



**Assembly instruction**  
**Digital measuring gauges**  
**for WABECO milling machines**



**Walter Blombach GmbH**  
**Tool and Machine Factory**

# Outlay

## Dear customer!

Congratulations on choosing the **digital measuring gauges** a precise system of measuring coordinates.

These operating instructions are to help you to install the digital readout correctly. Therefore we request that you read the respective instructions carefully and follow them exactly.

After unpacking the digital readout, please check to see if any kind of damage has occurred during transportation. Any complaints must be made immediately. Complaints made at a later date **cannot** be accepted.

Before assembling the measuring gauges, please check the functions, that means ON/OFF-switch, switching from mm to inch, Reset- and preset function etc.

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## 1. Delivery range

### 1.1 X-axis

Piece	Designation	
1	Digital measuring guage	
2	Measuring guage bracket	
1	Vernier holder	
8	Allan screws	M4x10
8	Washers	4,3
2	Serrated lock washers	4,3
2	Hexagon nuts	M4

### 1.2 Y-axis

Piece	Designation	
1	Digital measuring guage	
1	Measuring guage bracket	
1	Vernier holder	
6	Allan screws	M4x10
6	Washers	4,3
2	Serrated lock washers	4,3
2	Hexagon nuts	M4

### 1.3 Z-axis

Piece	Designation	
1	Digital measuring guage	
1	Measuring guage bracket	
1	Vernier holder	
6	Allan screws	M4x10
6	Washers	4,3

## **2. Assembly**

### **2.1 Position of the length measuring gauges**

An assembly sketch is attached to the assembly instructions, in order to show the position of the screw holes which have to be drilled.

### **2.2 Preparatory drilling work prior to assembly**

We know from experience that it is very difficult to locate and drill all the necessary holes according to a sketch, on an assembled machine. For this reason we recommend that the screw holes be centred first and before drilling, that the pieces should be held against this and checked for length.

### **2.3 Assembly of the measuring gauge and bracket**

#### **2.3.1 Assembly X-axis**

1. Mount the slant-angled vernier holder from the rear onto the vernier.
2. Mount both the measuring gauge brackets with the right-angled flange upwards onto the upper slide.
3. Mount the whole measuring gauge with 2 nuts, 2 washers and 2 serrated washers onto the downward slanting flange of the measuring gauge bracket.
4. Attach the angle of the vernier holder to the cross slide.

#### **2.3.2 Assembly Y-axis**

1. As with the assembly of the X-axis, first of all mount the vernier holder to the rear side of the vernier.
2. Affix the measuring gauge bracket to the base plate.
3. Using 2 nuts, 2 washers and 2 serrated washers, mount the measuring gauge onto the bracket.
4. Mount the flange of the vernier holder onto the cross slide.

## 2. Assembly

### 2.3 Assembly of the measuring guage and bracket

#### 2.3.3 Assembly Z-axis

The Z-axis is principally assembled in the same way as the X-axis and the Y-axis.

1. Affix the vernier holder to the rear side of the vernier.
2. Mount the top and lower measuring guage brackets to the Z-column of the machine.
3. Mount the measuring guage using 2 nuts, 2 washers and 2 serrated washers to the measuring guage brackets.
4. Mount the flange of the vernier holder to the vertical slide.

### 2.4 Assembly in general

**When assembling all measuring guages, please take care that no tension or warping occurs to the single components when screwing the gauges to the brackets.**

- Check that the slides can move freely
- Tighten all assembly screws.

### 3. Working and reading off with the individual measuring guages

Due to differing construction, the functions and control keyboards of the individual measuring guages are different.

Due to the fact that the measuring guages are built onto or will be built onto our machines, we only mention the most important functions here:

- **ON - OFF**
- **Switch over from mm/inch**
- **Zero positioning.**

#### 3.1 X-axis

This measuring guage has an ON – OFF switch which must be turned off when the machine is not in use.

**The last position to be run is stored after switching off.**

In addition there is an O key on the measuring guage with which the system can be set to zero at any position.

The key mm / inch enables a change from mm to inch which is then displayed.

#### 3.2 Y-axis

This measuring guage has only two keys.

The first key is for zero setting.

The second key is for switching from mm to inch which is then displayed.

**The display switches off automatically after a few minutes. The position is stored however, and need not be switched on again.**

The measuring guage also has an ON – OFF switch which must be switched off when the machine is not in use.

#### 3.3 Y-axis

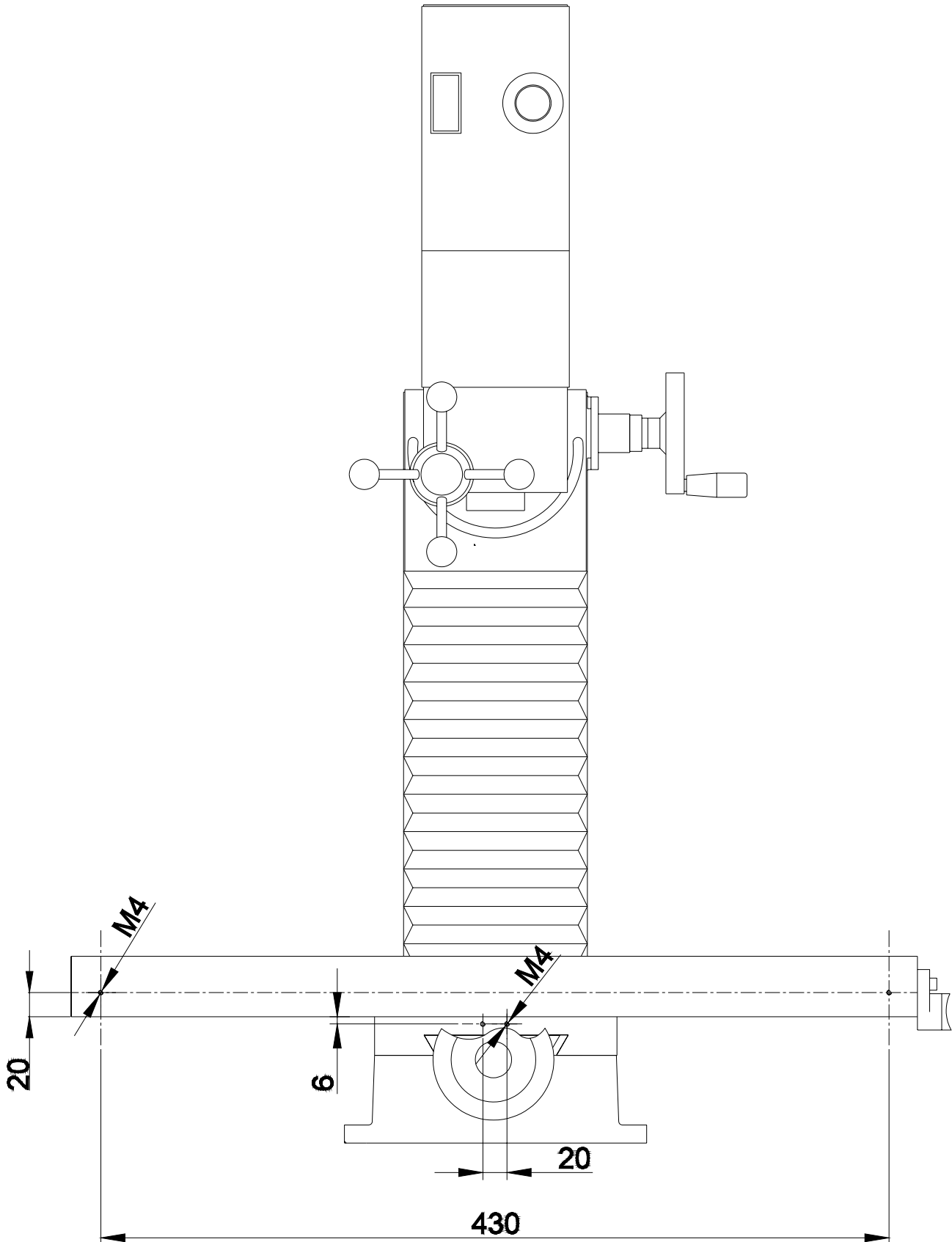
**The last position to be run is stored after switching off.**

In addition there is an O key on the measuring guage with which the system can be set to zero at any position.

The key mm / inch enables a change from mm to inch which is then displayed.

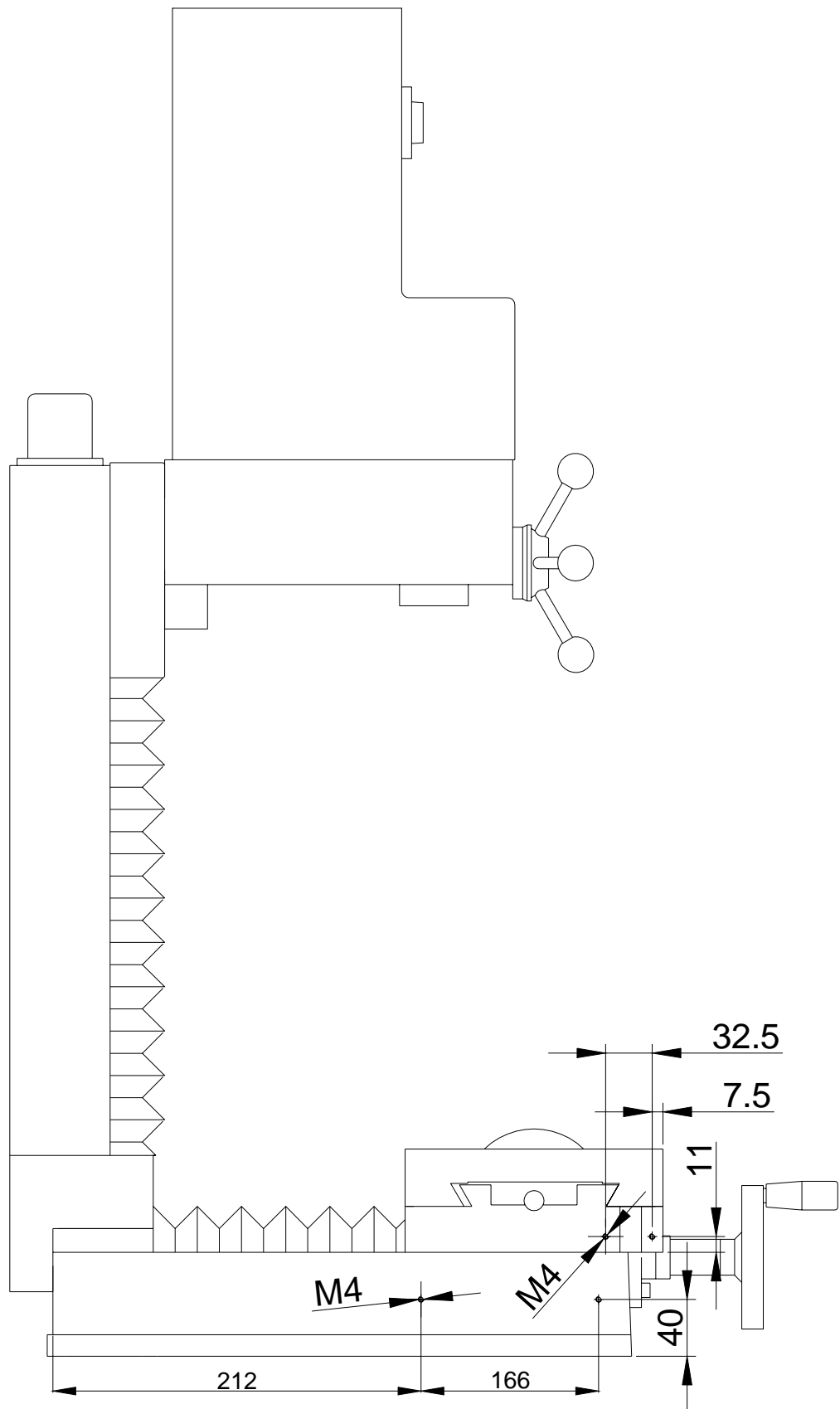
## 4. Assembly sketch

### 4.1 X-axis for F1200 E, F1200 E high speed, CC-F1200 E and CC-F1200 E high speed



# 4. Assembly sketch

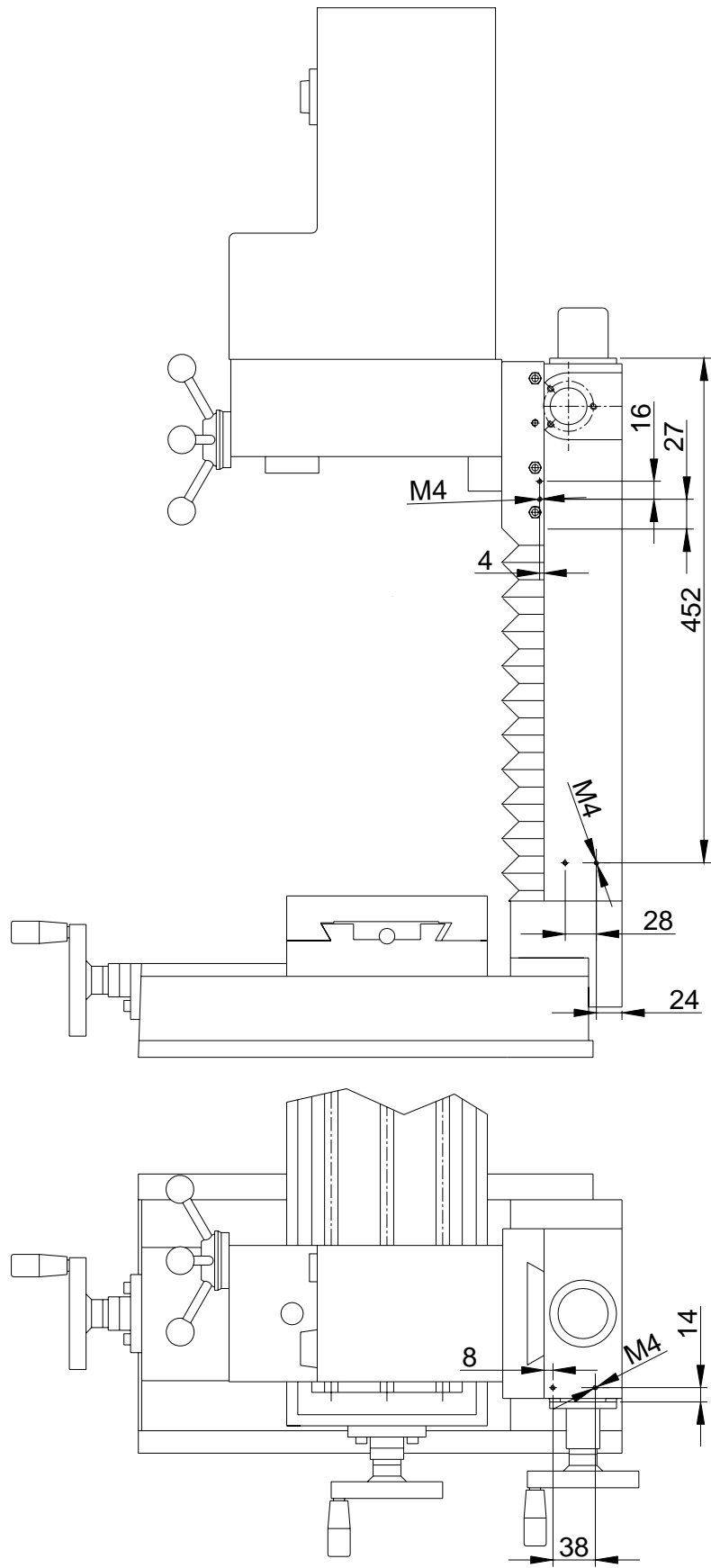
## 4.2 Y-axis for F1200 E, F1200 E high speed, CC-F1200 E and CC-F1200 E high speed





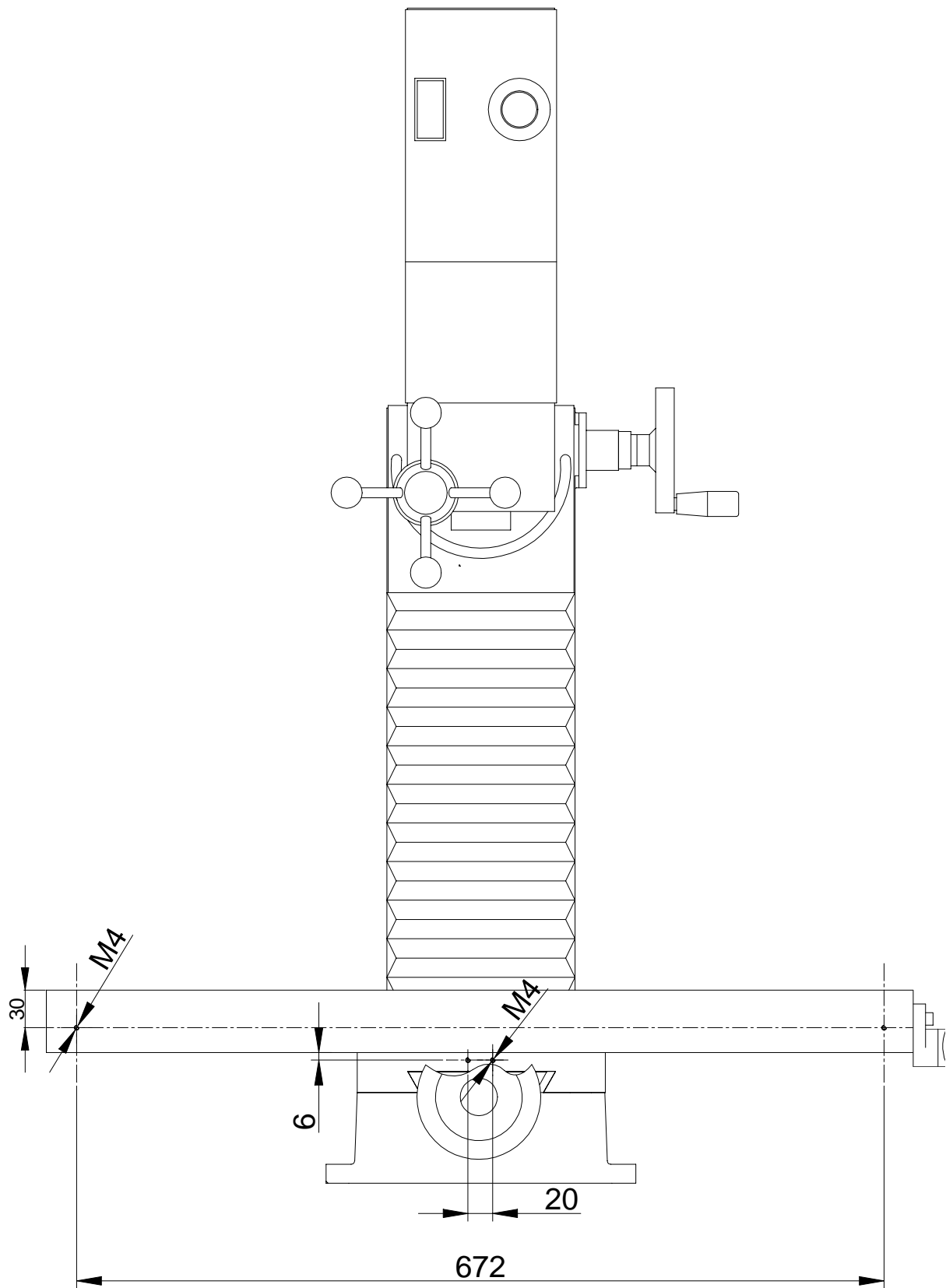
# 4. Assembly sketch

## 4.3 Z-axis for F1200 E, F1200 E high speed, CC-F1200 E and CC-F1200 E high speed



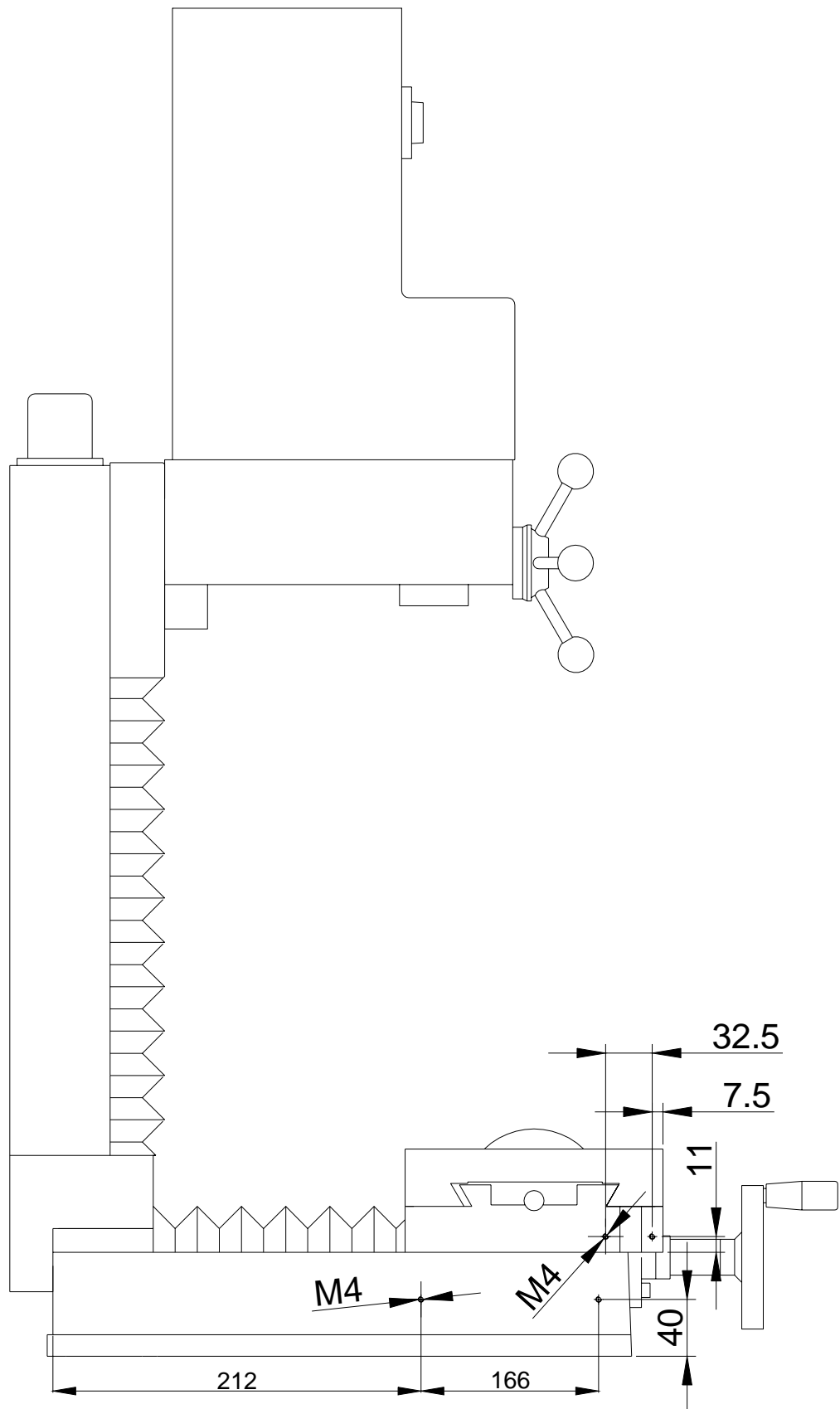
**5. Assembly sketch**

**5.1 X-axis for F1210 E, F1210 E high speed, CC-F1210 E and CC-F1210 E high speed**



**5. Assembly sketch**

**5.2 Y-axis for F1210 E, F1210 E high speed, CC-F1210 E and CC-F1210 E high speed**



# 5. Assembly sketch

## 5.3 Z-axis for F1210 E, F1210 E high speed, CC-F1210 E and CC-F1210 E high speed

