

## Introduction

- Model: HBT165C
- This type of testing machine is designed to perform bending test on metallic materials, like rod steel, plate steel, polygonal cross-section materials and threaded steel.
- Bidirectional hydraulic loading, easy to bend specimen with diameter less than 40mm to 180°.
- Hand wheel drives bidirectional screw lead to adjust the support span; the support roller is self-lock; using a wrench to lock a roll is not needed any more; Plug-in type bending indenter is simple to change.
- Testing speed adjusting device, displacement device, and Speed display device, fully complying with Clause 6.3 of ISO 7438:2005: "In case of dispute, a testing rate of  $(1 \pm 0,2)$  mm/s shall be used". It can also real-time display bending angle and facilitate for various angle tests.

**Standards:** GB/T 232-2010, ISO 7438

## Structure and Function

HBT165C structure is as showed in Figure 1.

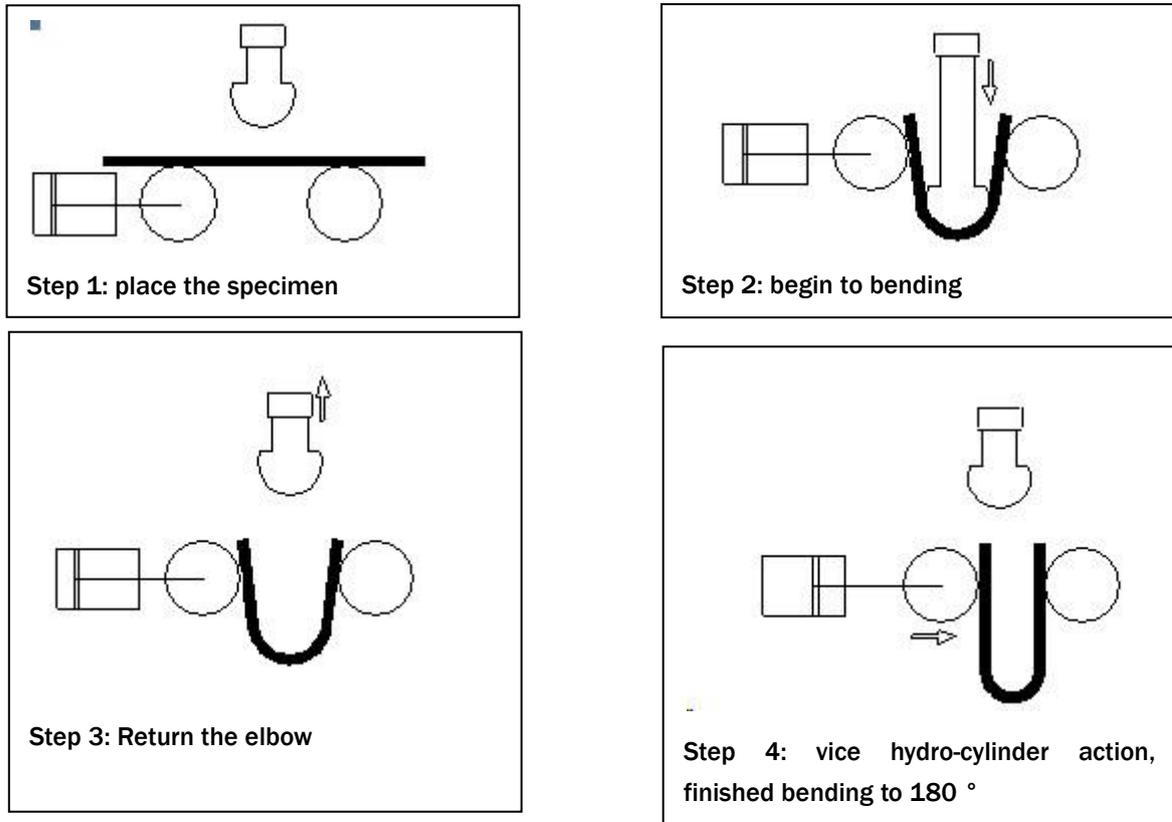
It's a vertical type testing machine; the operation height is about 800mm, very easy to operate. During the test, master cylinder drives V-block to make the specimen bend to nearly 180°, and then retreats itself. Subsidiary cylinder drives an roller to make the nearly 180° bended specimen continue to bend to 180°, so it can well meet the needs of standards. The test is completed continuously with high efficiency.

- Speed governing pilot wheel make the piston rod extending speed achievable to be adjusted, to meet the new ISO testing speed requirements.
- The span between the two rollers can be adjusted by lead screw. With an elaborate design, it's just need to turn pilot wheel to a corresponding span without fastening, it's very convenient. And compared to the old bending testing machine, it greatly reduced the work intensity.
- The operate buttons and the display screen are located on the right slop of the bending testing machine. The buttons control the machine so the bending test can be realized.
- Displacement transducer measures the displacement and speed, then transfer the data to microcomputer, the microcomputer calculate it and display it on the screen. The parameters of the testing speed, the displacement of the piston rod and the bending angles



can be viewed on the LED display screen.

**Experimental Procedure**



**Figure 2: Bending schematic diagrams**

1. Dual station structure: the first station bending to about 170°, and the second station finish to 180° ;
2. The speed regulation and display can meet arbitration testing speed requirement of (1±0.2) mm/s;
3. The first station and the second finished step by step.
4. Test can begin after the span is adjusted without locking the bolt;
5. One person to operate, pressing the buttons to complete the test;
6. Vertical type, better securely.

**Parameters**

<b>Max pushing force(KN)</b>	<b>160kN</b>
Master cylinder max travel(mm)	300mm
Master cylinder no load pushing speed	0.5-4mm/s(Stepless regulation) Adjustable to 1±0.2mm/s for ISO
Subsidiary cylinder max force(kN)	60kN
Subsidiary cylinder max travel(mm)	30mm
Support roller diameter(mm)	120mm
Distance between the rollers(mm)	10-340mm(stepless)
Diameter of bending pressure head	6-200mm(can be customized)
Round specimen diameter(mm)	φ6~φ40 mm
Flat specimen thickness(mm)	(6~40)×50 mm
Max. bending angle	180°
Power consumption(kW)	2.2 kW(380v、50Hz)
Main dimension(mm)	1450×680×1050mm
Weight (kg)	600kg

**Standard Configurations**

<b>Name</b>	<b>Description</b>	<b>Quantity</b>
Mainframe		1 set
Standard bending pressure head		1 set
Bending pressure head diameter(mm)		1 set
Plain round rebar	6,8,10	
Ribbed rebar	18,24,30,32,36,40,42,48,54,56,60,64,66,72,75,80,88,100,112,128,140,144,160,180,200	
Hydraulic station		1 set
Shield		1 set
Random tool		1 set



**Shenzhen Wance Testing Machine Co., Ltd.**

Fuxinfa Industrial Park, Liuxiandong, Xili,

Nanshan District, 518055, Shenzhen, China

Tel: +86-755-23057996 Fax: +86-755-23057995

Email: [sales@wance.net.cn](mailto:sales@wance.net.cn)

[www.wance.net.cn](http://www.wance.net.cn) [www.wance.net](http://www.wance.net)