

BR16 ANGLE BENDING MACHINE

Operation Manual of Semi Hydraulic Section Bending Machine

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1. Main usage

BR-16 is semi-hydraulic 3 roller type Section bending machine, which mainly uses in various steel Section bending. It can roll "O" spiral shape workpieces. It is widely in petrol, chemical, shipyard, metalworking and machine manufacturing industries.

2. Technical Parameters

- Details technical parameters show:

Technical Parameter		WYQ24-6	WYQ24-16	WYQ24-30	WYQ24-45	WYQ24-75	WYQ24-100	WYQ24-140	WYQ24-180	WYQ24-260	WYQ24-320	WYQ24-400	WYQ24-500
Max. Bending Section Modulus		6	16	30	45	75	100	140	180	260	320	400	500
Rolling Speed(m/min)		6	6	5	5	5	5	4	4	4	4	4	4
Yield Strength (Mpa)		S=450											
	Angle Inside Bending	40X5	70X8	80X8	90x10	100X10	120X12	140X16	150X16	160X16	180X14	200X18	200X20
	Angle Outside Bending	50X5	80X8	90X10	100x10	120X12	140X16	150X16	160X16	180X14	200X18	200X24	250X25
	U-steel Outside Bending	8	12	16	20	25	28	30	32	36	40	45	50
	U-steel Inside Bending	8	12	16	20	25	28	30	32	36	40	45	50
	Flat Horizontal Bending	100X18	150X25	180X25	200x30	220X40	250X40	280X50	300X50	330X50	360X60	400X75	500X76
	Flat Vertical Bending	50X12	75X16	90X20	100x25	110X40	120X40	150X40	180X30	190X40	190X50	200X50	200X60
	Round Pipe	42X4	76X4.5	89X5	89x8	114X5	159X5	186X6	168X8	219X8	245X8	273X8	323X10
	Round Steel	38	52	62	75	85	90	100	110	120	135	150	160
	Square Steel	45X3	60X4	70X4	80x6	90X8	100X10	125X10	140X10	150X10	165X10	180X12	200X12

2.2 Model and specification

Please find the right model according to the maximum bending resistant modulus of Sections.

3. The main structure of Section bending machine

All three rolls are main drive roller. The top roller move by elevation, the bottom roller rotates in a fixed position. It's easy to take off the finished workpiece. Independent and movable console to make the operation easier. It's an advanced machine to easily operate and maintain with a small flat edge.

Top roller installs in the above the machine body, the bear on the two sides of the top roller used cylindrical roller bearing. The top roller movement up and down which driven by hydraulic.

Bottom roller rotates in a fixed position.

Top roller shaft and bottom roller shaft are all main drive shaft, through the hydraulic motor, gear, chain to drive the top roller shaft and bottom roller shaft rotary. The unique design of synchronous mechanism make the top and bottom mold have the same line speed when bending the different Sections.

Guide roller easy to roll the asymmetrical section to avoid the bending default.

4. Hydraulic system

The usage of the hydraulic system: drive the motor to make the top roller and bottom roller rotate; And drive the cylinder to make the top roller move by up and down.

The hydraulic system is reasonable in design, reliable operation, equipped with a high accuracy oil and return oil filter, in order to ensure cleanliness of the system oil.

The main valve hydraulic system adopts the famous quality products. Pump, oil filter, motor, seals are used brand-name manufacturers of domestic or foreign joint venture products, its advanced performance, reliable quality. All hydraulic parts in the factory have to undergo a rigorous testing, screening, to eliminate the hidden trouble.

Layout of the pipeline system, convenient operation, flexible action neatly, and overload protection device.

5. Electric system

Main voltage 380V 50HZ 3phases

Main motor 5.5KW

The machine electric control part of the contractor as the core, with the electric control system and hydraulic system, in order to realize the machine each action, main buttons to move the button box and a console based. Through the digital display shows the amount of movement, convenient intuitive operation.

The high voltage part of the main electrical components is brand-name and quality products, with long service life, no fault time.

6. Main characteristic

6-1. The molds of this machine have good mechanical properties, high strength, strong wearable, suitable for high load operation and long life after forging, quenching and tempering.

6-2. Double row self-aligning roller bearing mounted at the end of the main shaft, there's large capacity and reduce the power loss caused by friction, long life service and saving energy.

6-3. Movable console and digital display for top roller elevation amount make the operation easier.

6-4. High accuracy displacement sensor of the top roller elevation ensure the precision and monitor of each roller.

6-5. This machine adopts the whole body, strong rigidity, good hoisting, easy to install, and annealing treatment, eliminate stress, improve the accuracy.

7. Section bending machinery installation and commissioning

The level of the ground plane and tilt in any direction shall not exceed 2mm / m.

Machines should be checked before installation completely, all preparations have been installed before they can proceed on the installation sequence.

The following mold surface level as a benchmark to check the tilt and the upper and lower mold parallelism, adjusted to meet the requirement. All installed, inspected before tightening bolts.

Must ensure the equipment flexible running after the installation.

Prior to starting the test the connection to be solid and the department of inspection and adjustment of the gap part of all sports and travel and so on, to check whether or not a good electrical switch.

After the completion of preparatory work for the commissioning, commissioning of 10 minutes, stopping to check all in good condition after the operation before the load test.

8. Section rolling machine operation and safety maintenance

This equipment is very easy to operate and reliable. Push the button “forward” and “backward” separately, can get the different rotate direction. The operation should obey the following principle:

- 8-1. Don't run the machine when the electric system is in an abnormal situation.
- 8-2. Forbid the operator who doesn't know the machine and don't abide by the rules running the machine.
- 8-3. Ensure there's a good light in working area.
- 8-4. Don't allow the two sides flat edge of the workpiece overlapping to prevent damage the machine.

In order to ensure the machine is a good running station, please change the worn parts timely. Establish reasonable repair and maintenance system, the workplace, the device should be kept clean and tidy surroundings

9. Machine lubrication

A reasonable machine lubrication is to reduce power consumption and increase machine life and effective measures to this, we must choose the right lubricants, to establish the necessary lubrication system.

9-1. Lubrication

The machine according to the work of cups was used lubricating oils, artificial fuel, lubricating oil tank focused on three ways.

9-2. Lubricant Selection

Artificial refueling Department, the use of calcium-based grease, oil cup lubrication points, the summer use of calcium-based # 2 grease, the winter using a # calcium-based grease.

9-3. Lubrication system and note

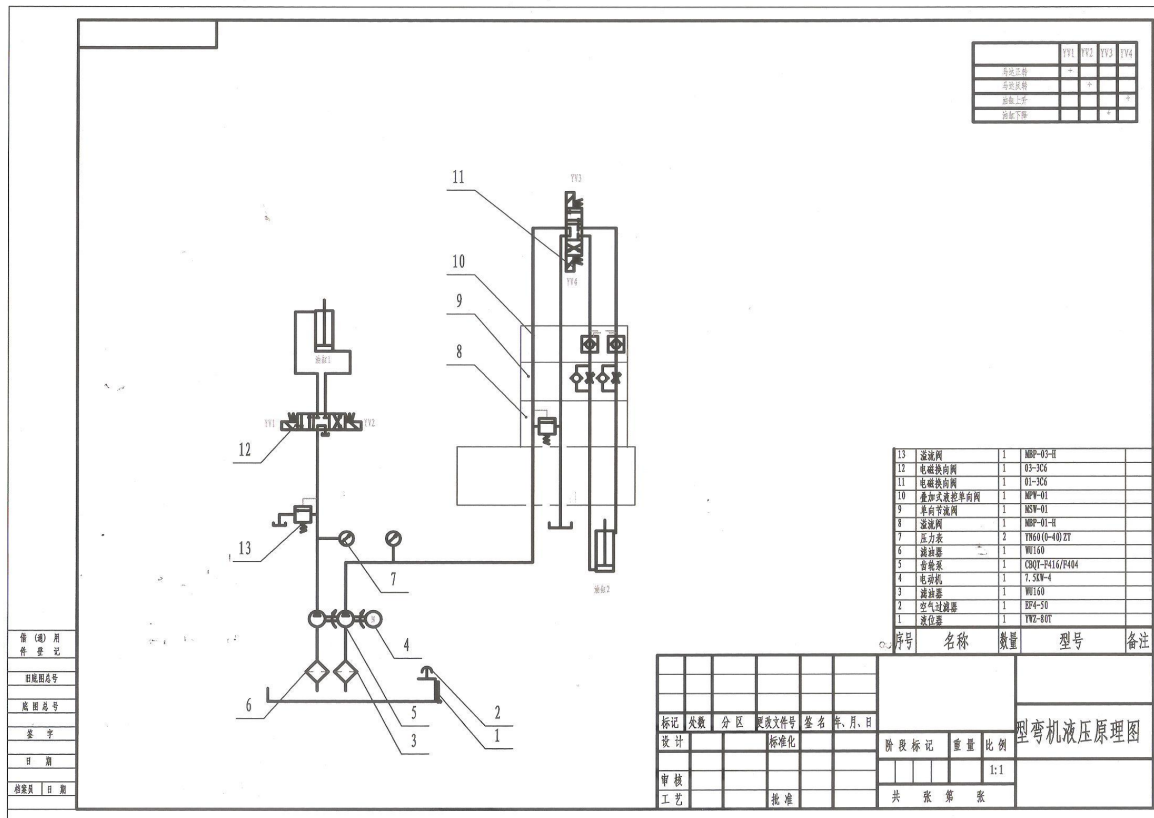
The user according to the specific situation of the machine, load, and operation of the establishment of a specific lubrication system.

The machine before starting the lubrication points must be sufficient oil supply.

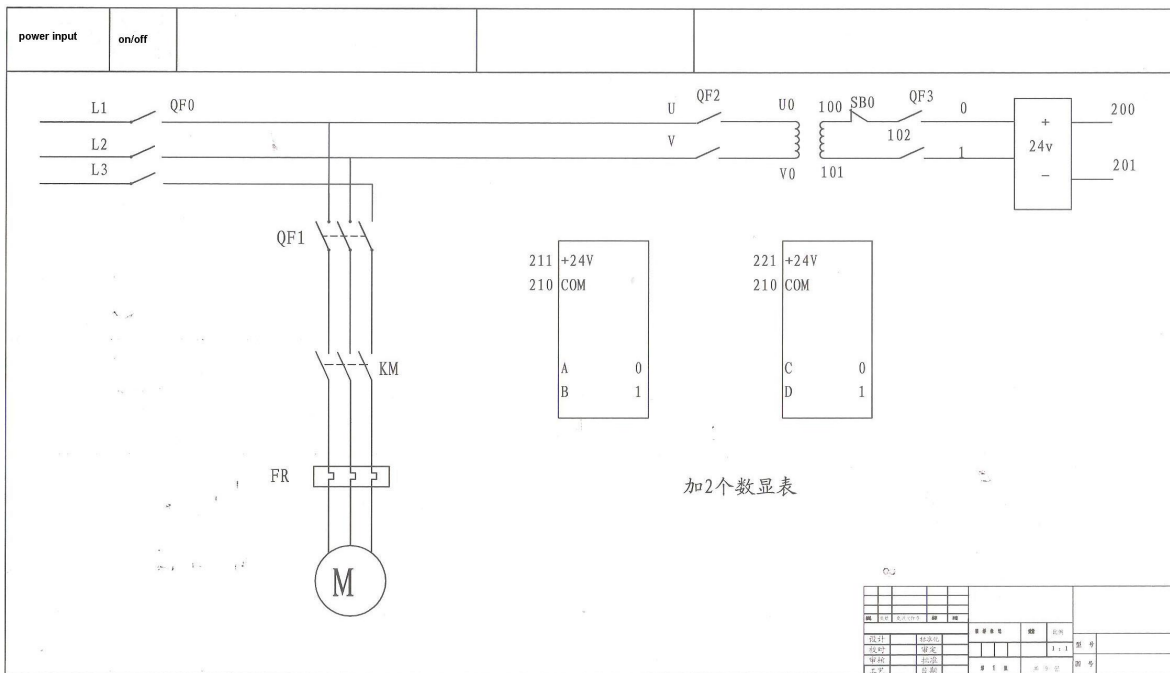
The machine in continuous working conditions, the oil cup oil in general 4 hours once a month in general lubricating the gears once.

Machine washed once a year the whole lubrication system.

10. Hydraulic schematic diagram



11. Electrical diagram



13. Electrical diagram

13. Electrical diagram

Add: Hai'an County, Nantong city, Jiangsu Province, China

Tel: +86 513 88812117

Fax: +86 513 88812117

E-mail: beabang@163.com

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