length above 4000mm to have a backlash of 0.3 arc minute.**
3. **Servo stroking ensuring dwell at the blind end of the cylinder.**
4. Accurate positioning within the cylinder being honed .
5. **Variable Acceleration and Deceleration control of stroking speeds due to servo control.**
6. High Speed PLC communication for precise positioning and mapping of the bore geometry.
7. Programmable variable home speed.
8. Quick Speed changeover.
9. **Smooth Direction transition reduced stone stop marks due to stroke reversal jerking.**

“Most sorted after option in Oil and Gas and Cylinder repair industry where our customers need to hone Blind Bored cylinders.”



Video Link and Questionnaire

Youtube Links:

HHM 4000 : <https://youtube.com/shorts/IGn5xi7n-jk?si=AsfAwkoi3hvJEusV>

HHM with Auto taper correction : https://youtu.be/K01RzUyQXfE?si=3j_UTssJRWmwAILB

Automated Taper correction : https://youtu.be/jDHlsmjdjd_c?si=p_f9Q9LtnDpeg0mo

Questionnaire:

We thank you very much for your interest and patience for having gone through our products, however we believe in understanding the requirement fully and supporting our customers with the right solution. Kindly help us understand your requirement better.

1. What is the minimum and maximum diameter of honing required ? _____.
2. What is the maximum stroke length of the cylinder to be honed ? _____.
3. Should we consider for expanding the stroke length in future ? _____ YES / NO _____.
4. What is the type of jobs and challenges you are currently facing ? _____.
5. Is there any specific requirement that we need to address in this machine ? _____.
6. What is the typical average material to be removed in the ID of the cylinder? _____.
7. Are there any special materials of high hardness materials you are looking to hone? _____.
8. What is the typical RA value desired ? _____.
9. Is there any specific Hatch angle control required ? _____ YES / NO _____.
10. Would you be interested in Automated Taper correction ? _____ YES / NO _____.
11. Do you have blind bore honing to be done ? _____ YES / NO _____.
12. Do you need any dedicated non magnetic filtration systems ? _____ YES / NO _____.
13. Is there any specific general questions about the product you would like to ask about the product?

_____.

We have only shared limited images to avoid piracy/ copying of our product images by other manufacturers and traders, We would be more than happy to share you our product videos on request for easy understanding .

For any further clarifications , please feel free to get in touch with us :

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