



Established 1930

Distributors of new & used workshop Equipment

P073

PIPE BENDER 2" S/SIR 16B

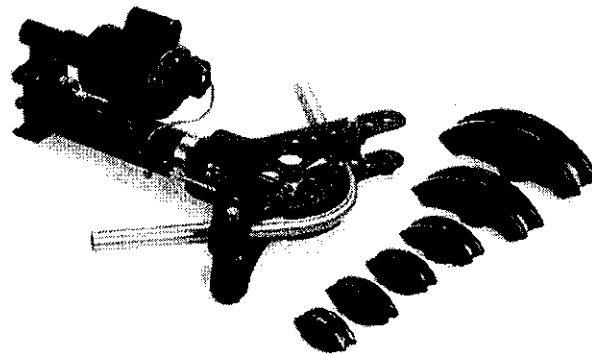
ELECT-HYDRAULIC

MANUAL

13-01-2011



SWADESIR INTERNATIONAL PTY LTD, 5-7 STRONG AVE, THOMASTOWN, VIC. 3074 PH 03-9460 3444 FAX 03-9460 8777



Operating Instructions for Swadesir 16B Hydraulic Pipe Bending Machine

1. Remove limit switch collar attached to ram. Screw bending frame to power unit. Reassemble limit switch collar to ram. This collar is to be positioned against the shoulder on the ram.
2. Select former to suit size of pipe being bent.
3. Position stops in correct holes marked on bending frame relative to pipe size being bent.
4. Position former on end of ram and place pipe between stops.
5. Release filler cap on barrel of machine half a turn to allow air to enter reservoir. Switch on motor.
6. Operate unit by use of return valve at the side of pumping head until former comes into contact with pipe. Make sure that pipe former and ram are squarely aligned.
7. Operate Unit until desired angle of bend is obtained.
8. Loosen return valve, which will allow the ram to retract for removal of the bend from the machine. Do not unscrew release valve more than is necessary to retract ram.
9. On obtaining desired angle, identical bends can be repeated by setting adjustable stop provided.

Special Notes

Important: Damage to the machine can be caused by incorrect alignment of pipe and former, or the use of wrong holes relative to the pipe size being bent.

When bending pipe with a series of bends close to each other, it is essential that the being bent must be square to the ram.

When topping up or refilling oil reservoir, make sure that no particles or dirt, dust, or other matters enters with oil. Fill oil reservoir to 6mm below filler plug.

Recommended oil is Mobil D.T.E Light, Castrol Hyspin 32 or equivalent. Ensure correct grade of oil is used. Correct oil is available from Swadesir International Pty Ltd.

Tighten filler cap after bending operations are completed.

Air lock may be expelled by bleeding machine with small knurled knob on the right hand side of the machine.

The motor is equipped with thermal overload protection.

Trouble Shooting Chart

Trouble	Cause
Will not pump or extend ram.	• Return Valve Open • Bleeder Valve Open • Air Lock (see special notes) • Filter Clogged • Pump piston spring broken • Inlet valve not seating • Pressure check valve not seating
Ram movement but no power	• Return Valve open • Bleeder Valve open • Ram vee packing faulty • Pressure check valve not seating
Ram will not turn properly	• Bent or damaged ram
Oil leakage at the return	• Faulty seal on return or bleeder valve
Oil Leakage at ram bearing	• Front seals damaged
Motor fails to start	• Limit switch tripped • Overload switch tripped
Motor stalling	• Overloading of ram

**Standard Formers Supplied with the 16B
'Cathedral Form' for Cold Rolled Pipe**

Former Size	Pipe OD	Part No	Centre Line Radius
10mm NB (3/8"NB)	17.2 mm	15B-32G	70mm (2 3/4")
15mm NB (1/2" NB)	21.3 mm	15B-32F	85mm (3 1/4")
20mm NB (3/4" NB)	26.9 mm	15B-32E	85mm (3 1/4")
25mm NB (1" NB)	33.7 mm	15B-32D	100mm (4")
32mm NB (1 1/4" NB)	42.4 mm	15B-32C	135mm (5 1/4")
40mm NB (1 1/2" NB)	48.3 mm	15B-32B	170mm (6 5/8")
50mm NB (2" NB)	60.3 mm	15B-32A	200mm (8")

Optional Formers (Available at additional cost)

Formers for Hot Rolled NB Pipe

Former Size	Pipe OD	Part No	Centre Line Radius
10mm NB (3/8"NB)	17.2 mm	15B-32OCG	70mm (2 3/4")
15mm NB (1/2" NB)	21.3 mm	15B-32OCF	85mm (3 1/4")
20mm NB (3/4" NB)	26.9 mm	15B-32OCE	85mm (3 1/4")
25mm NB (1" NB)	33.7 mm	15B-32OCD	100mm (4")
32mm NB (1 1/4" NB)	42.4 mm	15B-32OCC	135mm (5 1/4")
40mm NB (1 1/2" NB)	48.3 mm	15B-32OCB	170mm (6 5/8")
50mm NB (2" NB)	60.3 mm	15B-32OCA	200mm (8")

Formers for Heavy Wall Hydraulic Tube

Former Size	Part No	Centre Line Radius
12.7mm OD	15B-32GCG	70mm (2 3/4")
19mm OD	15B-32GCE	85mm (3 1/4")
25.4mm OD	15B-32CGD	85mm (3 1/4")
31.8mm OD	15B-32GCC	100mm (4")
38.1mm OD	15B-32GCB	135mm (5 1/4")
50.8mm OD	15B-32GCA	170mm (6 5/8")

Warranty

Swadesir International Pty. Ltd.

Congratulations and thank you for purchasing a quality Swade-Sir product.

All Swade-Sir products are warranted against defects in material and workmanship for a period of twelve months from the date of purchase.

Swadesir International Pty. Ltd. is expressly limited to the original purchaser of the product. Service under warranty is provided only upon proof of purchase & within the warranty period.

Swadesir International Pty. Ltd. warranty does not cover products that have been abused, used incorrectly, tampered with, accidentally damaged, worn out, heated, neglected, ground or repaired by an unauthorized repairer or altered in any way.

This warranty will become invalid if product or parts are used for any purpose than what they were designed.

No representatives or agents of Swadesir International Pty. Ltd. have the authority to bind Swadesir International to any warranty concerns or matters except the authorities of Swadesir International Pty. Ltd.

Swadesir International Pty. Ltd. will not be held liable for and warranty decisions that have not been made by the authorities of Swadesir International Pty. Ltd.

For determination of warranty consideration, return the product or part to Swadesir International Pty. Ltd. 6 Strong Avenue Thomastown. Victoria, 3074 Australia, freight prepaid including handling and return freight.

If the product or part manufactured by Swadesir International Pty. Ltd. is deemed to be faulty in materials or workmanship. Swadesir International Pty. Ltd. will determine, at their discretion to either replace or repair the defective product or part and return it on completion via the best means of transportation at their discretion. However, this warranty does not include freight costs to or from Swadesir International Pty. Ltd.

Customer Support Number

Phone 03-9460 3822

Fax 03-9460 3855

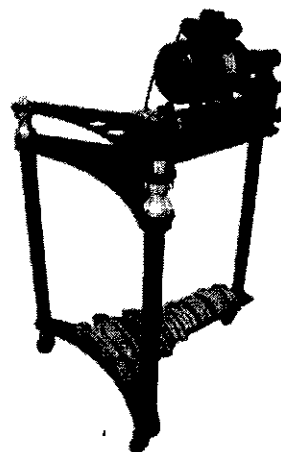
Swadesir International Pty. Ltd.

6 Strong Avenue

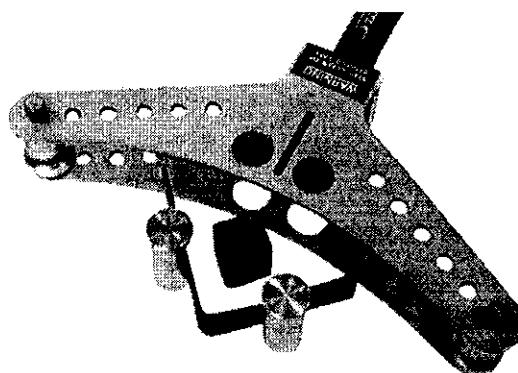
Thomastown Victoria. 3074.

Optional Attachments and Accessories Available

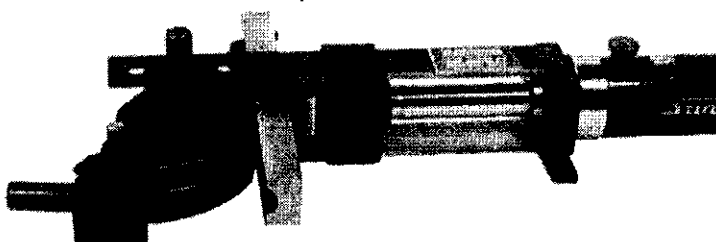
**Bender Stand, Part No.
15B-ST**



**Flat Bar Bender
Attachment
Part Number 15B-BBA**



**Tube Bending
Attachment
Part Number 15B-TA
(Tooling must be
ordered separately)**





SWADESIR INTERNATIONAL PTY LTD, 5-7 STRONG AVE, THOMASTOWN, VIC. 3074 PH 03-9460 3444 FAX 03-9460 8777

Product Warranty Registration

(Please complete, photocopy and return to above address within 20 days from purchase to validate warranty)

Model No. _____ Serial No. _____ Date of Purchase _____

Company
Name _____

Contact
Name _____

Address _____

City _____ State _____

Postcode _____

Phone _____ Fax _____

Email
address _____

Distributor
Name _____

Tick here..... if you wish us to send you a current Swadesir catalogue.

www.swadesir.com.au

email: infosupport@swadesir.com.au



SWADESIR INTERNATIONAL MANUFACTURING PTY. LTD.

6 STRONG AVENUE, THOMASTOWN, VIC. 3074

Phone: 03-9460 3822 Fax: 03-9460 3855

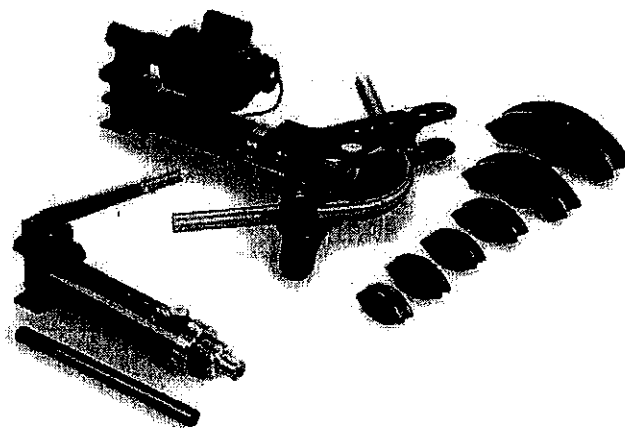
Email: Steve@swadesir.com.au

Web: www.swadesir.com.au

Plant Hazard Check List

Bender

Model No 16B



A. ENTANGLEMENT Can anyone's hair, clothing, gloves, necktie, jewellery, cleaning brushes, rags or other materials become entangled with moving parts of the plant, or materials in motion?	No
B. CRUSHING Can anyone be crushed due to: a. material falling off the plant?	No
b. uncontrolled or unexpected movement of the plant or its load?	Yes - if persons within the moving arc of the material being bent. However, machine is hand operated and movement is very slow. This event should not normally occur.
c. lack of capacity for the plant to be slowed, stopped or immobilised?	No
d. the plant tipping or rolling over?	No
e. parts of the plant collapsing?	No
f. coming in contact with moving parts of the plant during testing, inspection, operation, maintenance, cleaning or repair?	Yes - if persons within the moving arc of the material being bent. However, machine is hand operated and movement is very slow. This event should not normally occur.
g. being thrown off or under the plant?	No
h. being trapped between the plant and materials or fixed structures?	No
i. other factors not mentioned?	No

C. CUTTING, STABBING AND PUNCTURING Can anyone be cut, stabbed or punctured due to: a. coming in contact with sharp or flying objects?	No
b. coming in contact with moving parts of the plant during testing, inspection, operation, maintenance,	No

cleaning or repair of the plant?	
c. the plant, parts of the plant or work pieces disintegrating?	No
d. work pieces being ejected?	No
e. the mobility of the plant?	No
f. uncontrolled or unexpected movement of the plant?	No
g. other factors not mentioned?	No
D. SHEARING Can anyone's body parts be sheared between two parts of the plant, or between a part of the plant and a work piece or structure?	Yes – Operator and others must keep clear of moving parts of the machine.
E. FRICTION Can anyone be burnt due to contact with moving parts or surfaces of the plant, or material handled by the plant?	No
F. STRIKING Can anyone be struck by moving objects due to: a. uncontrolled or unexpected movement of the plant or material handled by the plant?	Yes - if persons within the moving arc of the material being bent. However, machine is hand operated and movement is very slow. This event should not normally occur.
b. the plant, parts of the plant or work pieces disintegrating?	No
c. work pieces being ejected?	No
d. mobility of the plant?	No
e. other factors not mentioned?	No

G. HIGH PRESSURE FLUID Can anyone come into contact with fluids under high pressure, due to plant failure or misuse of the plant?	No
H. ELECTRICAL Can anyone be injured by electrical shock or burnt due to: a. the plant contacting live electrical conductors?	No
b. the plant working in close proximity to electrical conductors?	No
c. overload of electrical circuits?	No
d. damaged or poorly maintained electrical leads and cables?	Yes – All electrical leads and cables must be maintained.
e. damaged electrical switches?	Yes – Cable to cut off switch must be maintained.
f. water near electrical equipment?	No
g. lack of isolation procedures?	No
h. other factors not mentioned?	No
I. EXPLOSION Can anyone be injured by explosion of gases, vapours, liquids, dusts or other substances, triggered by the operation of the plant or by material handled by the plant?	No

J. SLIPPING, TRIPPING AND FALLING Can anyone using the plant, or in the vicinity of the plant, slip, trip or fall due to: a. uneven or slippery work surfaces?		No
b. poor housekeeping, eg. swarf in the vicinity of the plant, spillage not cleaned up?	No	
c. obstacles being placed in the vicinity of the plant?	Yes - Area contained within the sweep of the material must be kept clear of the material being bent.	
d. other factors not mentioned?	No	
Can anyone fall from a height due to: a. lack of a proper work platform?	No	
b. lack of proper stairs or ladders?	No	
c. lack of guardrails or other suitable edge protection?	No	
d. unprotected holes, penetrations or gaps?	No	
e. poor floor or walking surfaces, such as the lack of a slip-resistant surface?	No	
f. steep walking surfaces?	No	
g. collapse of the supporting structure?	No	
h. other factors not mentioned?	No	
K. ERGONOMIC Can anyone to be injured due to: a. poorly designed seating?		No
b. repetitive body movement?	No	
c. constrained body posture or the need for excessive effort?	No	
d. design deficiency causing mental or psychological stress?	No	
e. inadequate or poorly placed lighting?	No	
f. lack of consideration given to human error or human behaviour?	No	
g. mismatch of the plant with human traits and natural limitations?	No	
h. other factors not mentioned?	No	

L. SUFFOCATION Can anyone be suffocated due to lack of oxygen, or atmospheric contamination?	No
M. HIGH TEMPERATURE OR FIRE Can anyone come into contact with objects at high temperatures?	No
Can anyone be injured by fire?	No
N. TEMPERATURE (THERMAL COMFORT) Can anyone suffer ill-health due to exposure to high or low temperatures?	No
O. OTHER HAZARDS Can anyone be injured or suffer ill-health from exposure to:	No
a. chemicals?	No
b. toxic gases or vapours?	No
c. fumes?	No
d. dust?	No
e. noise?	No
f. vibration?	No
g. radiation?	No
h. other factors not mentioned?	SAFETY GLASSES SHOULD BE WORN DURING OPERATION



Swadesir International Pty. Ltd
6 Strong Avenue
Thomastown, Victoria 3074
Ph: 9460 3822 Fax: 9460 3855

CUSTOMER SATISFACTION SURVEY

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Thankyou for purchasing a Swadesir International product. We are confident this product will serve you well for many years to come.

Since the company's foundation in 1942, customer service and product satisfaction have always been foremost in the expectations of the company's directors.

Your experience with our company is important to us and we ask that you take a few minutes to fill out the survey. Returning the survey to us will allow us to establish what we are doing well and areas where we need to improve.

We thank you for your interest and your assistance.

P & D.J. Casamento. Directors

Please Circle

1	Was your initial contact with Swadesir International handled courteously and promptly?	Excellent	V.Good	Good	Fair	Poor	N/A
2	Were you directed to the correct person to handle your enquiry in the first instance?	Excellent	V.Good	Good	Fair	Poor	N/A
3	Where you given the correct information to ensure that you purchased the correct product for your needs?	Excellent	V.Good	Good	Fair	Poor	N/A
4	If it was necessary to have you call returned by our staff was your call returned promptly?	Excellent	V.Good	Good	Fair	Poor	N/A
5	When you placed your order, were you given a delivery time?	Yes	No				
6	Was your order delivered by the due date?	Yes	No				
7	If your order was delivered late, how many days late?	Days					
8	If your order was delivered early, how many days early?	Days					
9	Was your order packaged correctly and was it in good condition when it arrived?	Excellent	V.Good	Good	Fair	Poor	N/A
10	Did all parts and accessories arrive with the order?	Yes	No				
11	Were the operation instructions adequate & easy to follow?	Excellent	V.Good	Good	Fair	Poor	N/A
12	Did you have any difficulties in operating the product? If yes, what was the problem?	Yes	No				

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Swadesir International Pty. Ltd
Manufacturing Engineers



5-7 Strong Avenue
Thomastown 3074 Victoria

TEL: (03) 9460 3444

FAX: (03) 9460 8777

www.swadesir.com.au

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Repair Parts List Swadesir 16B Bender

Part No.	Part Description.	Qty Per
15B-10	Filler cap	1
15B-11	Nose Piece	1
15B-12	Spacer	1
15B-13	Sealing Ring	1
15B-14	Locknut	1
15B-15	Gland Nut	1
15B-16	Tie Rod	4
15B-17	Return Valve	1
15B-18	Hook Assembly	1
15B-19	Valve Plug	1
15B-20	Valve Pad	1
15B-21	Seal	1
15B-24	Stop Pin	2
15B-28	Filter	1
15B-29A	Ram Seal	1
15B-29B	Valve Plug Seal	1
15B-29C	Filter Seal	1
15B-30	2" Round Stop	2
15B-31	Yoke	1
15B-31A	Yoke Spacers	6
15B-32A	2" Former	1
15B-32B	1 1/2 Former	1
15B-32C	1 1/4 Former	1
15B-32D	1 Former	1
15B-32E	3/4 Former	1
15B-32F	1/2 Former	1
15B-32G	3/8 Former	1
15B-33	Pump Valve Spring	1
15B-33A	High Pressure Valve Spring	1
15B-33C	Ram Spring	1
15B-34A	Front Seal	2
15B-34B	Reservoir Seal	3
15B-34C	Reservoir Seal	0
15B-34D	Pump Seal	1
15B-34E	Release Seal	2
15B-34F	Filter Seal	1
15B-34I	Filler Cap Seal	1
15B-36	Tie Rod Nut	4
15B-37	Cap Screw	1
15B-38	Grub Screw	1
15B-41	Valve Pump Ball	1
15B-42	Check Valve Ball	1
15B-43	Hydraulic Oil	1
15B-44	High Pressure Valve	1
15B-6	Anchor Pin & Seal	1
15B-7	Cylinder	1
16B-1	Body	1
16B-101	Motor Drive Housing Coupling Guard	1
16B-3	Ram	1
16B-33D	Valve Guide Spring	1

16B-33E	Piston Spring	1
16B-33F	Spacer Spring	1
16B-34	Seal Kit	1
16B-34K	Vee Packing Plus 'O' Ring	3
16B-34K2	O' Ring	1
16B-36	Drive Housing	1
16B-37	Drive Shaft	1
16B-38	Pump Cylinder	1
16B-39	Piston	1
16B-40A	Coupling - Motor	1
16B-40B	Coupling - Pump	1
16B-41	Cover	1
16B-43	Large Spacer	1
16B-44	Small Spacer	1
16B-45	Bleeder Valve	1
16B-46	Valve Guide	1
16B-47	Motor Base Plate	1
16B-48	Limit Switch Box	1
16B-49	Limit Switch Tube	1
16B-49A	Limit Switch Tube Bush	1
16B-50	Limit Switch Collar	1
16B-51	Limit Switch Rod	1
16B-52	Limit Switch Trip	1
16B-53	Limit Switch Trip Screw	1
16B-54	Limit Switch Insulator	1
16B-55	Check Valve	1
16B-60	Motor	1
16B-61	Limit Switch	1
16B-64	Roller Bearing	1
16B-65	Ball Bearing (300-163)	1
16B-65A	Oil Seal	1
16B-66	Cam Bearing	1
16B-67	Circlip	1
16B-68	Coupling Nut	1
16B-69	Cap Screw (Use 15B-37)	1
16B-70	Grub Screw (use 300-197)	1
16B-74	Cam Bearing Nut	1
16B-75	Motor Bolt	4
16B-76	Motor Nut	4
16B-77	Motor Washer	4
16B-78	Shakeproof washer	4
16B-8	Oil Tank	1
16B-80	Limit Switch Screw	2
16B-81	Limit Switch Washer	2
16B-82	Limit Switch Collar Screw	1
16B-83	Limit Switch Stop Bolt	1
16B-85	Drive Shaft Key	1
16B-87	Drive Shaft Washer	1
16B-88	Gasket	1
16B-89	Drive Housing Bolt	4
16B-90	Limit Switch Tube Screw	2
16B-93	Limit Switch Stop Washer	1
16B-94	Motor Key	1
16B-98	Drive Housing Cover Gasket	1
B1061900	Hydraulic Power Unit	1

* Items included in and available only as part of 16B-34 Seal Kit

Swade-Six
MACHINE TOOLS CO. INC.
Swadesir 168 HYDRAULIC PIPE BENDER

