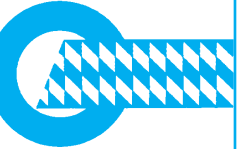


## PHM Mobile Honing Machine for Cylinder Liners

### The Key Features

- ★ **FULLY AIR POWERED.**  
Powerfull air motor for rotary motion of honing head, an air hoist for stroke motion and, as an unique feature, air operated actuators for honing stone to cylinder wall pressure.
- ★ **STURDY HONING HEADS.**  
Only three honing heads are required for cylinder liner bores from 150 to 640 mm diam.  
Head type 150-250 mm for honing diam. 150-250 mm.  
Head type 240-340 mm for honing diam. 240-340 mm.  
Head type 320-640 mm for honing diam. 320-640 mm.  
Each honing head can be easily set to the required honing diameter by inserting spacers between the central shaft and the stone holder units.
- ★ **PIVOT-MOUNTED STONE HOLDERS.**  
The stone holders are pivot-mounted and radially offset to assure a wiping-type honing stone to cylinder wall contact for superior honing performance. ^
- ★ **AUTOMATIC STROKING.**  
Automatic stroking of the honing head is a standard feature for ease of operation..  
The honing stroke is adjustable by means of end stops which are slideably mounted on a control rod.
- ★ **COMFORT CONTROL PANEL.**  
The comfort control panel is located near to the cylinder liner level for easy access.  
The comfort control panel houses  
the control knobs for fine adjusting of honing head RPM, the stroking rate and the stone feed pressure  
the pressure gauges displaying the selected setting of the honing head RPM, the stroking rate and the stone feed pressure and  
the levers for shutting-off the air supply to the air hoist, the air motor for the rotation of the honing head and the actuators for forcing the honing stones against inner wall of the cylinder liner.
- ★ **PREASSEMBLED DRIVE UNIT.**  
The drive unit including the air hoist for stroking, the air motor for rotating the honing head and the comfort control panel are completely assembled in the factory and stored in the transport case so that only a short setup time is required for preparing the machine for honing a cylinder liner in the engine block.



PHM340

placed on honing rig HMB340 for honing liners removed from engine block.

## Description

The PHM is a sturdy and solid mobile machine protected by a strongly adhering color layer.

Two models are available.

PHM640 for liners up to 640mm in diameter and PHM340 for liners up to 340mm in diameter.

Rotary motion and linear stroke motion of the honing head are in-finitely variable through simple pressure regulation of the air supply to obtain the desired crosshatch surface pattern. Stone feed pressure is also infinitely variable through regulation of air supply to the stone feeding actuators.

When air supply to the stone feeding actuators is shut off, the spring biased stone holders are pivoting inwards so that vertical scratches in the cylinder liner wall can be avoided when the honing head is inserted into or removed from the cylinder liner bore.

The powerfull air motor permits adjustment of the rotation speed of the honing head within a broad range by the mere turn of a control knob without changing any gear boxes.

The central control panel is equipped with regulator valves combined with manometer gauges for selecting the RPM of the honing head, the stroking rate and the stone contact pressure. Thus, the pressure settings which once proved as resulting in perfect surface finish, can be repeated time and again.

Automatic stroking is a standard feature.

The stroking length can be infinitely adjusted by means of end stops.

A single central air treatment unit with air filter and lubricator is also provided for trouble free operation.

An optional comfort control panel including the regulator valves and the manometer gauges can be provided at the lower end of the pre-assembled drive unit within easy reach of the operator while standing at cylinder liner level.

Setting up the PHM for honing requires only three steps.

1. Slide mounting tubes over two opposite studs at the engine block.
2. Placing the preassembled drive unit onto the mounting tubes.
3. Attaching the honing head to the air motor of the drive unit.

## Specifications

Capacity:	PHM340	PHM640
Honing diameter range	150 - 340 mm	150- 640 mm

Feed motions:	
Honing head RPM range	20 - 70 rpm
Stroke speed	up to 19 m/min

Air supply:	
Air supply pressure	6 - 10 bar
Air consumption	up to 3,7 m <sup>3</sup> /min

Storage case:		
Length/Width/Height	1700/850/630mm	1700/910/630mm
Gross weight	ca. 250 kg	ca.300 kg