

# KAKA® Industrial

## Specifications

Model.....SBG-40

Stock No. ....173203

Bending strength :

28-1/2 Tons per square inch(4.42T)Flat  
Maximum

Capacities(Steel & iron) :

5/8"Round stock(16mm)  
1/2"X 1/2"Squire stock(13X13mm)  
1-3/16"X5/16"Strip stock(30X8mm)

Maximum capacities (Wrought iron) :

15/32"Round stock(12mm)  
13/32"X 13/32"Squire stock(10X10mm)  
1-3/16"X1/4"Strip stock(30X8mm)

Maximum capacities (Brass & Copper) :

5/8"Round stock(16mm)  
15/32"X 15/32"Squire stock(12X12mm)  
1-3/16"X5/16"Strip stock(30X8mm)

Maximum capacities (Aluminum) :

23/32"Round stock(18mm)  
19/32"X 19/32"Squire stock(15X15mm)  
1-3/16"X13/32"Strip stock(30X10mm)



## Unpacking

The UNIVERSAL BENDER is shipped from the manufacture in a carefully packed Carton box. Thoroughly inspect the product upon opening the package. After unpacking the unit, carefully inspect for any damage that may have occurred during transit.

If damage has occurred, shipping damage claims must be filed with the carrier and are the responsibility of the user.

Check for completeness. Immediately report missing parts to dealer.

Carefully open crate and unbolt brake from shipping pallet and remove from crate using heavy duty lifting equipment such as an overhead crane.

### Warning

The warnings, cautions and instructions discussed in this instructions or situations that could occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

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## Save this manual

You will need this manual for the safety instruction, assembly instruction, operating procedures, parts list, and diagram. Write your invoice number on the inside front cover. Put both your manual and invoice in a safe, dry place for future reference.

## Important safety precautions

READ THIS INSTRUCTIONS BEFORE USING THIS TOOL

1. KEEP WORK AREA CLEAN. Cluttered areas invite injuries.

2. CONSIDER WORK AREA CONNECTIONS. Don't use tools in damp, wet, or poorly lit locations. Don't expose to rain.

Keep work area well lit.

3. KEEP CHILDREN AWAY. All children should be kept away from work area.

4. STOCK IDLE EQUIPMENT. When not in use, tools should be locked up in a dry location to inhibit rust. If possible, store in an area out of reach of children.

5. USE THE RIGHT TOOL. Don't force a small tool or attachment to do the work of a larger industrial tool. Don't use a larger industrial tool. Don't use a tool

for a purpose for which it was not intended.

6. DRESS PROPERLY. Don't wear loose clothing or jewelry.

Non-skid footwear is recommended when working to prevent slipping. Wear protective hair covering to contain long hair.

7. USE EYE PROTECTION. Wear approved impact goggles at all times when using this tool.

8. SECURE WORK. Use clamps or a vise to hold the work if possible. It's safer than using your hands and it frees both hands to operate the tool.

9. DON'T OVERREACH. Keep handles dry. Clean, and free from oil and grease. Follow instructions for lubricating and changing accessories.

10. MAINTAIN TOOL WITH CARE. Keep handles dry, clean, and free from oil and grease. Follow instructions for lubricating and changing accessories.

11. CHECK DAMAGE PARTS. Before using any tool, any parts that appear damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts,

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mounting, and other conditions that may affect its operation. Any part that is damaged should be properly repaired or replaced by an authorized service center unless otherwise indicated elsewhere in the instruction manual.

12. REPLACEMENT PARTS AND ACCESSORIES. When serving, use only identical replacement parts. Only use accessories intended for use with this tool.

13. DON' T OPERAYE TOOL IF UNDER THE INFLUENCE OF ALCOHOL OR DRUGS. Read warning labels on prescription to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, don' t operate machine.

14. NEVER STAND ON TOOL. If tool is tipped over, serious injury or product damage could result.

## OPERATING PROCEDURES

Your tool is capable of many different operations. When forming angles or round shapes, the Die Mounting Plate (4) must be attached to the Spring Forming Mounting Disk (32).

**NOTE:** The Metal Bender must be mounted to a secure surface before

using.

Round operations (see figure #1 on following parts):

1. Make sure the Die Mounting Plate (4) is attached to the body.
2. Make sure the stop (2) is loose.
3. Make sure the Vise Assembly (5-9, 15) to the rear position on the arm of the Mounting Plate.
4. Screw the Round Die Mount Shaft (28) into the Mounting Plate.
5. Set the Round Die (29) into the Mounting Shaft.
6. Move the Bending Block Locking Plate (21) by loosening the two Hex Key Blots (20). Don' t secure the Locking Plate at this time.
7. Set stock against the Round Die and close the Vise, so that it clamps the work securely against the Die.
8. Move the Bending Block in until is up against the work and it' s Face (16) is even with the vise Face (8). Secure the Bending Block by tightening the two Blots.
9. Move the Bending block to the left with the Handle (27) until you have achieved your desired angle bender (remember to account for "spring-back" ).
10. If you wish to do repeat bends at the same are tighten the Stop at the point

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where you finish making your bend and tighten it.

11. When you wish to do complete 360° rings, make sure you clamp just the very end of your work piece in-between the Dir. Bend your stock all of the way around and cut off excess.

12. To make springs, loosen the Stock (2), and lift stock to be formed slightly as you bend the stock around the Die. When starting and finishing the spring, make a complete 360°ring as started in #11.

## Angle Operations

(see figure #1 above):

1. Make sure the Die Mounting Plate (4) is attached to the body.
2. Make sure the stop (2) is loose.
3. Make the Vise Assembly (5-9, 15) to the forward position on the arm of the Mounting plate.
4. Plate the Angle Die' s (13) Spring Pin (19) into the Mounting Plate' s small unthreaded hole.
5. Attach the Angle Die by screwing the Hex Key Blot (18) into the small threaded hole of the Mounting Plate.
6. Move the Bending Block Assembly (16.17.22-24) back all of the way. You may have to release the Bending Block

Plate (21) by loosening the two Hex Key Blots (20). Don' t secure the Locking Plate at this time.

7. Set stock against the Angle Die and close the Vise so that it clamps the work securely against the Die.

8. Move the Bending Block until it is up against the work and its Face (16) is even securely the Vise Face (8).

9. Move the Bending Block to the left with handle (27) until you have achieved your desired angle bend (remember to account for "spring-back" ).

10. To make repeat bends at 90°, use the Angle Gauge Assembly (10-12). Screw the Gauge Shaft (10) into the Angle Die. Slide the Gauge Stop (11) onto the Shaft to the desired position (depending upon the length of your work). This will "stop" your bend at the proper location.

11. If you wish to do repeat bends at the same angle (other than 90°), use the stop ( 2).

## Spiral Operation:

1. Remove the Die Mounting Plate (4) by removing the two Hex Key Blots (14). Loosen the Stop (2).

2. Retreat the Bending Block. Assembly (16, 17, 22-24) all of the way. Remove the

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Face Plate (16) by unscrewing the associated Hex Key Bolt (17). This will reveal the Bending Block Wheel (22).

3. Attach the Spring Forming Mounting Disc (32) with the two Hex Key Bolts (in positions 1).

4. Place the spring pin (25) of the Spring Forming Die "A" (31) into hole 3 and attach with the long Hex Key Bolt (26) (in position 2). Or Steps 5&7, see figure #3.

5. Insert the stock to be bent into the hole of Die "A" .

6. Move the Bending Block Assembly forward until it contracts the stock and then tighten it in position.

7. Bend the stock until the portion is forming it about at the Pin (marked with a "P" in the figure).

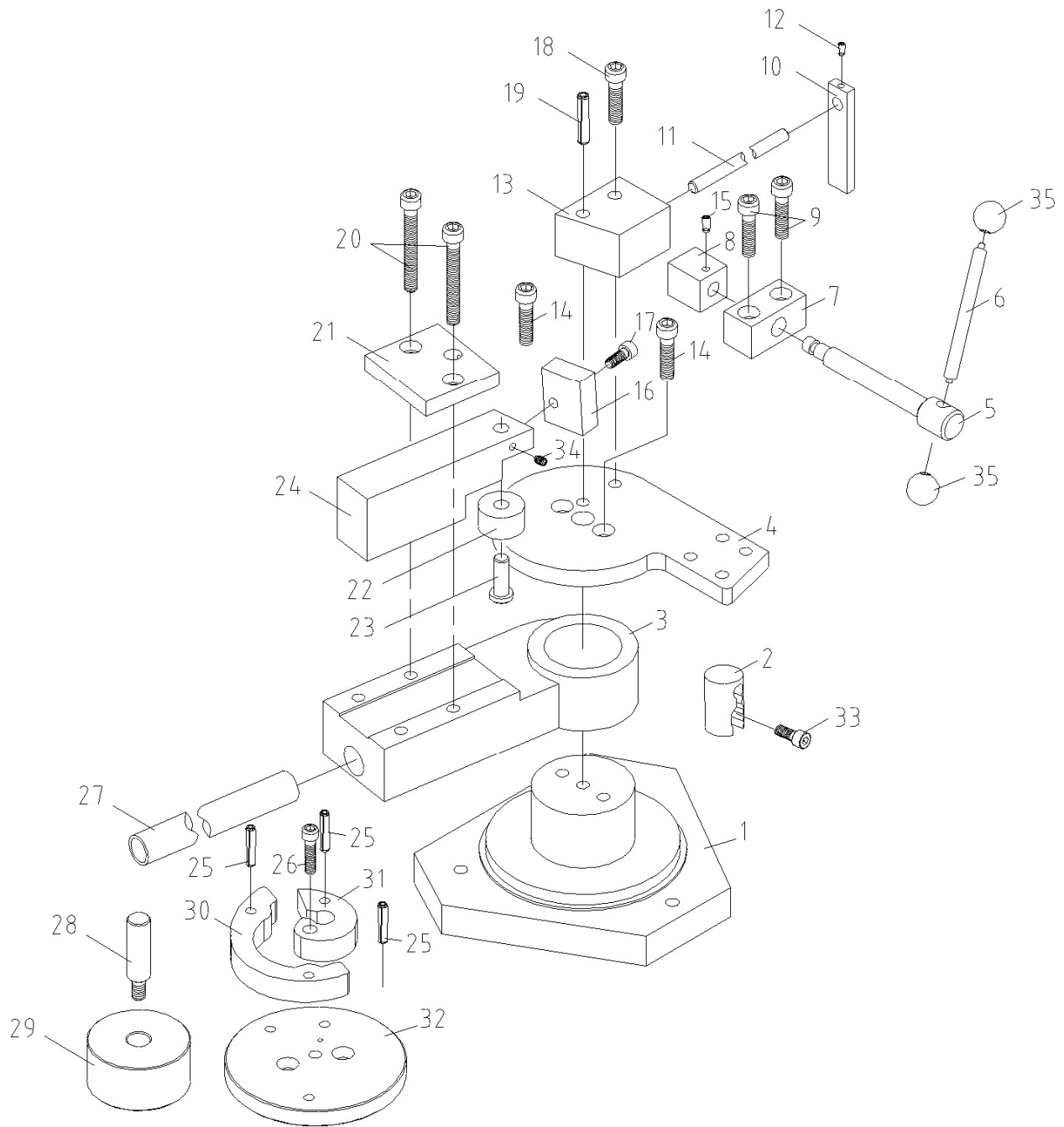
8. Now put the Spring Pins (25) of Spring Forming Die "B" (30) into holes 4&5.

9. Finish your bender by wrapping completely around the Forming Die.

## Parts List

Item	Description	Qty	Item	Description	Qty
1	Base	1	19	Spring Pin	1
2	Stop	1	20	Hey Key Bolt	2
3	Body	1	21	Bending block Locking Plate	1
4	Die Mounting Plate	1	22	Bending Block Wheel	1
5	Vise Drive Plate	1	23	Bending Block Shaft	1
6	Vise Handle	1	24	Bending Block	1
7	Vise Base	1	25	Spring Pin	3
8	Vise Face	1	26	Hey Key Bolt	1
9	Hex Key Bolt	2	27	Handle	1
10	Gauge Stop	1	28	Round Die Mounting Shaft	1
11	Gauge Shaft	1	29	Round Die	1
12	Gauge Locking Screw	1	30	Spring Forming Die "B"	1
13	Angle Die	1	31	Spring Forming Die "A"	1
14	Hey Key Bolt	2	32	Spring Forming Die Mounting Disc	1
15	Set Screw	1	33	Screw	1
16	Bending block Face Plate	1	34	Screw	1
17	Hey Key Bolt	1	35	Handle ball	2
18	Hey Key Bolt	1			

**Diagram:**









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If you have any questions about the use of this product, please contact the nearest one to you as below:

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