

29 Tools holder and Boring Cutter



30 Assorted Hard Metal Insert with Holder



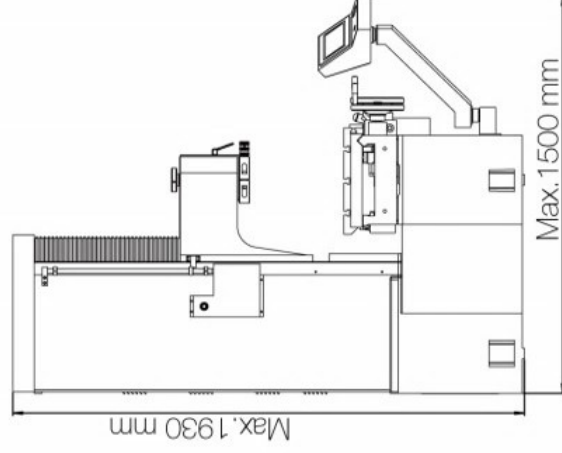
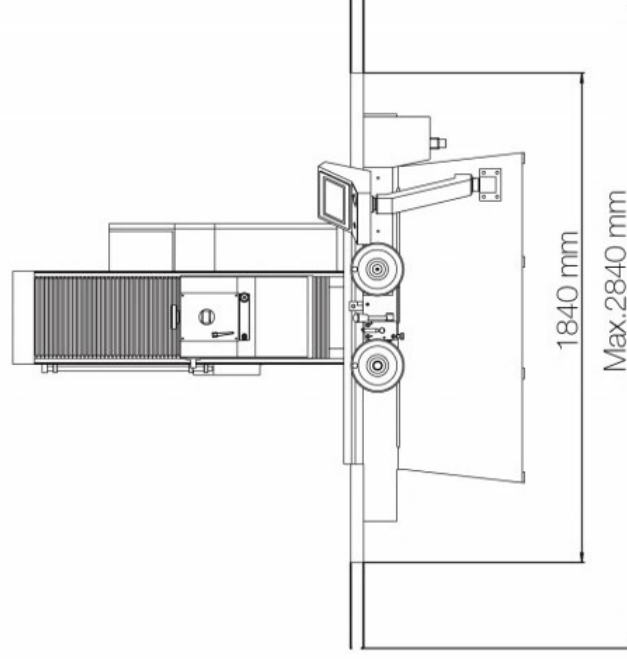
31 Tools Grinder TG-III



Table of Standard Acc. & Equipment, Optional Acc. & Equipment

Model	Standard	Optional
BM160	1, 4, 8, 10, 17, 18, 20, 21, 25, 27, 29	2, 3, 5, 6, 7, 9, 11, 12, 13, 14, 15, 16, 19, 22, 23, 24, 26, 28, 30, 31
B160	2, 4, 8, 10, 17, 18, 29	1, 3, 5, 6, 7, 9, 11, 12, 13, 14, 15, 16, 19, 30, 31

## Required Space

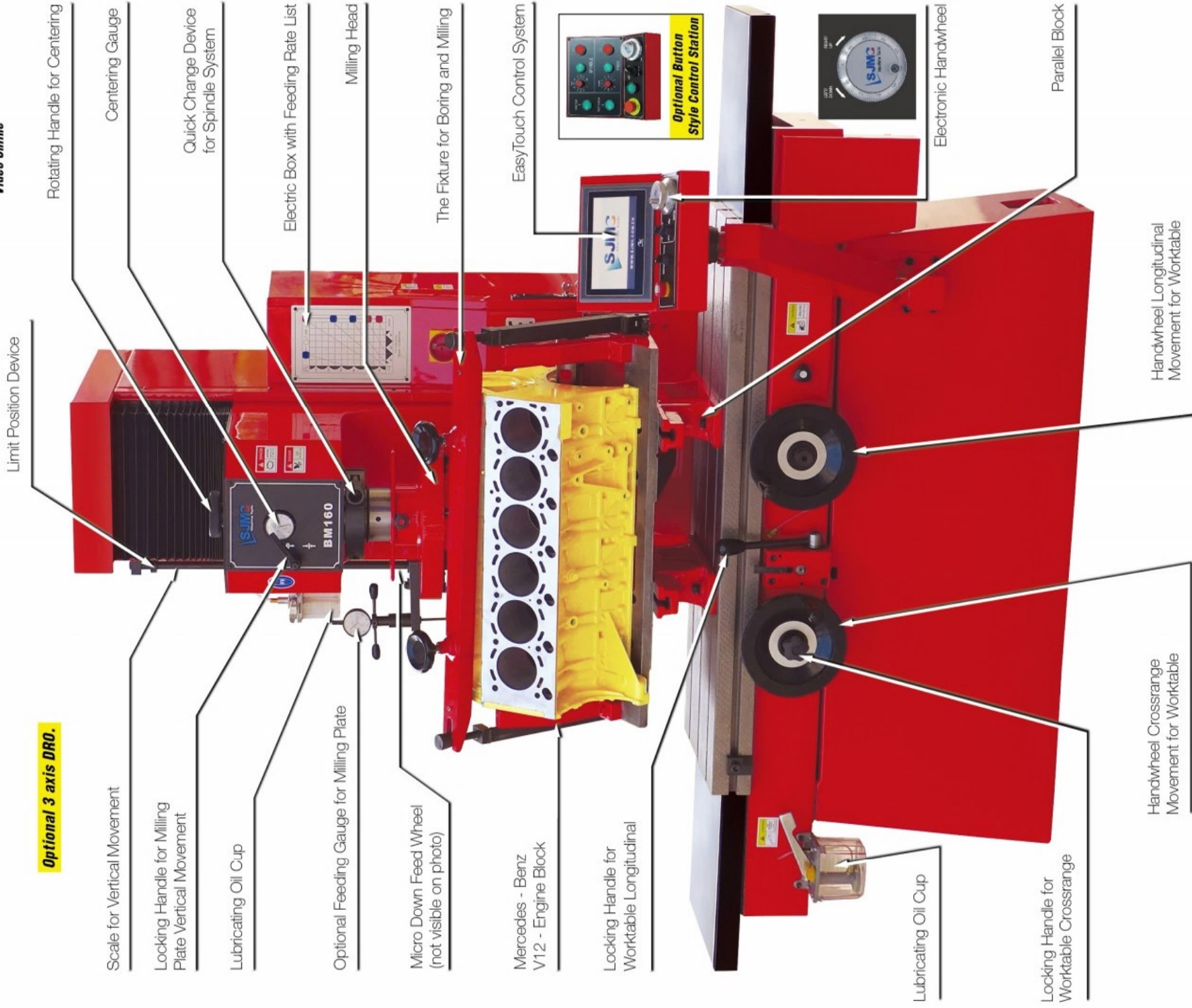


# Vertical Fine Boring - Milling Machine

## Model: BM160



Video Online



**Optional 3 axis DRO.**

Limit Position Device

Scale for Vertical Movement

Locking Handle for Milling Plate Vertical Movement

Lubricating Oil Cup

Optional Feeding Gauge for Milling Plate

Micro Down Feed Wheel (not visible on photo)

Mercedes - Benz V12 - Engine Block

Locking Handle for Worktable Longitudinal

Lubricating Oil Cup

Locking Handle for Worktable Crossrange

Rotating Handle for Centering

Centering Gauge

Quick Change Device for Spindle System

Electric Box with Feeding Rate List

Milling Head

The Fixture for Boring and Milling

EasyTouch Control System

Optional Button Style Control Station

Electronic Handwheel

Parallel Block

Handwheel Crossrange Movement for Worktable

Handwheel Longitudinal Movement for Worktable

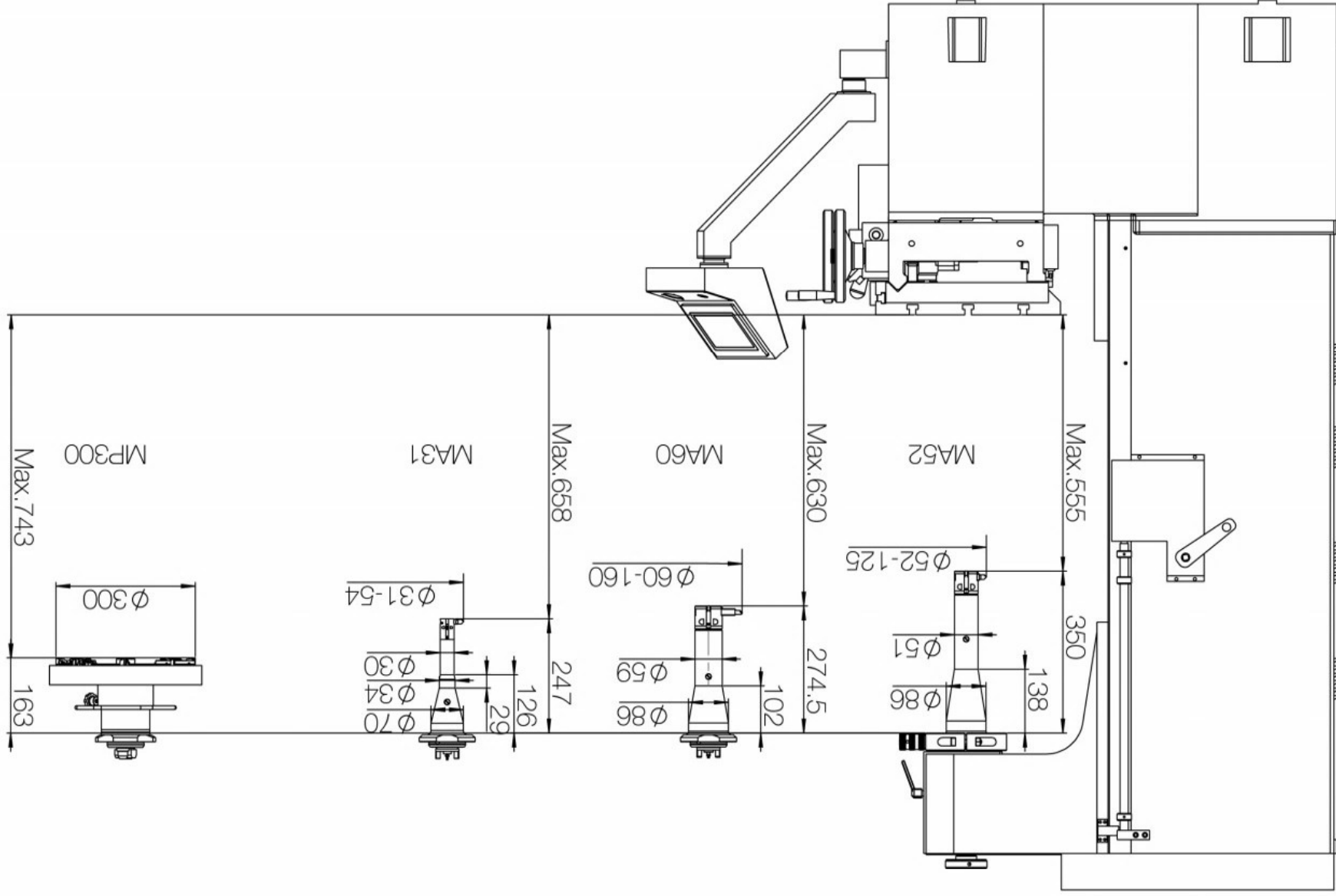
The Vertical Fine Boring - Milling Machine **BM160** has combined all functions and simple performance of the traditional Cylinder Boring Machine with the easy-to-operate SJMC EasyTouch control system. Through the joint operation of the standard mechanical handwheel and the electronic handwheel, the boring of the cylinder body and the machining of the milling plane can be easily accomplished. With the excellent EasyTouch system, even a new hand can easily learn to operate the machine.

## Specifications

Model	BM160	B160
Control System	EasyTouch 3 Axis	Without
Boring Capacity	160 mm	
Max. Boring Depth	350 mm	
Max. Milling Area ( LxW )	300x850 mm	Without Milling
Spindle Speed	50 ~ 780 rpm stepless	
Spindle Feeding	10 ~ 900 mm / min (0.01 ~ 0.2 mm / r )	
Rated Torque of Boring at 50-500 rpm	96 N.M	
Rated Torque of Boring at 500-780 rpm	75 N.M.	
Spindle Traverse	550 mm	
Distance Between Spindle End Face and Work Table	0 ~ 700 mm	
Distance between Spindle Axis and Carriage Vertical Plane	335 mm	Hand Movement
Longitudinal Feeding of Work Table by Electric	30 ~ 1200 mm / min	
Longitudinal Quick Travel of Work Table by Electric	1200 mm / min	Hand Movement
Longitudinal Traverse of Work Table	980 mm	
Cross Traverse of Work Table	70 mm	
Work Table Size ( LxW )	400x1100 mm	
Boring Accuracy	H7	
Working Accuracy of Roundness for Boring	0.005 mm	
Working Accuracy of Cylindricity for Boring	0.015 mm / 300 mm	
Working Accuracy of Flatness for Milling	0.0127 mm / 305 mm	Without Milling
Surface Roughness of Boring	Ra 0.8	
Surface Roughness of Milling	Ra 0.8	Without Milling
Power of Spindle Motor	3 kW AC Servo Motor	
Motor Power of Work Table Movement	0.4 kW	Hand Movement
Motor Power of Spindle Vertical Movement	0.4 kW	
Overall dimensions ( LxWxH )	2670x1170x1920 mm	
Package Size	2200x1200x2200 mm	
N.W.	1600 Kg	
G.W.	1900 Kg	
Note: Model B160 is just Boring Machine without Milling Function		

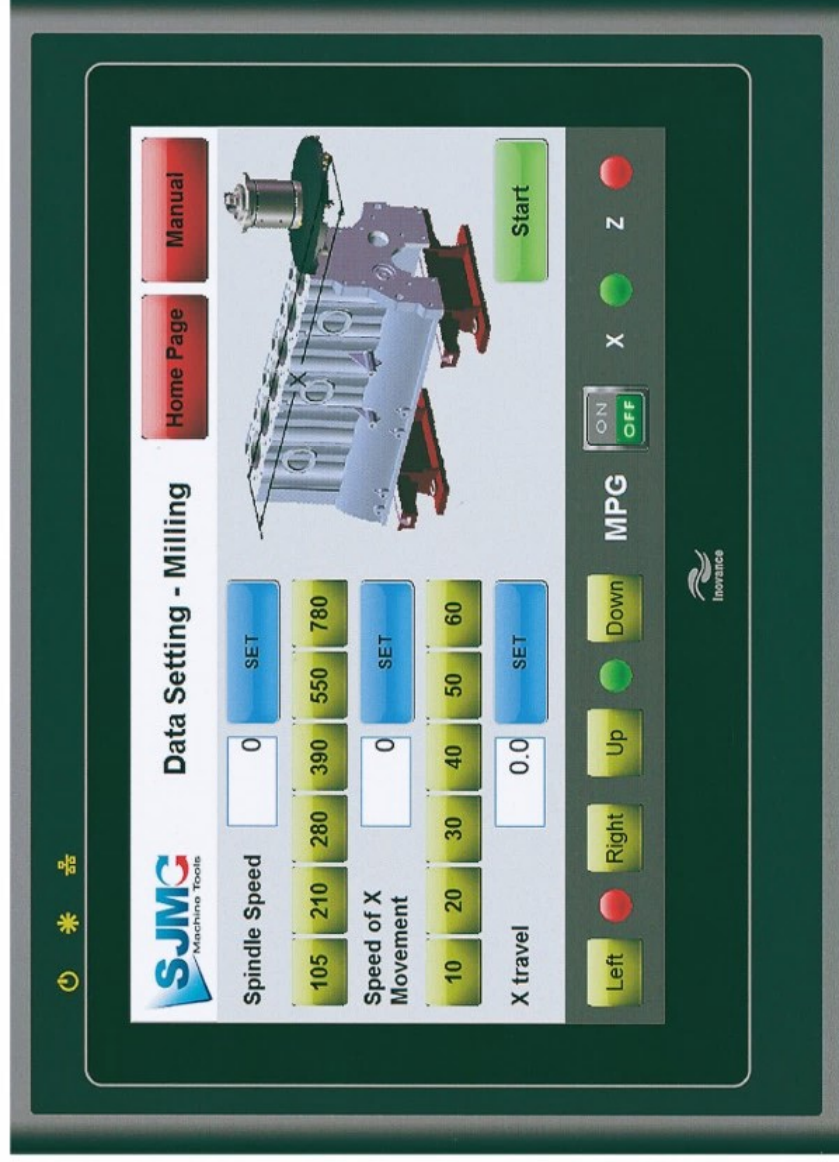
**\* All technical data and photos are subject to change due to designing without notice.**

# Spindle System Diagram



## Features

1. EasyTouch control system  
The left and right movement of the table, the up and down of the spindle, as well as the rotation of the spindle, are all driven by servo motors, which by combining with the specific SJMC EasyTouch system, achieves the accurate numerical control of three-axis movement on the whole machine.



2. Small size to output high torque  
 BM160 is in compact design, with its working area of 1.5 m<sup>2</sup> less than those of the similar machines. However, with maximum operating torque of 120N.M, its small size shows powerful processing capability. Due to BM160 spindle driven by 4kW servo motor and equipped with heavy load belt transmission system, the spindle is capable of a constant powerful torque output 120N.M at 200 to 500 RPM, and it can even maintain a constant output 100N.M at the higher speed of 500 to 780 RPM. The high torque output at high speed ensures the high efficiency of BM160.

3. Precise and powerful spindle system  
 The deliberately designed spindle system with 3 spindles from small to large, you can hold one of which by one hand easily, plus the more artful quick change structure, contributes to the change of different spindle within 5 min by a person. Although the spindles are all exquisite, their cutting load capacities are strong. The penetration of a cutting tool at one side of MA52 and MA60 spindle can reach 1.5mm, with boring precision 0.005 mm.

4. Option milling head MP300 is equipped with 8 cutters, and the milling feed at one time for facing is 1mm, so that no matter cast iron or aluminum part, the ideal surface roughness can be achieved. With flatness exceeding 0.013mm/300mm, its machining precision achieves the grounding effect and thus it can take the place of grinding with milling.

## Accessories

- 1 EasyTouch Control System for BM160



- 2 Optional Button Style Control Station



- 3 3 axis DRO.



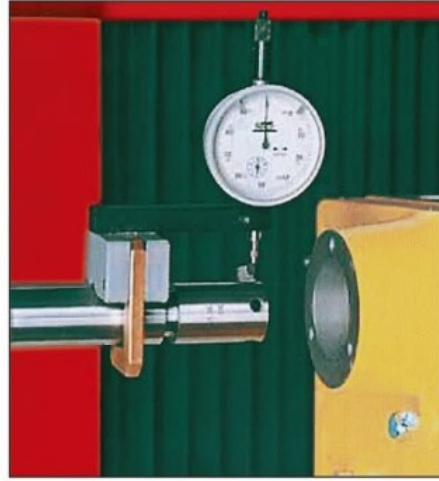
- 4 MA52 Measuring Device for Setting Tool



- 5 MA52 Measuring DRO for Setting Tool



- 6 Tools Setting Gauge on Spindle M30



- 7 Bore Gauge



- 8 Dial Gauge



9 30° and 45° V-fixture for Boring and Milling



10 Parallel Block



11 30° and 45° V-fixture for Boring



12 Universal Cylinder Head Fixture A



13 Quick Acting Fixture



14 Universal Cylinder Head Fixture B



15 Motorcycle Cylinder Fixture



16 Centering Device of Spindle

