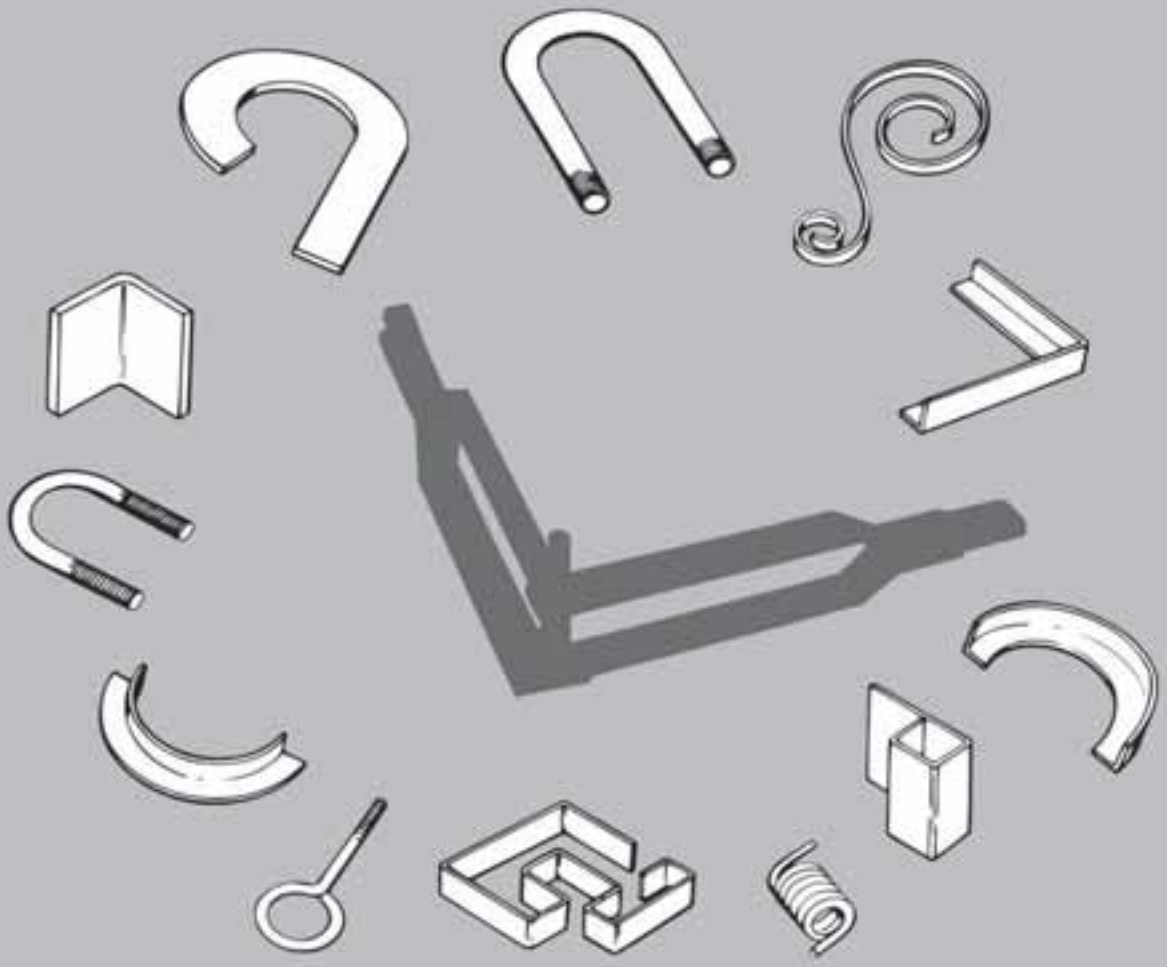
HOSSFELD

UNIVERSAL®

Parts Catalog No.50 ©

Model No. 1



BENDER

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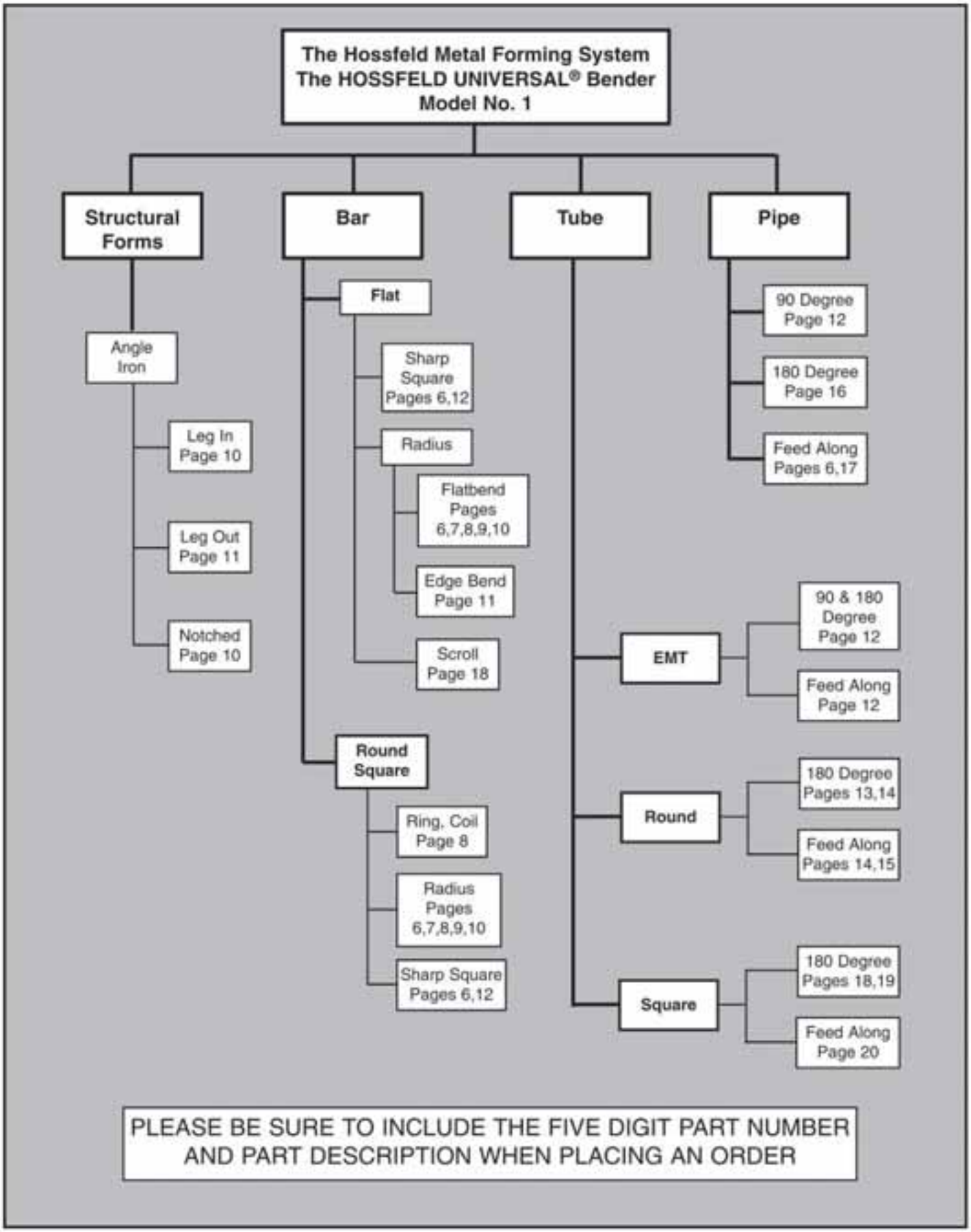

PLEASE BE SURE TO INCLUDE THE FIVE DIGIT PART NUMBER AND PART DESCRIPTION WHEN PLACING AN ORDER

THE MODEL No. 1 HOSSFELD UNIVERSAL® BENDER

This hand operated metal forming machine with the tooling illustrated in the following pages will bend radii and sharp angles in bar and angle stock and will bend pipe and tubing in smooth curves without distortion. The versatility and fast, easy set-up make it an ideal tool for production, prototype development, custom fabrication, and plant maintenance.

No tools are necessary for assembly of the operating dies and pins. Finger adjustment of mounting pins is all that is required. The standard and accessory pins and dies described in this catalog will resolve all of the common and most of the uncommon problems encountered in bending bar, angle, tube, and pipe stock. Special dies have been developed in over 70 years of experience in the bending of unusual forms and shapes. Many of these dies are available from factory stock. The technical staff of the Hossfeld Manufacturing Company offers a service for development of tools for special bending jobs. Contact the factory for further information.

No. 1 HOSSFELD UNIVERSAL® BENDER

Section A lists the No. 1 Bender with a series of optional groups of tools and dies recommended for the different operations in the HOSSFELD METAL FORMING SYSTEM. Each group is referred to in a brochure describing the tooling applications by figure number.

Section B is a listing of the tools, dies, and parts that are available for the Model No. 1 Bender

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IMPORTANT

To assure promptness and accuracy in shipping, all orders must include both the Five Digit Part Number shown in the first column of this list and the Description of the Part. Before ordering, **check the size of your bender**: Do you have a **No. 1 Bender?**

Tools listed in this Catalog will not fit the Standard No. 2 or the Long Frame Bender.
Separate catalogs are available for the No. 2 Bender and the Long Framed Bender

For validation of the warrantee, bending tools must be provided by the Hossfeld Manufacturing Company or be authorized by the Company for use in the HOSSFELD UNIVERSAL® Bender

The Tube and Pipe forming dies are assembled in sets and tested for accuracy of bending before shipping. We attempt to maintain a stock of the sets in greatest demand. A limited stock of other dies and castings is maintained ready for finishing and assembly. These may require two or more weeks lead time for shipping.

Foundry patterns are available for a great variety of tools and dies that have been developed by our engineering staff for customers' special problems. The staff is ready to assist in problem solving.

Section A

The following list of Tooling Sets is provided to aid in selection of groups of forming dies and blocks that have, over the years, been most widely used in each category of metal forming operations. The No. 05281 Bender package is a fully operable machine for simple basic bends. Each of the listed sets of tooling will expand the Machine's capabilities in a specific application.

Part No.	Part Description
05281	**No. 1 HOSSFELD UNIVERSAL®Bender** Consisting of the Following Component Parts: 65 lbs.

05255	Main Frame Assy.	05169	25 Gauge Adjusting Block
05260	Swinging Frame Assy.	05170	25A Gauge Extension Rod
05040	9 Flat Surface Roller	05172	27 Circle Gauge
05042	11 Square Block (2)	20763	28B6 Hand Lever
05052	17 Regular Flat Head Pin	20764	28B7 Hand Lever Pin
05055	19 U Pin	05268	#1 VHS Video
05057	20 Center Pin	05271	#1 Operating Manual
05166	22 Support Plug		

Part No.	Part Description	
05290	Cabinet Stand	160 lbs.
05296	Pedestal Stand	140 lbs.

Part No. Part Description

05408 Set of General Purpose Tools for Cold Bending Schedule 40 Pipe
Consisting of the Following Component Parts (Figure 1): 17 lbs.

05041	10 V Groved Roller	05047	14 Pipe Die 3/4 & 1"
05044	13 Pipe Die 1-1/4"	05048	15 Pipe Die 1/4, 3/8, & 1/2"

Part No. Part Description

05037 Set of General Purpose Tools for Bending Hot Rolled Low Carbon Steel (AISI 1020) Bar Stock Consisting of the Following Component Parts (Figures 2 to 8): 15 lbs.

05038	7 Cam Die 1-1/2 "	05056	19A U Pin w/lug
05039	8 Cam Die 1-3/4" & 2"	05165	21 U Pin Roller
05049	16 Bending Dog	05167	23 Yoke
05053	17A Offset Flat Head Pin	05168	24 Thumb Nut (2)
05054	18 Eye Pin	05171	26 Sharp Square Bending Block

Part No. Part Description

05700 Special Press Forming Tool for Sharp Angle Bends up to 90 Degrees in Bar and Flat Stock 1/8x3" and 1/4" Wire and Rod
Consisting of the Following Component Parts (Figure 13): 6 lbs.

05701	60-1 Bulldozer Center Pin
05704	60-2 Bulldozer Casting
05444	53 Wrist Pin

Part No. Part Description

05288 Set of Tools for Bending Angle Iron Leg Inward Consisting of the Following Component Parts (Figure 9): 50 lbs.

05190	30 Inbend Master Die Assy.	05208	31 Radius Block 18"
05197	31 Radius Block 6"	05210	31 Radius Block 24"
05200	31 Radius Block 9"	05211	31 Radius Block 30"
05203	31 Radius Block 12"	05212	31 Radius Block 36"
05206	31 Radius Block 15"		

Part No. Part Description

05289 Set of Tools for Bending Angle Iron Leg Outward Consisting of the Following Component Parts (Figure 10): 75 lbs.

05440	50 Outbend Master Die	05559	51 Outer Radius Block 15"
05444	53 Wrist Pin	05562	51 Outer Radius Block 18"
Radius Blocks		05565	51 Outer Radius Block 24"
Vertical Leg Inside Radius Dimension			**Dual working face**
05547	51 Outer Radius Block 4"	05601	52 Inner Radius Block 4 & 5"
05548	51 Outer Radius Block 5"	05602	52 Inner Radius Block 6 & 9"
05549	51 Outer Radius Block 6"	05606	52 Inner Radius Block 12 & 15"
05553	51 Outer Radius Block 9"	05608	52 Inner Radius Block 18 & 24"
05556	51 Outer Radius Block 12"		

Part No. Part Description

05676 Tools for Edgebending Flat Bar Stock. This Set Must Be Used with the No. 05440 Master Die, No. 05444 Wrist Pin, the No. 05600 through No. 05615, Inner Radius Blocks, and the No. 20940 through No.20943 Spacer Sets Selected from Section B, Page 12. (Figure 11): 8 lb

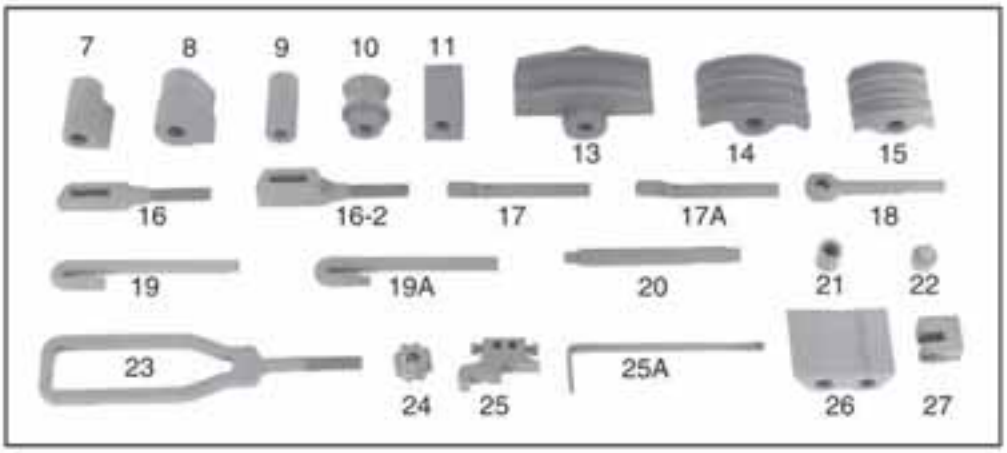
05679	51-1 Edgebend Die Casting
20983	51B4 Pin (2)

Part No.	Part Description
21221	**Set of Scroll Forming Tools** Consisting of the Following Parts (Figure 17): 27 lbs.
21218	64B 2-1/2 "
21219	65B w/Assembling Pin 4" & 6-1/2"
21220	66B w/Assembling Pin 5" & 8"

Section B

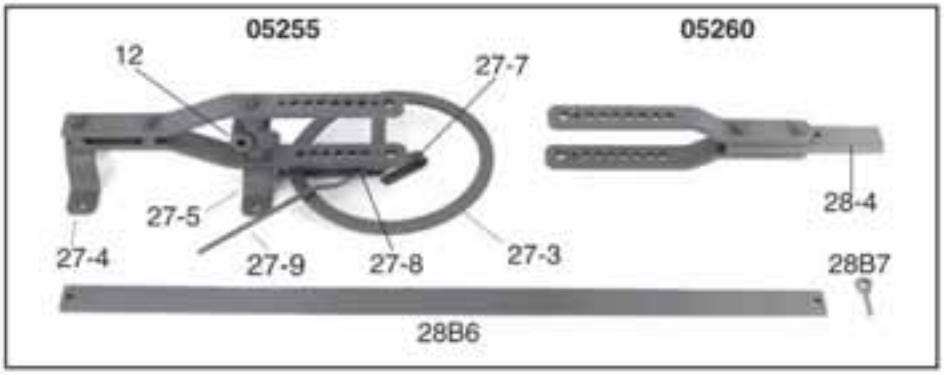
This Section includes the forming tools and parts that are available for the Model No. 1 HOSSFELD UNIVERSAL® Bender. Our Technical Staff and Pattern Shop are ready to assist in providing Dies and Radius Blocks not found in this list and to solve special problems within the scope of the HOSSFELD METAL FORMING SYSTEM.

General Purpose Dies, Pins, and Blocks.



Part No.	Part Description
05038	7 Cam Die 1-1/2"
05039	8 Cam Die 1-3/4' & 2"
05040	9 Roller
05041	10 V Groved Roller
05042	11 Square Block
05044	13 Pipe Die 1-1/4"
05047	14 Pipe Die 3/4" & 1"
05048	15 Pipe Die 1/4", 3/8" & 1/2"
05049	16 Bending Dog
05051	16-2 Wide Nose Bending Dog
05052	17 Flat Head Pin
05053	17A Offset Flat Head Pin
05054	18 Eye Pin
05055	19 U Pin
05056	19A U Pin w/Lug
05057	20 Ctr. Pin 1/2", 5/8" & 3/4"
05165	21 U Pin Roller
05166	22 Support Plug
05167	23 Yoke
05168	24 Thumb Nut
05169	25 Sliding Gauge
05170	25A Gauge Extension
05171	26 Sharp Square Bending Block
05172	27 Circle Gauge

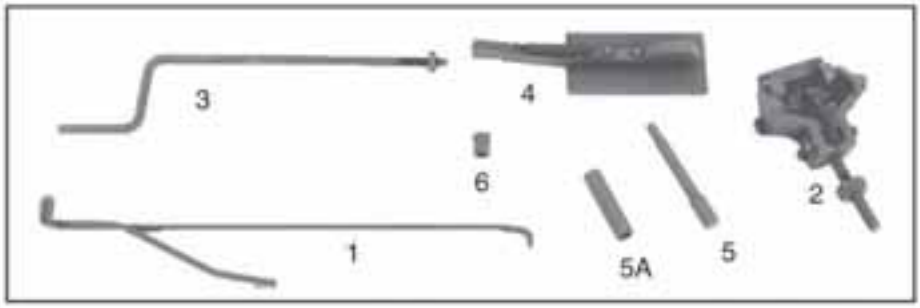
Parts for No. 05255 Main Frame Assembly and No 05260 Swinging Frame Assembly.



Parts for No. 05255 Main Frame Assembly and No 05260 Swinging Frame Assembly.

Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
05255	Main Frame Assembly	05176	27-4 Large Foot	05043	12 Oscillating Block
05260	Swing Frame Assembly	05177	27-5 Small Foot	05182	27-10 Osc. Block Bush.
05219	27-6A Main Frame Spacer(4)	05179	27-7 Center Pin Support	05185	28-4 Socket & Filler
		05180	27-8 U Pin Support	20763	28B6 Hand Lever
05175	27-3 Circle Assembly	05181	27-9 Circle Rod	20764	28B7 Hand Lever Pin

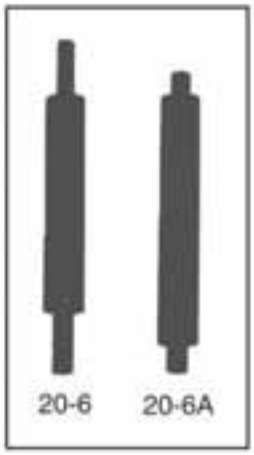
Tools for Bending Flat Eyes on Wide Stock.



Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
* 06161	1 Ext. Rod Support	06197	5 Pin 11/16"	06186	5A Bushing 1-1/8"
* 06162	2 Roller & Shoe	06198	5 Pin 3/4"	06187	5A Bushing 1-3/16"
* 06170	3 Pressure Screw	06181	5A Bushing 13/16"	06188	5A Bushing 1-1/4"
* 06173	4 Gripping Blade	06182	5A Bushing 7/8"	06189	5A Bushing 1-5/16"
* 06193	6 Top Pin Bearing	06183	5A Bushing 15/16"	06190	5A Bushing 1-3/8"
* 06195	5 Pin 9/16"	06184	5A Bushing 1"	06191	5A Bushing 1-7/16"
06196	5 Pin 5/8"	06185	5A Bushing 1-1/16"	06192	5A Bushing 1-1/2"

* Tooling required for all bending combinations

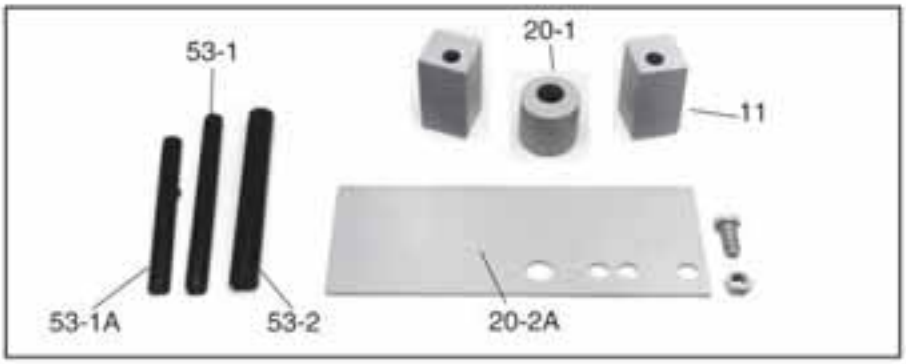
Special Pins.



Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
Diameter of Turned Ends		05070	20-6A End Ctr. Pin 1/4"	05077	20-6A End Ctr. Pin 11/16"
05059	20-6 End Lng. Ctr. Pin 3/8"	05071	20-6A End Ctr. Pin 5/16"	05444	53 Wrist Pin
05060	20-6 End Lng. Ctr. Pin 7/16"	05072	20-6A End Ctr. Pin 3/8"	20983	51B4 Edgebend Pin 3/4"
05061	20-6 End Lng. Ctr. Pin 1/2"	05073	20-6A End Ctr. Pin 7/16"	05697	53-1 Main Frame Pin 5/8"
05062	20-6 End Lng. Ctr. Pin 9/16"	05074	20-6A End Ctr. Pin 1/2"	05698	53-1A Swing Frame Pin 5/8"
05063	20-6 End Lng. Ctr. Pin 5/8"	05075	20-6A End Ctr. Pin 9/16"	05699	53-2 Long Center Pin 3/4"
05064	20-6 End Lng. Ctr. Pin 11/16"	05076	20-6A End Ctr. Pin 5/8"		

Tools for Bending Rings in Flat, Round, or Square Stock on Top of Bender.

A Set of Straight Pins and a Support Plate Are Required for setting up These Cams.



Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
*05697	53-1 Straight MF Pin	05306	20-1 Round Cam 2-3/4"	05313	20-1 Round Cam 4-1/2"
*05698	53-1A Straight SF Pin	05307	20-1 Round Cam 3"	05314	20-1 Round Cam 4-3/4"
*05699	53-2 Straight Center Pin	05308	20-1 Round Cam 3-1/4"	05315	20-1 Round Cam 5"
*05303	20-2A Plate w/Bolt & Nut	05309	20-1 Round Cam 3-1/2"	05316	20-1 Round Cam 5-1/4"
		05310	20-1 Round Cam 3-3/4"	05317	20-1 Round Cam 5-1/2"
05304	20-1 Round Cam 2-1/4"	05311	20-1 Round Cam 4"	05318	20-1 Round Cam 5-3/4"
05305	20-1 Round Cam 2-1/2"	05312	20-1 Round Cam 4-1/4"	05319	20-1 Round Cam 6"

*** Parts necessary to assemble tools for bending**

Wide (2-1/2 inch) Flat Face (WF) Radius Blocks for Forming Wider Flat Stock to Radius Between Bender Frames.

Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
	Dual working faces	05229	20-2 WF Rad.Blk. 10&11"	05243	20-2 WF Rad.Blk. 39&40"
05225	20-2 WF Rad.Blk. 4-1/2&5-1/2"	05362	20-2 WF Rad.Blk. 13&14"	05245	20-2 WF Rad.Blk. 42&48"
		05231	20-2 WF Rad.Blk. 15&18"	05247	20-2 WF Rad.Blk. 54&60"
05226	20-2 WF Rad.Blk. 5&6"	05234	20-2 WF Rad.Blk. 20&22"	05364	20-2 WF Rad.Blk. 66&72"
05360	20-2 WF Rad.Blk. 6-1/2&7-1/2"	05236	20-2 WF Rad.Blk. 24&36"	05365	20-2 WF Rad.Blk. 78&84"
05227	20-2 WF Rad.Blk. 7&8"	05240	20-2 WF Rad.Blk. 28&30"	05250	20-2 WF Rad.Blk. 108&120"
05228	20-2 WF Rad.Blk. 9&12"	05242	20-2 WF Rad.Blk. 34&35"	05251	20-2 WF Rad.Blk. 228& 240"

General Purpose Cast Rollers. Mount on No. 05057 Center Pin For Radius Bends in Medium Size Hot Rolled AISI 1020 Stock. Diameter Dimension in Inches.

Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
05088	20-7 Cast Roller 1-1/4"	05094	20-7 Cast Roller 2-3/4"	05100	20-7 Cast Roller 4-1/4"
05089	20-7 Cast Roller 1-1/2"	05095	20-7 Cast Roller 3"	05101	20-7 Cast Roller 4-1/2"
05090	20-7 Cast Roller 1-3/4"	05096	20-7 Cast Roller 3-1/4"	05102	20-7 Cast Roller 4-3/4"
05091	20-7 Cast Roller 2"	05097	20-7 Cast Roller 3-1/2"	05103	20-7 Cast Roller 5"
05092	20-7 Cast Roller 2-1/4"	05098	20-7 Cast Roller 3-3/4"		
05093	20-7 Cast Roller 2-1/2"	05099	20-7 Cast Roller 4"		

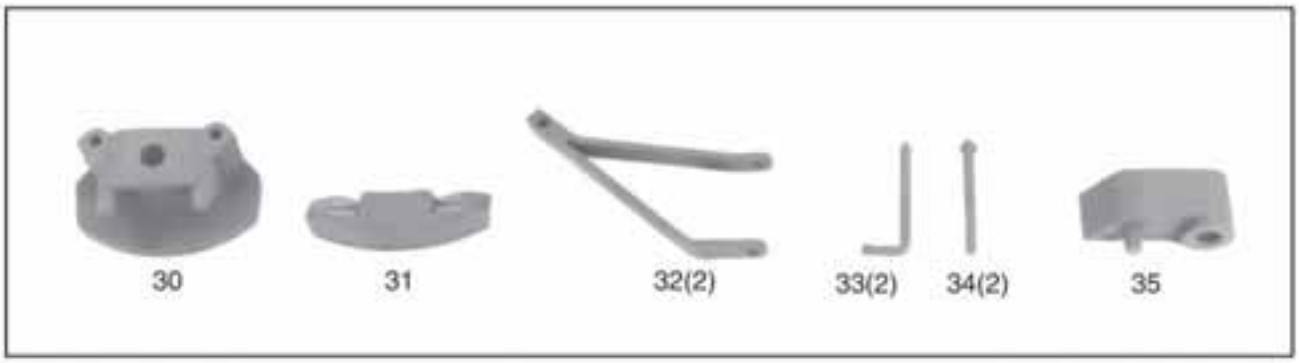
Steel Rollers for Radius Bends in Heavier Stock • Special Order Only • Not a Stock Item.

Part No.	Part Description	Part No.	Part Description	Part No.	Part Description
05114	20-7 Steel Roller 1"	05119	20-7 Steel Roller 2-1/4"	05123	20-7 Steel Roller 3-1/4"
05115	20-7 Steel Roller 1-1/4"	05120	20-7 Steel Roller 2-1/2"	05124	20-7 Steel Roller 3-1/2"
05116	20-7 Steel Roller 1-1/2"	05121	20-7 Steel Roller 2-3/4"	05125	20-7 Steel Roller 3-3/4"
05117	20-7 Steel Roller 1-3/4"	05122	20-7 Steel Roller 3"	05126	20-7 Steel Roller 4"
05118	20-7 Steel Roller 2"				

General Purpose Cast Cam Dies for Forming Uniform Leg "U" bends. Diameter Dimension in Inches.

Part No.	Part Description
05143	20-8 Cast Cam 2-1/2"
05144	20-8 Cast Cam 2-3/4"
05145	20-8 Cast Cam 3"
05146	20-8 Cast Cam 3-1/4"
05147	20-8 Cast Cam 3-1/2"
05148	20-8 Cast Cam 3-3/4"
05149	20-8 Cast Cam 4"
05150	20-8 Cast Cam 4-1/4"
05151	20-8 Cast Cam 4-1/2"
05152	20-8 Cast Cam 4-3/4"
05153	20-8 Cast Cam 5"
05320	20-8 Cast Cam 5-1/4"
05321	20-8 Cast Cam 5-1/2"
05322	20-8 Cast Cam 5-3/4"
05323	20-8 Cast Cam 6"
05324	20-8 Cast Cam 6-1/4"
05325	20-8 Cast Cam 6-1/2"
05326	20-8 Cast Cam 6-3/4"
05327	20-8 Cast Cam 7"

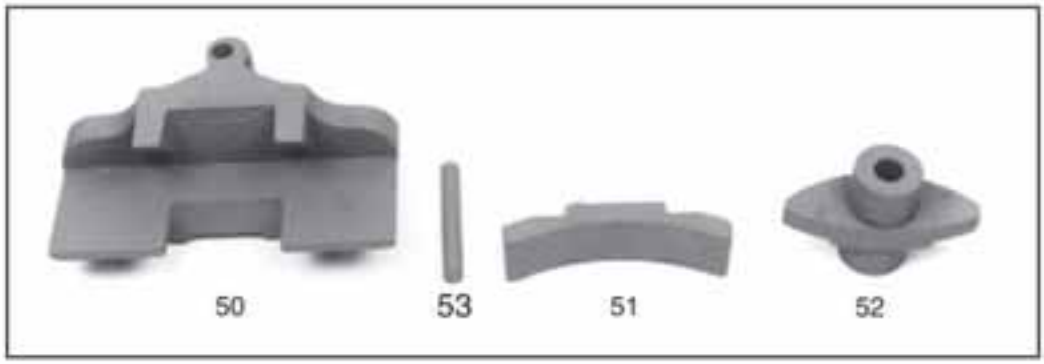
Tooling for Forming Angle Iron, Leg Inward.



Part No.	Part Description
05190	30 Inbend Master Die Assembly
05191	30 Inbend Master Die Casting
Inside Radius Vertical Leg	
05195	31 Radius Block 4"
05196	31 Radius Block 5"
05197	31 Radius Block 6"
05198	31 Radius Block 7"
05199	31 Radius Block 8"
05200	31 Radius Block 9"
05201	31 Radius Block 10"
05202	31 Radius Block 11"
05203	31 Radius Block 12"
05204	31 Radius Block 13"
05205	31 Radius Block 14"
05206	31 Radius Block 15"
05207	31 Radius Block 16"
05208	31 Radius Block 18"
05209	31 Radius Block 20"
05210	31 Radius Block 24"
05211	31 Radius Block 30"
05212	31 Radius Block 36"
05213	31 Radius Block 48"
05214	31 Radius Block 60"
*05222	32 Swinging Arm
*05252	33 Prong
*05253	34 Pin
05300	35 Notched Angle Die

*Two of each are required

Tooling for Forming Angle Iron Leg Outward. Matching Pairs of Outer and Inner Radius Blocks Are Required.



Part No.	Part Description
05440	50 Outbend Master Die
05444	53 Wrist Pin
Outer Radius Block	
Vertical Leg Inside Radius	
05545	51 Radius Block 3"
05546	51 Radius Block 3-1/2"
05547	51 Radius Block 4"
05548	51 Radius Block 5"
05549	51 Radius Block 6"
05551	51 Radius Block 7"
05552	51 Radius Block 8"
05553	51 Radius Block 9"
05554	51 Radius Block 10"
05555	51 Radius Block 11"
05556	51 Radius Block 12"
05557	51 Radius Block 13"
05558	51 Radius Block 14"

Part No.	Part Description
05559	51 Radius Block 15"
05560	51 Radius Block 16"
05561	51 Radius Block 17"
05562	51 Radius Block 18"
05563	51 Radius Block 20"
05564	51 Radius Block 22"
05565	51 Radius Block 24"
05566	51 Radius Block 26"
05567	51 Radius Block 28"
05568	51 Radius Block 30"
05569	51 Radius Block 32"
05570	51 Radius Block 36"
05573	51 Radius Block 42"
05576	51 Radius Block 48"
05585	51 Radius Block 60"
05590	51 Radius Block 72"

Part No.	Part Description
	Dual Working Faces
05600	52 Inner Rad.Blk. 3 & 3-1/2"
05601	52 Inner Rad.Blk. 4 & 5"
05602	52 Inner Rad.Blk. 6 & 9"
05603	52 Inner Rad.Blk. 7 & 11"
05604	52 Inner Rad.Blk. 8 & 13"
05605	52 Inner Rad.Blk. 10 & 20"
05606	52 Inner Rad.Blk. 12 & 15"
05607	52 Inner Rad.Blk. 14 & 16"
05608	52 Inner Rad.Blk. 18 & 24"
05609	52 Inner Rad.Blk. 22 & 26"
05610	52 Inner Rad.Blk. 28 & 32"
05611	52 Inner Rad.Blk. 30 & 36"
05613	52 Inner Rad.Blk. 42 & 48"
05615	52 Inner Rad.Blk. 60 & 72"

Flat Stock Edgebending Tools to be Used with No. 05440 Outbend Master Die (above).

Spacer Set Includes Two Short and Two Long Spacers

Part No	Part Description
05679	51-1 Edgebend Die
20983	51B4 Pin (2 required)

Part No	Part Description
20940	51B3 Spacer Set 1/8"
20941	51B3 Spacer Set 3/16"

Part No	Part Description
20942	51B3 Spacer Set 1/4"
20943	51B3 Spacer Set 5/16"

Special Purpose Tools.

Part No.	Part Description
05701	60-1 Bulldozer Center Pin
05704	60-2 Bulldozer Casting
05444	53 Wrist Pin

Tools for "Machine" Formed Bends in Electro Metallic Tube (EMT)

Part No.	Part Description Trade Size EMT by Center Line Radius in Inches
05720	70 90° EMT 1/2x3"
05730	71 90° EMT 3/4x4
05740	72 90° EMT 1x5"

Part No.	Part Description
05790	74 180° EMT 1/2x2"
05805	74-1 180° EMT 1/2x3"
05820	74-2 180° EMT 1/2x4"
06060	74-3 180° EMT 3/4x3"
06088	74-4 180° EMT 3/4x4"

Part No.	Part Description Feed Along (FA) Sets
05918	75 FA EMT 1/2x7-7/16"
05929	75-1 FA EMT 1/2x7-5/8"
05989	75-2 FA EMT 1/2x10"
06151	75-3 FA EMT 3/4x6-1/8"

Tools for 90 Degree Machine Bends in Rigid Electrical Conduit and Schedule 40 Iron Pipe

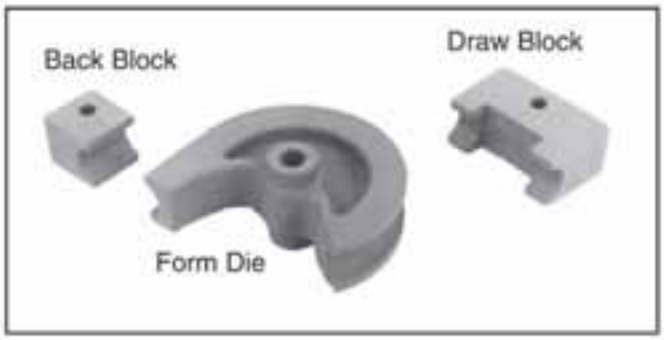
Center Line Radius (CLR) in Inches

BEND A53 TYPE F AMERICAN PIPE ONLY

Part No.	Part Description Pipe x CLR
*05410	40 90 Degree Pipe 3/8x1-1/4"
*05411	41 90 Degree Pipe 1/2x1-3/4"
*05412	42 90 Degree Pipe 1/2x3"
*05413	43 90 Degree Pipe 3/4x4"
*05414	44 90 Degree Pipe 1x5"

*05041 10 V Roller is required

Tube Forming Die Sets. 180 Degree Sets Permit Gauged Single Setting Bends up to 180 Degrees in a Single Operation.



Center Line Radius (CLR) in Inches

Based on "Cold Drawn over Mandrel and Electric Resistance Welded" AISI 1020 Steel Tube. Radius Dimension will vary for Copper, Brass, Aluminum or Alloy Steel. Contact Factory for Details.

14 Gauge Maximum Permissible Wall Thickness of Tube for Bending with All Die Sets.

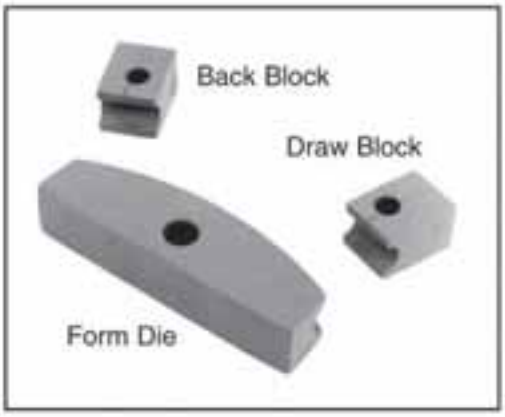
Part No	Part Description
3/8 Inch Outside Dia. x CLR Tube	
18 Gauge Minimum Wall	
06306	180 OD 3/8x1-1/4"
06317	180 OD 3/8x1-1/2"
06340	180 OD 3/8x2-1/4"
06400	180 OD 3/8x4"
06438	180 OD 3/8x6-1/4"
1/2 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
06460	180 OD 1/2x1-1/4"
18 Gauge Minimum Wall	
06467	180 OD 1/2x1-1/2"
06474	180 OD 1/2x1-3/4"
06485	180 OD 1/2x2"
06505	180 OD 1/2x2-1/2"
06520	180 OD 1/2x3"
06527	180 OD 1/2x3-1/4"
06560	180 OD 1/2x4"
06590	180 OD 1/2x5"
5/8 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
06900	180 OD 5/8x1-1/2"
06907	180 OD 5/8x1-3/4"
06914	180 OD 5/8x1-13/16"
06921	180 OD 5/8x2"
18 Gauge Minimum Wall	
06928	180 OD 5/8x2-1/4"
06934	180 OD 5/8x2-3/8"
06941	180 OD 5/8x2-1/2"
06948	180 OD 5/8x2-3/4"
06955	180 OD 5/8x3"
06961	180 OD 5/8x3-1/4"
06974	180 OD 5/8x3-5/8"
06986	180 OD 5/8x4"
06998	180 OD 5/8x4-1/2"
07010	180 OD 5/8x5"
3/4 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
07490	180 OD 3/4x1-7/8"
07497	180 OD 3/4x2"
07504	180 OD 3/4x2-1/4"
07511	180 OD 3/4x2-1/2"
07518	180 OD 3/4x2-3/4"
18 Gauge Minimum Wall	
07525	180 OD 3/4x3"
07538	180 OD 3/4x3-3/8"
07545	180 OD 3/4x3-1/2"
07552	180 OD 3/4x3-9/16"
07565	180 OD 3/4x4"
07572	180 OD 3/4x4-1/8"
07579	180 OD 3/4x4-3/16"
07591	180 OD 3/4x4-3/8"
07598	180 OD 3/4x4-1/2"
07610	180 OD 3/4x5"
7/8 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
08015	180 OD 7/8x1-3/4"
08022	180 OD 7/8x2"
08035	180 OD 7/8x2-1/2"
08041	180 OD 7/8x2-3/4"
08055	180 OD 7/8x3"
08067	180 OD 7/8x3-1/2"
08075	180 OD 7/8x4"
18 Gauge Minimum Wall	
08087	180 OD 7/8x4-1/4"
08095	180 OD 7/8x4-7/16"
08103	180 OD 7/8x4-3/4"
08110	180 OD 7/8x5"
15/16 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
08650	180 OD 15/16x4-1/2"
1 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
08725	180 OD 1x2-1/4"
08733	180 OD 1x2-1/2"
08740	180 OD 1x2-3/4"
08750	180 OD 1x3"
08760	180 OD 1x3-1/4"
08767	180 OD 1x3-1/2"
08775	180 OD 1x3-3/4"
08782	180 OD 1x4"
08795	180 OD 1x4-1/2"
08805	180 OD 1x4-3/4"
08812	180 OD 1x5"
1-1/16 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
09626	180 OD 1-1/16x2"
09634	180 OD 1-1/16x2-1/4"
09700	180 OD 1-1/16x2-1/2"
09646	180 OD 1-1/16x2-3/4"
09714	180 OD 1-1/16x3"
09666	180 OD 1-1/16x3-1/2"
09682	180 OD 1-1/16x4"
09753	180 OD 1-1/16x4-1/2"
09696	180 OD 1-1/16x4-3/4"
09710	180 OD 1-1/16x5"
09726	180 OD 1-1/16x6"
09730	180 OD 1-1/16x6-1/2"

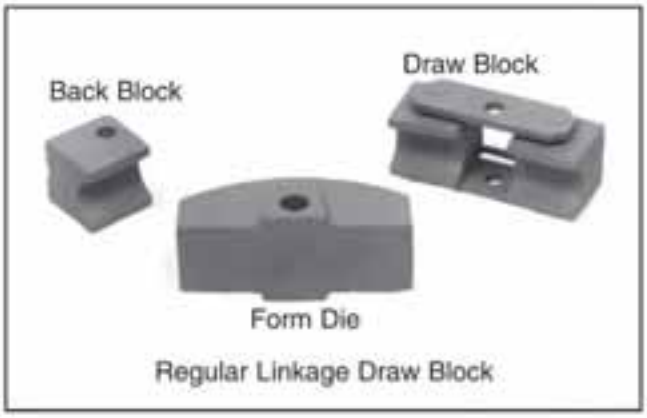
Tube Forming Die Sets. 180 Degree Sets Permit Gauged Single Setting Bends up to 180 Degrees in a Single Operation.

1-1/8 Inch Outside Dia. x CLR Tube
16 Gauge Minimum Wall

09865	180 OD 1-1/8x3"	09900	180 OD 1-1/8x4"
09879	180 OD 1-1/8x3-7/16"	09915	180 OD 1-1/8x4-1/2"

Feed Along (FA) Tube Die Sets for Forming Larger Radius Bends.





Center Line Radius (CLR) in Inches

Based on Cold "Drawn over Mandrel and Electric Resistance Welded" AISI 1020 Steel.

Tube Radius Dimension will vary for Copper, Brass, Aluminum or Alloy Steel. Contact Factory for Details

14 Gauge Maximum Permissible Wall Thickness of Tube for Bending with All Die Sets.

Part No. Part Description

1/2 Inch Outside Dia. x CLR Tube
18 Gauge Minimum Wall

06615	FA OD 1/2x5-3/4"
06640	FA OD 1/2x9"
06653	FA OD 1/2x10"
06691	FA OD 1/2x11-3/4"
06697	FA OD 1/2x12"
06710	FA OD 1/2x13"
06720	FA OD 1/2x14"
06730	FA OD 1/2x15"
06740	FA OD 1/2x16"
06765	FA OD 1/2x18"
06790	FA OD 1/2x20"

5/8 Inch Outside Dia. x CLR Tube
18 Gauge Minimum Wall

06968	FA OD 5/8x3-1/2"
07050	FA OD 5/8x6-5/16"
07055	FA OD 5/8x7"
07110	FA OD 5/8x9"
07135	FA OD 5/8x10"
07145	FA OD 5/8x11"
07155	FA OD 5/8x12"
07190	FA OD 5/8x15"
07225	FA OD 5/8x18"
07250	FA OD 5/8x20"
07345	FA OD 5/8x28"
07385	FA OD 5/8x32"

3/4 Inch Outside Dia. x CLR Tube
18 Gauge Minimum Wall

07673	FA OD 3/4x7-1/4"
07685	FA OD 3/4x8"
07697	FA OD 3/4x8-1/2"
07710	FA OD 3/4x9"
07745	FA OD 3/4x10"
07755	FA OD 3/4x11"
07764	FA OD 3/4x11-1/2"
07772	FA OD 3/4x12"
07784	FA OD 3/4x13-1/2"
07790	FA OD 3/4x13-3/4"
07810	FA OD 3/4x15-3/16"
07825	FA OD 3/4x16"
07910	FA OD 3/4x23"

7/8 Inch Outside Dia. x CLR Tube
18 Gauge Minimum Wall

08130	FA OD 7/8x5-9/16"
08160	FA OD 7/8x6-5/8"
08179	FA OD 7/8x7"
08185	FA OD 7/8x7-1/2"
08195	FA OD 7/8x8"
08245	FA OD 7/8x10"
08256	FA OD 7/8x11"
08261	FA OD 7/8x12"
08290	FA OD 7/8x14"
08430	FA OD 7/8x36"
08545	FA OD 7/8x48"
08608	FA OD 7/8x130"
08620	FA OD 7/8x150"

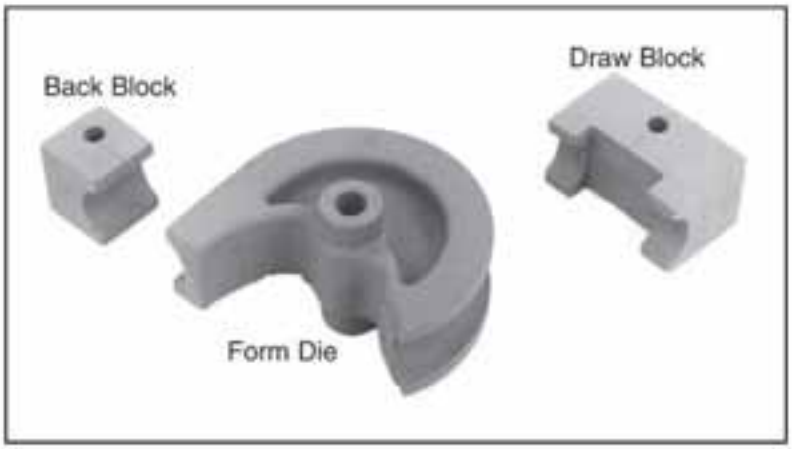
1 Inch Outside Dia. x CLR Tube
18 Gauge Minimum Wall

08888	FA OD 1x6-1/2"
08900	FA OD 1x8"
08920	FA OD 1x8-5/8"
08935	FA OD 1x9"
08950	FA OD 1x9-1/2"
08965	FA OD 1x10"
08995	FA OD 1x11-3/4"
09001	FA OD 1x12"
09007	FA OD 1x12-1/2"
09030	FA OD 1x14"
09045	FA OD 1x15-1/8"
09065	FA OD 1x16-1/8"

Feed Along (FA) Tube Die Sets for Forming Larger Radius Bends.

Part No.	Part Description
1 Inch Outside Dia. x CLR Tube	
18 Gauge Minimum Wall	
09085	FA OD 1x17-1/2"
09095	FA OD 1x18-1/2"
09115	FA OD 1x19-5/8"
09170	FA OD 1x24"
09205	FA OD 1x27"
09223	FA OD 1x30"
09300	FA OD 1x42"
09335	FA OD 1x48"
09400	FA OD 1x59"
09440	FA OD 1x65"
09535	FA OD 1x83"
09590	FA OD 1x168"
1-1/16 Inch Outside Dia. x CLR Tube	
18 Gauge Minimum Wall	
09738	FA OD 1-1/16x8"
09742	FA OD 1-1/16x8-1/2"
09837	FA OD 1-1/16x9-1/4"
09746	FA OD 1-1/16x9-1/2"
09768	FA OD 1-1/16x10-1/2"
09772	FA OD 1-1/16x11-1/2"
09776	FA OD 1-1/16x12"
09780	FA OD 1-1/16x13"
09784	FA OD 1-1/16x14"
09792	FA OD 1-1/16x17"
09796	FA OD 1-1/16x17-1/2"
09760	FA OD 1-1/16x18"
09804	FA OD 1-1/16x20"
09820	FA OD 1-1/16x24"
09824	FA OD 1-1/16x30"
09828	FA OD 1-1/16x36"
09832	FA OD 1-1/16x42"
09844	FA OD 1-1/16x48"
09848	FA OD 1-1/16x54"
09852	FA OD 1-1/16x60"
09861	FA OD 1-1/16x120"
1-1/8 Inch Outside Dia. x CLR Tube	
18 Gauge Minimum Wall	
10025	FA OD 1-1/8x8"
10095	FA OD 1-1/8x10-1/2"
10110	FA OD 1-1/8x11-1/2"
10215	FA OD 1-1/8x18-9/16"
10290	FA OD 1-1/8x24-9/16"
10314	FA OD 1-1/8x31"
1-3/16 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
10395	FA OD 1-3/16x14"
10430	FA OD 1-3/16x17"
10495	FA OD 1-3/16x24"
1-1/4 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
10600	FA OD 1-1/4x10"
10610	FA OD 1-1/4x11-1/4"
10635	FA OD 1-1/4x14-3/8"
10645	FA OD 1-1/4x16"
10680	FA OD 1-1/4x21-5/8"
10701	FA OD 1-1/4x23-5/8"
10750	FA OD 1-1/4x32-3/8"
10855	FA OD 1-1/4x57"
10935	FA OD 1-1/4x168"
1-3/8 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
10972	FA OD 1-3/8x16"
10980	FA OD 1-3/8x18"
1-1/2 Inch Outside Dia. x CLR Tube	
16 Gauge Minimum Wall	
11020	FA OD w/Reg. Linkage 1-1/2x6"
11050	FA OD w/Reg. Linkage 1-1/2x10"
11070	FA OD w/Reg. Linkage 1-1/2x11"
11094	FA OD 1-1/2x17-1/2"
11100	FA OD 1-1/2x18 "
11114	FA OD 1-1/2x22"
11120	FA OD 1-1/2x25"
11130	FA OD 1-1/2x26"
11139	FA OD 1-1/2"x29-1/8"
11160	FA OD 1-1/2x48"

Standard Schedule 40 Pipe 180 Degree Forming Die Sets. 180 Degree Sets Permit Gauged Single Setting Bends up to 180 Degrees in Single Operation.

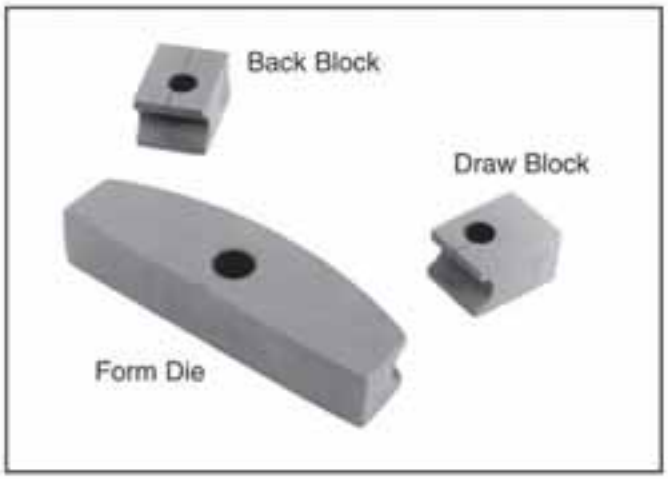


Center Line Radius (CLR) in Inches

BEND A53 TYPE F AMERICAN PIPE ONLY

Part No.	Part Description
1/4 Inch Pipe x CLR	
11475	180 Pipe 1/4x1-1/4"
11481	180 Pipe 1/4x1-1/2"
11489	180 Pipe 1/4x1-3/4"
11510	180 Pipe 1/4x2-1/2"
11559	180 Pipe 1/4x4-1/4"
3/8 Inch Pipe x CLR	
11900	180 Pipe 3/8x1-3/8"
11906	180 Pipe 3/8x1-1/2"
11921	180 Pipe 3/8x1-7/8"
11956	180 Pipe 3/8x3"
11977	180 Pipe 3/8x3-3/4"
1/2 Inch Pipe x CLR	
12300	180 Pipe 1/2x1-1/4"
12307	180 Pipe 1/2x1-1/2"
12321	180 Pipe 1/2x2"
12335	180 Pipe 1/2x2-1/2"
12342	180 Pipe 1/2x2-5/8"
12356	180 Pipe 1/2x3"
12364	180 Pipe 1/2x3-1/4"
12372	180 Pipe 1/2x3-1/2"
12388	180 Pipe 1/2x4"
12420	180 Pipe 1/2x5"
3/4 Inch Pipe x CLR	
12985	180 Pipe 3/4x2"
12992	180 Pipe 3/4x2-1/4"
12999	180 Pipe 3/4x2-1/2"
13006	180 Pipe 3/4x2-3/4"
13013	180 Pipe 3/4x3"
13027	180 Pipe 3/4x3-1/2"
13043	180 Pipe 3/4x4"
13059	180 Pipe 3/4x4-1/2"
13067	180 Pipe 3/4x4-3/4"
13075	180 Pipe 3/4x5"
1 Inch Pipe x CLR	
13643	180 Pipe 1x2-1/4"
13650	180 Pipe 1x2-7/16"
13657	180 Pipe 1x2-1/2"
13671	180 Pipe 1x3"
13678	180 Pipe 1x3-1/8"
13692	180 Pipe 1x3-1/2"
13699	180 Pipe 1x3-3/4"
13706	180 Pipe 1x4"
13714	180 Pipe 1x4-1/16"
13730	180 Pipe 1x4-1/2"
13738	180 Pipe 1x4-5/8"

Standard Schedule 40 Pipe Feed Along (FA) Forming Die Sets for Larger Radius



Center Line Radius (CLR) in Inches

Part No. Part Description

1/4 Inch Pipe x CLR
11580 FA Pipe 1/4x5"

3/8 Inch Pipe x CLR
12053 FA Pipe 3/8x6-5/16"

1/2 Inch Pipe x CLR
12473 FA Pipe 1/2x6-3/4"
12515 FA Pipe 1/2x8-1/4"
12536 FA Pipe 1/2x9"
12557 FA Pipe 1/2x9-9/16"
12620 FA Pipe 1/2x13"
12655 FA Pipe 1/2x15"
12697 FA Pipe 1/2x18"
12716 FA Pipe 1/2x19-1/4"
12744 FA Pipe 1/2x22"
12751 FA Pipe 1/2x23"
12800 FA Pipe 1/2x30"

3/4 Inch Pipe x CLR
13107 FA Pipe 3/4x6"
13121 FA Pipe 3/4x6-1/2"
13163 FA Pipe 3/4x8"
13177 FA Pipe 3/4x8-1/2"
13198 FA Pipe 3/4x9-1/4"
13205 FA Pipe 3/4x9-1/2"
13233 FA Pipe 3/4x10-1/2"
13254 FA Pipe 3/4x11-1/2"
13261 FA Pipe 3/4x12"
13275 FA Pipe 3/4x13"
13289 FA Pipe 3/4x14"
13331 FA Pipe 3/4x17"
13338 FA Pipe 3/4x17-1/2"
13348 FA Pipe 3/4x18"
13375 FA Pipe 3/4x20"
13403 FA Pipe 3/4x24"
13487 FA Pipe 3/4x36"
13501 FA Pipe 3/4x54"
13540 FA Pipe 3/4x120"

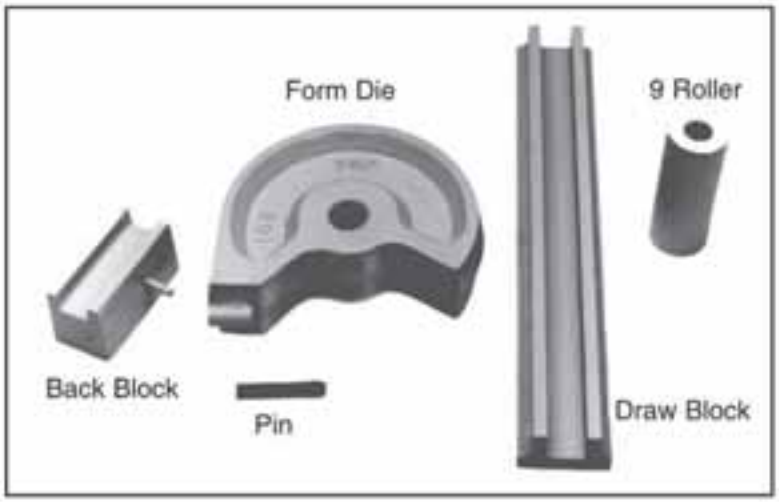
1 Inch Pipe x CLR
13786 FA Pipe 1x6"
13814 FA Pipe 1x7"
13828 FA Pipe 1x7-1/2"
13842 FA Pipe 1x8"
13870 FA Pipe 1x9"
13884 FA Pipe 1x9-1/2"
13912 FA Pipe 1x10-1/2"
13940 FA Pipe 1x12"
13954 FA Pipe 1x12-3/4"
13961 FA Pipe 1x13"
13975 FA Pipe 1x14"
13989 FA Pipe 1x15"
14087 FA Pipe 1x24"
14129 FA Pipe 1x30"
14165 FA Pipe 1x35"
14171 FA Pipe 1x36"
14227 FA Pipe 1x48"
14273 FA Pipe 1x96"
14338 FA Pipe 1x192"

1-1/4 Inch Pipe x CLR
14350 FA Pipe 1-1/4x8"
14378 FA Pipe 1-1/4x9"
14406 FA Pipe 1-1/4x10"
14434 FA Pipe 1-1/4x11"
14448 FA Pipe 1-1/4x12"
14462 FA Pipe 1-1/4x13"
14490 FA Pipe 1-1/4x15"
14630 FA Pipe 1-1/4x30"
14658 FA Pipe 1-1/4x34"
14672 FA Pipe 1-1/4x36"
14776 FA Pipe 1-1/4x192"

Scroll Forming Tools

Part No	Part Description
21217	Assembling Pin for 65B and 66B
21218	64B Scroll 2-1/2"
21219	65B Scroll w/Assembling Pin 4" & 6-1/2"
21220	66B Scroll w/Assembling Pin 5" & 8"

180 Degree Square Tube Bending Die Sets.



14 Gauge Maximum Permissible Wall Thickness of Tube for Bending with All Die Sets.

Inside Radius Dimension in Inches Based on Bending Mechanical Grade AISI 1010 Steel Tube

Part No.	Part Description
2 inch Inside Radius	
16 Gauge Minimum Wall	
14942	116 Sq Tube 1/2x2"
14945	116 Sq Tube 5/8x2"
14947	116 Sq Tube 3/4x2"

Part No.	Part Description
3 inch Inside Radius	
16 Gauge Minimum Wall	
14975	116 Sq Tube 1/2x3"
14995	116 Sq Tube 5/8x3"
15015	116 Sq Tube 3/4x3"
15035	116 Sq Tube 7/8x3"
15055	116 Sq Tube 1x3"

Part No.	Part Description
4 Inch Inside Radius	
16 Gauge Minimum Wall	
15135	103 Sq Tube 1/2x4"
15154	103 Sq Tube 5/8x4"
15173	103 Sq Tube 3/4x4"
15192	103 Sq Tube 7/8x4"
15211	103 Sq Tube 1x4"

Individual Square Tube Die Set Components. Since some components are duplicated in the assembled Square Tube die sets listed on page 18, the following listing of components is provided for shops having need for a more extensive inventory of square tube bending equipment. Complete Die Sets Consist of a Radius Form Die, a Backing Block, a Draw Block, a Roller, and a Dowel Pin.

14 Gauge Maximum Permissible Wall Thickness of Tube for Bending with All Die Sets.

Example: Tooling Required to Bend 1/2" Tube to a 3" Radius:
- 14976 Form Die & Dowel Pin
- 14978 Backing Block
- 37906 Draw Block
- 05040 9 Roller (Page 7)

Square Tube Draw Blocks for Use with Either (2", 3" & 4") Radius Form Dies

Part No.	Part Description
	16 Gauge Minimum Wall
37906	180 1/2" Sq Tube Draw Block*
37925	180 5/8" Sq Tube Draw Block*
37944	180 3/4" Sq Tube Draw Block*
**37963	180 7/8" Sq Tube Draw Block*
**37982	180 1" Sq Tube Draw Block*

*All Require 05040 9 Flat Surface Roller for Operation

**Cannot be used with #14943 - 2" Form Die

Square Tube Form Dies and Backing Blocks

Important
Back Blocks are matched to Form Dies and cannot be interchanged for use with a different radius Form Die.

Inside Radius Dimension in Inches Based on Bending Mechanical Grade AISI 1010 Steel Tube.

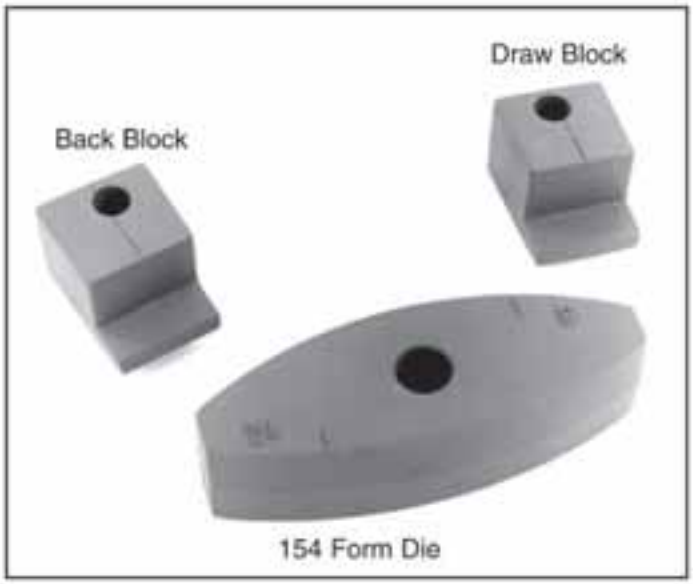
Part No.	Part Description
2 Inch Radius	
	16 Gauge Minimum Wall
14943	180 2" Rad. Sq Tube Form Die & Dowel Pin
14944	180 1/2" Sq Tube Backing Block
14946	180 5/8" Sq Tube Backing Block
14948	180 3/4" Sq Tube Backing Block

Part No.	Part Description
3 Inch Radius	
	16 Gauge Minimum Wall
14976	180 3" Rad. Sq Tube Form Die & Dowel Pin
14978	180 1/2" Sq Tube Backing Block
14998	180 5/8" Sq Tube Backing Block
15018	180 3/4" Sq Tube Backing Block
15038	180 7/8" Sq Tube Backing Block
15058	180 1" Sq Tube Backing Block

Part No.	Part Description
4 Inch Radius	
	16 Gauge Minimum Wall
15136	180 4" Rad. Sq Tube Form Die & Dowel Pin
15137	180 1/2" Sq Tube Backing Block
15156	180 5/8" 5 Sq Tube Backing Block
15175	180 3/4" Sq Tube Backing Block
15194	180 7/8" Sq Tube Backing Block
15213	180 1" Sq Tube Backing Block

Part No.	Part Description
37894	Dowel Pin

Feed Along Crowned Radius Blocks for Forming Larger Radius Bends in Square Tube.
Select Back Block Set for Appropriate Tube Size when Ordering Crowned Radius Blocks.



14 Gauge Maximum Tube Wall Thickness for Bending with all Back Block Sets

Part No.	Part Description
Sets consists of a Draw Block and a Matching Backing Block	
	Square Tube Size
15370	Set 1/2" Back Blocks
15373	Set 9/16" Back Blocks
15376	Set 5/8" Back Blocks
15379	Set 11/16" Back Blocks
15382	Set 3/4" Back Blocks
15385	Set 13/16" Back Blocks
15388	Set 7/8" Back Blocks
15391	Set 15/16" Back Blocks
15394	Set 1" Back Blocks
	Inside Radius Dimension
	Dual Working Faces
15250	154 Rad. Block 8&11-1/2"
15252	154 Rad. Block 9&12"
15254	154 Rad. Block 10&15"
15258	154 Rad. Block 14&16"
15260	154 Rad. Block 18&20"
15266	154 Rad. Block 24&36"
15274	154 Rad. Block 30&33"
15284	154 Rad. Block 42&48"
15296	154 Rad. Block 54&55"
15302	154 Rad. Block 60&72"
15314	154 Rad. Block 84&96"
15326	154 Rad. Block 108&120"
15350	154 Rad. Block 149&150"

MODEL NO. 2 HOSSFELD UNIVERSAL® BENDER
EQUIPPED FOR
HYDRAULIC POWER OPERATION

The Model No. 2 Bender Equipped with the No. 49000 Hydraulic Attachment Is a Powerful Machine for Bending Larger Sizes of Pipe, Tubing, Angle, and Bar Stock. Substitute the No. 49270 "L" Type Swinging Frame for the Straight Swinging Frame and the Machine Will Complete 180 Degree Bends in Tube and Pipe by Simply Lifting a Pin and Shifting the Draw Block!

HOSSFELD MANUFACTURING CO.
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P.O. BOX 557
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