

Hydraulic Laboratory Presses Series

MP150 | MP250

Sample Preparation made perfect

For KBr powder, grounded soil or other materials: if you analyze such samples with X-Ray fluorescence instruments, Infrared Spectroscopy, Calorimeters or others, you need to have a solid lab press with easy handling and a long lifetime. It should be able to produce perfect pellets, handle huge loads up to 25 tons, but it also needs to be small enough to fit on a table.

Then you have to choose our lab presses: solid stainless steel and aluminium construction for best quality, enabling to use a variation of die sets from 3 to 50 mm.

Maassen Lab Presses make the difference

- The hand pump is a special Maassen design, so you need less force for 25 tons load compared to other presses in the market
- The presses are reduced to essential parts. Therefore we only use the best material qualities: high solid aluminium, hardened steel and polished stainless steel
- All presses can maintain the load for several hours
- The MP250M is one of the motorized presses with the easiest handling available. It combines a long lifetime with easy operation and it is one of the most popular lab presses now
- The presses need no special maintenance. Just keep it clean!
- *Options for the digital versions MP150D / MP250D:*
 - MP-DA1: the serial connector allows to connect the press to your computer and save the data for each process
 - MP-S1 / MP-S2: with the digital pressure limiter, you can exactly program the load where the press needs to stop. Further pumping will not exceed this limit, so you can save small die sets from over pressure and make reproducible samples
- Our presses are completely designed and produced in Germany. So we are able to guarantee the spare parts supply and availability of service documents for many years

- Every single press is intensely tested to ensure that it matches our high quality standards
- Certify your load: with the optional Maassen Pressure Certificate, you can be sure about the exact load on your sample
- The press can be easily separated, single components can be replaced. Spare parts shipment available worldwide
- For individual needs, we are able to modify the press in some ways, like splitting it in two parts (for glove boxes) or adding a remote control

Safety Features

- Limited cylinder movement with a spring to pull it back to the lower position
- Integrated pressure overload protection
- Clear cover shield around the press unit
- MP250M: Emergency stop button and safety switch to ensure that the front cover is closed while pressing

Easy Operation

Almost every die set for IR and XRF purpose can be used. We offer a wide range from 3 to 50 mm diameter, for aluminium cups or steel rings. For vacuum connection, the cover has an opening at the back for the vacuum tube.

If you need a die set to operate with our presses, we refer to our separate brochure.

The next pages show pictures, technical data and special features of each version.



Solutions for
AAS | ICP | UV-VIS | XRF | FT-IR

Contact:

Maassen GmbH
In der Vorstadt 19/1
D-72768 Reutlingen

www.maassen-gmbh.de Tel.: +49 7121 890 739 0
info@maassen-gmbh.de Fax: +49 7121 890 739 1



MP150

The small manual laboratory press

The best solution for IR purpose

The standard MP150 has a pressure gauge with 80 mm diameter and a scale of 0.5 tons. This is suitable for many applications, especially with the common 13 mm die sets for IR purposes.

The MP150D with its digital display shows pressure differences in 10 kg steps (0.01 tons). So you can precisely check the load on your die set. This makes sense for very small die sets which usually don't stand high loads.

We recommend a minimum pressure of about 1 ton to allow the hydraulic lines to close. Then, the press can maintain the load for hours. The maximum load is limited to 15 – 16 tons. For die sets larger than 18 mm, you need to prove if the surface pressure is high enough to get solid pellets.

The manual release valve allows a smooth pressure decrease to avoid cracks in your pellets.

The MP150D can be combined with an adjustable pressure limiter (p/n: MP-S1) to set the maximum load individually. It can be programmed with the buttons at the display. This saves samples and dies from over load and allows reproducible samples. This setting is saved, even when you turn off the display.

With the serial connector, you can send the press data to your Computer (p/n: MP-DA1).



Model	MP150	MP150D
Dimensions (H min/max x W x D)	436/538 x 370 x 300 mm	
Width between columns	150 mm	
Min. / Max. clear height (for die set)	52 mm / 142 mm	
Display / resolution	Analogue, 0.5 to.	Digital four digit, 0.01 to.
Spindle diameter	35 mm	
Max. way of spindle movement	102 mm	
Cylinder diameter / max. lifting	105 mm / 22 mm	
Net. weight	43.5 kg	43.0 kg
Mains connection	–	Ext. power supply, 12 V
Order Number	54MP150	54MP150D

MP250

The manual laboratory press for XRF

The All-round talent

The MP250 has a pressure gauge with 100 mm dia. and a scale of 0.5 tons. It uses four longer columns compared to the MP150 for larger die sets and improved stability. The enhanced pressure range extends the press use for the common 32 and 40 mm die sets, needed for XRF analysis.

The MP250D uses the same digital display as the MP150D and shows pressure differences in 10 kg steps (0.01 tons). So you can precisely check the load on your die set. This makes sense for very small die sets which usually don't stand high loads. Therefore, the MP250D is a press for all applications in your lab.

We recommend a minimum pressure of about 1 ton to allow the hydraulic lines to close. Then, the press can maintain the load for hours. The maximum load is limited to 25 – 27 tons.

The manual release valve allows a smooth pressure decrease to avoid cracks in your pellets.

The MP250D can also be combined with an adjustable pressure limiter (p/n: MP-S2) to set the maximum load individually. It can be programmed with the buttons at the display. This saves samples and dies from over load and allows reproducible samples. This setting is saved, even when you turn off the display.

With the serial connector, you can send the press data to your Computer (p/n: MP-DA1).



Model	MP250	MP250D
Dimensions (H min/max x W x D)	497/609 x 370 x 300 mm	
Width between columns	150 mm	
Min. / Max. clear height (for die set)	73 mm / 185 mm	
Display / resolution	Analogue, 0.5 to.	Digital four digit, 0.01 to.
Top Spindle diameter	45 mm	
Max. way of spindle movement	112 mm	
Cylinder diameter / max. lifting	105 mm / 22 mm	
Net. weight	49.5 kg	49 kg
Mains connection	–	Ext. power supply, 12 V
Order Number	54MP250	54MP250D



MP250M

The motor power hydraulic press

Easiest handling for frequent use

The MP250M motor power press is made to handle a large number of press actions.

You control the load by positioning a red mark inside the 63 mm pressure gauge. Although it is possible to set 2 tons as minimum load, we recommend to use die sets not smaller than 8 mm because the 63 mm pressure gauge scale is 1 ton. So the load is reproducible as long as the mark is at the same position, but it is not exact enough for very small dies. The MP250M is able to hold the load for several hours.

We integrated two additional safety features compared to the manual versions: a safety switch to prevent press actions with opened cover and an illuminated emergency stop button.

The handling is very easy: pushing the green button starts the action and it stops at the marked position. The manual release valve allows a smooth pressure decrease to avoid cracks in your pellets.



Model	MP250M
Dimensions (H min/max x W x D)	497/609 x 360 x 400 mm
Width between columns	150 mm
Min. / Max. inner height for die set	73 mm / 185 mm
Display / resolution	Analogue, 0.5 to.
Top Spindle diameter	45 mm
Max. way of spindle movement	112 mm
Cylinder diameter / max. lifting	105 mm / 22 mm
Net. weight	68 kg
Mains connection	230 V / 50 Hz / 250 W
Order Number	54MP250M

MP5MD

Motorized precise load press

Programmable power for small dies

This compact laboratory press was especially designed for frequent and intense use of small die sets. The small electric hydraulic pump is made for precise load from 200 kg to 5 tons.

The pressure can be set in 0.01 tons steps at the digital display. The programmed load does not get lost when turning off the press. So it is perfectly suitable to reproduce the same press action with the same settings over and over again.

The press starts to work by pushing the green button, the blue button is for decreasing the load until the cylinder is back in his lowest position. The black rotary knob at the top of the metal cover adjusts the pump speed to minimize the overload for best precision and sample protection. The press can keep the load for several hours. If the load drops down to a predefined limit, it will automatically start again.

It also includes a safety switch at the front cover to interrupt the press action until it's closed.



Model	MP5MD
Dimensions (H min/max x W x D)	436/538 x 370 x 300 mm
Width between columns	150 mm
Min. / Max. clear height	52 mm / 142 mm
Display / resolution	Digital four digit, 0.01 to.
Spindle diameter	35 mm
Max. way of spindle movement	102 mm
Cylinder diameter / max. lifting	105 mm / 22 mm
Net. weight	40 kg
Mains connection	230 V / 50 Hz
Order Number	54MP5MD

Die Sets for XRF / RFA and FT-IR

Maassen Die Sets for Laboratory Presses

Precise pressing tools are very important for high quality pellets. Our Maassen press tools are made to produce such pellets in a fast and very easy way! There is no need to disassemble a heavy die set again and again. We have introduced a simple way to remove the base and push out the pellet. It was never easier or faster!

- Fill the Die Set as usual, put the plunger on top and start pressing with your lab press.
- After releasing the pressure: instead of removing the die set from the press and disassemble it, only pull the base block out of the black bracket and press again until the pellet is visible.
- Done!

And when using the Die Set upside down, it is more comfortable and faster to handle: push out the pellets without any vibrations or damage. Useful if the pellet is brittle.

All our die sets from 10 to 50 mm are working the same way. The 13 mm die set includes a wooden protection box. For 32 / 40 mm, the wooden box is available as an option

There is also a combined set of 32 and 40 mm available in a black protection case.

Our Die Sets for **3, 5 and 8 mm** pellets are also very easy to handle, small and efficient. They consist of three cylinders (lower, middle and upper part, made of hardened stainless steel) and two press pins (short and long version, made of KXF which means 90% tungsten carbide). This increases stability, lifetime and maximum possible load. The outer diameter of the cylinders is 13 mm, so for vacuum connection, you can put them inside any available 13 mm die set.

All our Die Sets are completely designed and made in Germany!



13 mm Die Set with wooden box



32 mm Die Set

Upside down handling



5 mm Die Set

Order informations:

Part number	Description	Max. pressure
54KB0300M-H	3 mm Die Set with hard metal press pins	1,5 to.
54KB0302M-H	3 mm spare hard metal press pins set	1,5 to.
54KB0500M-H	5 mm Die Set with hard metal press pins	4 to.
54KB0502M-H	5 mm spare hard metal press pins set	4 to.
54KB0800M-H	8 mm Die Set with hard metal press pins	6 to.
54KB0802M-H	8 mm spare hard metal press pins set	6 to.
54KB1000M	10 mm Die Set	7 to.
54KB1002M	10 mm spare pellets, 2 pcs.	7 to.
54KB1300M	13 mm Die Set in wooden case	10 to.
54KB1302M	13 mm spare pellets, 2 pcs.	10 to.
54KB1300M-H	13 mm Die Set with hard metal pellets in wooden case	14 to.
54KB1302M-H	13 mm spare hard metal pellets, 2 pcs.	14 to.
54KB1600M	16 mm Die Set	20 to.
54KB1602M	16 mm spare pellets, 2 pcs.	20 to.
54KBX20M	20 mm Die Set	24 to.
54KBX202M	20 mm spare pellets, 2 pcs.	24 to.
54KBX25M	25 mm Die Set	30 to.
54KBX252M	25 mm spare pellets, 2 pcs.	30 to.
54KBX32M	32 mm Die Set	30 to.
54KBX32M-H	32 mm Die Set with hard metal pellets	33 to.
54KBX322M	32 mm spare pellets, 2 pcs.	30 to.
54KBX322M-H	32 mm hard metal spare pellets, 2 pcs.	33 to.
54KBX40M	40 mm Die Set	40 to.
54KBX40M-H	40 mm Die Set with hard metal pellets	44 to.
54KBX402M	40 mm spare pellets, 2 pcs.	40 to.
54KBX402M-H	40 mm hard metal spare pellets, 2 pcs.	44 to.
54KB3240M	Combined Set 32 and 40 mm in plastic case	30 / 40 to.
54KBX500M	50 mm Die Set	45 to.

O-Rings, spare cylinders, plunger, pins or pellets are also available apart from the complete die set. Contact us for price and availability.

Maassen also offers individual sizes for die sets in case your size is not mentioned.

MAASSEN Die Set Series XRF

The new standard Die Sets for X-ray fluorescence analysis

The Maassen Die Set Series XRF is simplifying your sample preparation! With the spring-suspended base, combined with different adapters for different analysing instruments, you are able to press samples in a very short time.

The adapters enable to use steel rings or alu-cups in different sizes. You simply insert the ring or alu-cup, fill in your sample, put the lid on top and place it inside your laboratory press. The XRF series can take up to 40 tons load. After releasing the load, you can simply take out the ring or use a separate extractor ring to push the alu-cup out of the cylinder.



XRF-BC40 with inserted Alu-cup

These are the different types available:

XRF-BR51

This Die Set is made for steel rings with 8 - 9 mm height, an outer diameter of 51 mm and inner diameter of 35 mm.

It is made of the base unit XRF-B combined with the adapter XRF-51.

XRF-BC40

This Die Set is made for Aluminiumcups with 40 mm (usually 39.8 mm) diameter.

It is made of the base unit XRF-B combined with the adapter XRF-40



XRF-BR4035

This Die Set is made for steel rings with 14 mm height, an outer diameter of 40 mm and inner diameter of 35 mm.

It is made of the base unit XRF-B combined with the adapter XRF-R4035

XRF-BR4032

This Die Set is made for steel rings with 14 mm height, an outer diameter of 40 mm and inner diameter of 32 mm.

It is made of the base unit XRF-B combined with the adapter XRF-R4032