

# Hydraulic Tube Bender Model HB632

Hydraulic power does the work in bending tube of all materials in sizes from 6 (3/8" O.D.) through size 32 (2" O.D.), 10mm through 50mm, with wall thicknesses as great as .188 for annealed steel, and pipe sizes from 3/8" through 1-1/2". See page R7 for wall thickness capabilities. The radius block, around which the tube is bent, is driven by a roller chain and sprocket powered by a cylinder and a separate hydraulic power unit.

Maximum bend angle is 180° with radii from 1 1/4" to 8". Close second bends can be performed in either direction. An adjustable stop controls the degree of bend to a maximum of 180° and is graduated in 1° increments. After the bend is completed and pressure is released, a spring returns the clamp arm to the zero starting position.

The clamp vise arm features a quick release speed screw for positioning the required clamp block. Each size of tube requires the proper sized radius block, clamp block and slide block.

Written instructions, a DVD and Bulletin 4391-B26 are included with each bender.

HB632 radius blocks, slide blocks and clamp blocks will work with the following benders as well: 624, 824, 832 and 848.

**NOTE:** For size 28 (1 3/4" O.D. tube) through 32 (2" O.D. tube) radius blocks, an adapter plate is required.

**DIMENSIONS:** L – 40" W – 11" H – 12"

**COMPONENTS REQUIRED**

Minimum components required are a Model HB632 Bender, hose assembly, hydraulic pump and a radius, slide and clamp block which match the tube/pipe O.D. to be bent.

Part Name	Part No.
Hydraulic Bender Model HB632 (without pump) .....	<b>631050</b>
Hydraulic Pump (10,000 psi, 110V AC) .....	<b>900085</b>
High Flow Hydraulic Pump (10,000 psi, 110V) .....	<b>974691</b>
Hose Assembly (3' long) .....	<b>910004</b>

**One each of the following is required per tube O.D.:**  
**Radius Block, Clamp Block, Slide Block.**

Radius Block..... See pages R13 – R15

**INCH TUBE SIZES**

Clamp Block (for -6) .....	<b>864266</b>
Clamp Block (for -8, -12, -16, -24) .....	<b>631092</b>
Clamp Block (for -10, -14, -18, -20) .....	<b>631093</b>
Clamp Block (for -28) .....	<b>027418-28</b>
Clamp Block (for -32) .....	<b>027418-32</b>
Slide Block (for -6) .....	<b>864276</b>
Slide Block (for -8, -12, -16, -24) .....	<b>520516</b>
Slide Block (for -10, -14, -18, -20) .....	<b>520518</b>
Slide Block (for -28) .....	<b>631063</b>
Slide Block (for -32) .....	<b>631066</b>



Fig. R21 — HB632



Fig. R22 — 900085 Pump



Fig. R23 — High Flow Pump



Fig. R24 — Clamp Block



Fig. R25 — Slide Block

Dimensions and pressures for reference only, subject to change.

METRIC TUBE SIZES	Part No.
Clamp Block (for 10mm, 12mm, 14mm, 16mm)	790017
Clamp Block (for 15mm, 16mm, 18mm, 20mm)	780195
Clamp Block (for 22mm, 25mm, 30mm, 32mm)	780196
Clamp Block (for 35mm)	974346
Clamp Block (for 38mm)	631092
Clamp Block (for 42mm)	974349
Clamp Block (for 50mm)	974352
Slide Block (for 10mm, 12mm, 14mm, 16mm)	790016
Slide Block (for 15mm, 16mm, 18mm, 20mm)	780192
Slide Block (for 22mm, 25mm, 30mm, 32mm)	780193
Slide Block (for 35mm)	820094
Slide Block (for 38mm)	520516
Slide Block (for 42mm)	974348
Slide Block (for 50mm)	974351

INCH PIPE SIZES	Part No.
Clamp Block (for 3/8", 1/2", 3/4")	974332
Clamp Block (for 1")	974338
Clamp Block (for 1 1/4")	974341
Clamp Block (for 1 1/2")	974343
Slide Block (for 3/8", 1/2", 3/4")	974331
Slide Block (for 1")	974336
Slide Block (for 1 1/4")	974340
Slide Block (for 1 1/2")	974342

#### OPTIONAL ACCESSORIES

Radius Block Adapter Plate  
(for sizes 1 3/4", 42mm, 1 1/2 IPS and larger)..... **660221**  
Mandrel Bending Components for HB632..... See pages R16 – R18  
A video (on DVD) is included to provide proper instructions for use.



Fig. R26 — Radius Block Adapter Plate

## Radius Blocks

### For use with HB632 Bender

Radius blocks for every standard tube size from size 6 (3/8" O.D.) to size 32 (2" O.D.), 10mm through 50mm, and inch pipe sizes 3/8" through 1-1/2" are available.

### Standard Radius Blocks – Inch Sizes

Size	Tube O.D. (in.)	Radius (in.)	Part No.
6	3/8	1 1/8	590512-18
6	3/8	1 1/4	540502
8	1/2	1 1/4	530763
8	1/2	1 1/2	590515-24
10	5/8	1 1/2	530764
10	5/8	1 7/8	590518-30
12	3/4	1 3/4	530765
12	3/4	2 1/4	590521-36
14	7/8	2	530766
14	7/8	2 5/8	590523-42
16	1	3	590524-48
18	1 1/8	3 3/8	590526-54
18	1 1/8	3 1/2	530768
20	1 1/4	3 3/4	590527-60
24	1 1/2	4 1/2	590530-72
24	1 1/2	5	530770
28	1 3/4	7	631057-112*
32	2	8	631060-128*



Fig. R27 — Radius Block for use with HB632 Bender

\* Requires the use of Radius Block Adapter Plate, Part No. 660221.

Dimensions and pressures for reference only, subject to change.

**Radius Blocks – Metric Sizes**

Tube O.D./		Part No.
Size (mm)	Radius (mm)	
10	32	810023
12	32	780175
14	38	780176
15	38	780177
16	38	780178
18	44	780179
20	44	780180
22	89	780181
25	100	780182
30	128	780183
32	128	780184
35	105	974344
38	114	590530-72
42	128	974347*
50	150	974350*



Fig. R28 — Radius Block for use with HB632 Bender

**Radius Blocks – Inch Pipe Sizes**

Inch Pipe		Part No.
Size (in.)	Bend Radius (in.)	
3/8	2 1/4	974325
1/2	2 5/8	974326
3/4	3 1/4	974327
1	4	974328
1 1/4	5	974329
1 1/2	6	974330*

\* Requires the use of Radius Block Adapter Plate, Part No. 660221.

Dimensions and pressures for reference only, subject to change.

## Close Bend Radius Blocks for HB632

These adapters are used when bends are needed close to the end of the tube after the flare has been made, ferrule has been pre-set, or flange has been made. For flared or Ferulok fittings, attach tube end by threading tube nut onto the radius block threaded pin. To use this block with Seal-Lok fittings, Close Bend Adapters for Seal-Lok must be used to attach the tube to the radius block.

## Close Bend Radius Blocks – Inch Sizes

Size (in.)	Tube O.D. (in.)	Radius (in.)	Part No.
8	1/2	1 1/4 .....	<b>530597</b>
10	5/8	1 1/2 .....	<b>530601</b>
12	3/4	1 3/4 .....	<b>530605</b>
14	7/8	2 .....	<b>530609</b>
16	1	3 .....	<b>530613</b>
20	1 1/4	3 3/4 .....	<b>530621</b>
24	1 1/2	5 .....	<b>530625</b>

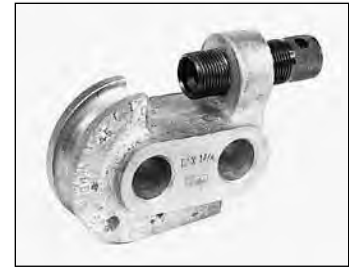


Fig. R29 — Close Bend Radius Block

## Close Bend Adapters for Seal-Lok

These adapters are used when bends are needed close to the end of the tube after the flange has been made or the sleeve has been brazed onto the end of the tube.

**HOW TO USE:** Screw the Seal-Lok adapter into the internal thread\* of the threaded pin on the radius block. Then attach the flanged or brazed tube by threading the tube nut to the Seal-Lok adapter on the radius block threaded pin.

\* If the threaded pin does not have an internal thread, a new threaded pin is required.

Tube O.D. (in.)	Description	Part No.
1/2	Seal-Lok Adapter.....	<b>930421-8</b>
5/8	Seal-Lok Adapter.....	<b>930421-10</b>
3/4	Seal-Lok Adapter.....	<b>930421-12</b>
1	Seal-Lok Adapter.....	<b>930421-16</b>
1 1/4	Seal-Lok Adapter.....	<b>930421-20</b>
1 1/2	Seal-Lok Adapter.....	<b>930421-24</b>
1/2	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-8</b>
5/8	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-10</b>
3/4	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-12</b>
1	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-16</b>
1 1/4	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-20</b>
1 1/2	Threaded Pin (for Close Bend Radius Blocks) ..	<b>930420-24</b>



Fig. R30 — Seal-Lok Close Bend Adapter

## Close Bend Radius Blocks – Metric Sizes

Tube O.D./ Size (mm)	Radius (mm)	Thread Size	Part No.
12	32	3/4-16 .....	<b>780185</b>
14	38	7/8-14 .....	<b>780186</b>
15	38	7/8-14 .....	<b>780187</b>
16	38	7/8-14 .....	<b>780188</b>
18	44	1 1/16-12.....	<b>780189</b>
20	44	1 1/16-12.....	<b>780190</b>
38	127	1 7/8-12.....	<b>530625</b>

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