

Bending

Electro

ROBEND 4000

Portable, sturdy and powerful. The successor of the proven ROBEND 3000, now with a higher bending capacity. Cold bending up to 180°, Ø 12 - 35 mm (1/2 - 1.3/8").

Product profile

APPLICATION AREA

Universal application in sanitary and heating installations, in pipeline construction, refrigeration and air-conditioning systems as well as industrial systems and batch production. Fewer joints means less potential for leaks. Safety implies less likelihood of injury.

Suitable for pipes made of:

Copper (hard, semi-hard and soft DIN EN 1057, 12735-1, 13348): Ø 12 - 35 mm, (1/2-1.3/8")

Copper and precision steel (coated): Ø 12 - 28 mm, (1/2-1.1/8")

Precision steel (soft DIN 2391 / 2393 / 2394): Ø 12 - 28 mm, (1/2-1.1/8")

Threaded steel (DIN 2440 / 2441): Ø 1/2", 3/4"

Seamless stainless steel (GW 541): Ø 12 - 28 mm, (1/2-1.1/8")

KEY FEATURES

- Quick return on investment through the savings from joints, soldering material and energy
- Universal application: U-bends, counter-bends, swan-neck bends and connecting bends possible at all levels
- Retains shape and remains stable: bending formers made of high-quality forged aluminium
- Top-quality, precise and simple to use
- Bending without deformation or ripples due to less friction
- Motor rating: 1,010 W



Forged aluminium former with bending radius scale

Easy to use

Pre-adjustment of the bending angle without tools

Fast and precise bending

ROLUB special guide shoe

Bending without deformation or ripples due to less friction



High-performance 1,010 W motor

Ideal for continuous operation

Automatic switch-off when preset bending angle is obtained

Fast batch production possible

ROBEND 4000 with tripod stand

Bending technology

Simplified work preparation, eliminates costs of purchase and storage of fittings

Bending of pipes made of various materials possible



Seven-fold drive



Comfortable carry handle



Model	Description	Pipe type	kg	No.
ROBEND 4000 set	12 - 15 - 18 - 22 - 28 mm	Cu, Fe et al.	23.50	1000001549
ROBEND 4000 set	1/2 - 5/8 - 3/4 - 7/8 - 1.1/8 - 1.3/8"	Cu, Fe et al.	29.00	1000001565

ROBEND 3000/4000/4000 E Bending formers

For bending pipes Ø 12 - 35 mm (1/2 - 1.3/8")



Fig. ROBEND 3000/4000/4000 E bending set with ROLUB special guide shoe

For steel pipe DIN 2440 and DIN 2441 (except 3/4")

Size	Wall thickness mm	Bending radius mm	kg	No.
1/2"	3.25	88	1.42	25684
3/4"	3.25	112	2.90	25685

For copper pipe DIN EN 1057, 12735-1, 13348, aluminium pipe, precision steel pipe DIN 2391/93/94, stainless steel pipe and others

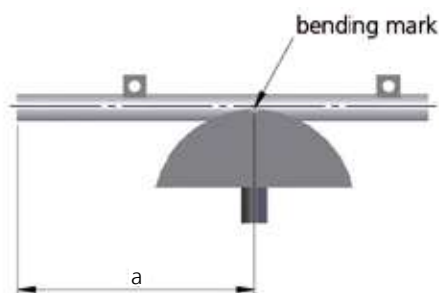
Size	Wall thickness mm	Bending radius mm	kg	No.
12 mm	1.0	42	0.48	25612
14 mm	1.0	49	0.48	25614
15 mm	1.0	52	0.53	25615
16 mm	1.0	56	0.60	25616
18 mm	1.0	72	1.17	25618
20 mm	1.0	80	1.42	25620
22 mm	1.2	88	1.42	25622
28 mm	2.0	112	2.90	25628
32 mm*	2.0	128	3.40	1000001561
35 mm*	2.0	140	3.60	1000001563

For imperial copper pipe DIN EN 1057, 12735-1, 13348 aluminium pipe, precision steel pipe DIN 2391/93/94, stainless steel pipe and others

Size	Wall thickness mm	Bending radius mm	kg	No.
1/2"	1.2	45	0.53	25652
5/8"	1.2	56	0.60	762955300
3/4"	1.2	80	1.42	25619
7/8"	1.2	88	1.42	762955700
1"	1.5	112	2.90	25625
1.1/8"	1.6	112	2.90	25626
1.1/4"*	2.0	128	3.40	1000001561
1.3/8"*	2.0	140	3.60	1000001563

*Bending former sets (No. 1000001561 / No. 1000001563) are only compatible with ROBEND 4000/ROBEND 4000 E. Only matching with optional plastic carrying case (No. 1000001564).

Push bending



Symbols

- L_1, L_2 = Leg length
- a = Lay out length
- L = Total length of the pipe piece
- L_W = Distance / pipe end - wall
- A_W = Distance / pipe middle - wall
- L_M = Minimum length*
- L_R = Reserve length*

45°- arc



$$L = L_1 + L_2$$

$$a = L_1 - L_R$$

90°- arc



$$L = L_1 + L_2 - L_M$$

$$a = L_1 - L_R$$

* All sizes listed are standards and are dependant on the material and the wall thickness. Bending specific sizes based on the bending radius - tabular value

Bending

Bending tables

Calculation examples TUBE BENDER MAXI

Specifications:

Installation in corner areas

$L_W = 1,200$ mm

$A_W = 30$ mm

Pipe-Ø 12 mm, 90°-arc

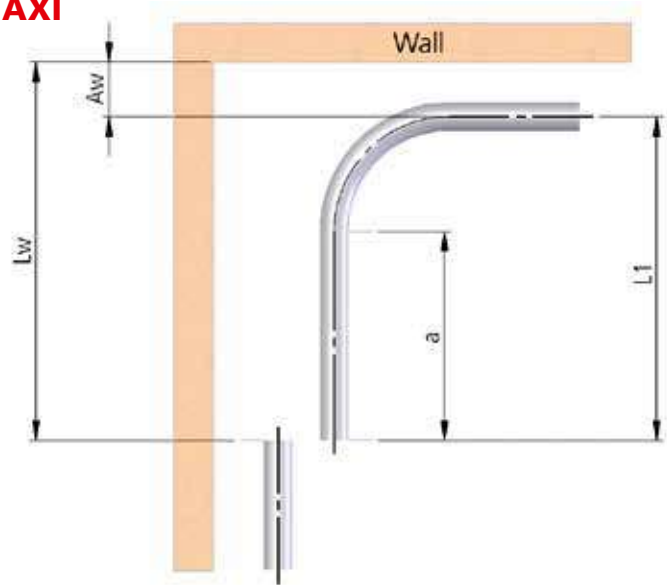
Sought after:

Leg length L_1

Applied size a

Solution:

Summary from the TUBE BENDER MAXI bending table



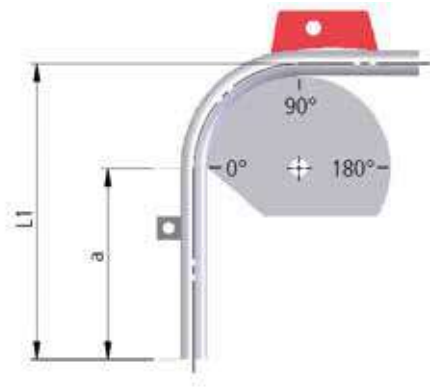
Leg length $L_1 = L_W - A_W = 1,200 - 30 = 1,170$ mm
 Applied size $a = L_1 - L_R = 1,170 - 7.5 = 1,162.5$ mm; L_R ... Tabular value

TUBE BENDER		at 45°		at 90°		at 180°	
for Ø mm / inch	Bending radius R (mm)	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm	Minimum length L_M mm
4.75/5	20.0	4.5	1.0	4.5	10.0	-	-
6	23.5	5.0	1.2	5.0	11.5	-	-
8	28.0	7.0	1.4	7.0	14.0	-	-
9	30.0	7.0	1.5	7.0	15.0	-	-
10	34.0	7.5	1.8	7.5	17.5	-	-
12	37.5	8.5	1.9	8.5	19.0	-	-
3/16"	20.0	4.5	1.0	4.5	10.0	-	-
1/4"	23.5	5.0	1.2	5.0	11.5	-	-
5/16"	28.0	7.0	1.4	7.0	14.0	-	-
3/8"	34.0	7.5	1.8	7.5	17.5	-	-
1/2"	37.5	8.5	1.9	8.5	19.0	-	-

TUBE BENDER MAXI		at 45°		at 90°		at 180°
for Ø mm / inch	Bending radius R (mm)	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm
12	35.0	0.8	10.0	7.5	35.0	-
14	42.5	0.9	12.5	9.0	42.5	-
15	48.5	1.1	14.0	10.5	48.5	-
16	49.0	1.1	14.5	10.5	49.0	-
18	74.0	1.7	22.0	16.0	74.0	-
22	87.0	1.9	25.5	18.5	87.0	-
3/8"	35.0	0.8	10.0	7.5	35.0	-
1/2"	35.0	0.8	10.0	7.5	35.0	-
5/8"	49.0	1.1	14.5	10.5	49.0	-
3/4"	74.0	1.7	22.0	16.0	74.0	-
7/8"	87.0	1.9	25.5	18.5	87.0	-

TUBE BENDER MAXI CT		at 45°		at 90°		at 180°
Tube Ø / Ws mm	Bending radius R (mm)	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm	Minimum length L_M mm	Reserve length L_R mm
10 x 0.6	42.5	0.8	12.5	9.0	42.5	-
12 x 0.6	49.0	1.1	14.5	10.5	49.0	-
15 x 0.7	74.0	1.7	22.0	16.0	74.0	-
18 x 0.7	87.0	1.9	25.5	18.5	87.0	-

Pull bending



Symbols

- L_1, L_2 = Leg length
- a = Lay out length
- L = Total length of the pipe piece
- L_w = Distance / pipe end - wall
- A_w = Distance / pipe middle - wall
- L_m = Minimum length*
- L_r = Reserve length*

45°- arc



$$L = L_1 + L_2$$

$$a = L_1 - L^R$$

90°- arc



$$L = L_1 + L_2 - L_m$$

$$a = L_1 - L_r$$

180°- arc



$$L = L_1 + L_2 + L_m$$

$$a = L_1 - L_r$$

Calculation examples ROBEND 3000/ROBEND 4000/ ROBEND 4000 E

Specifications:

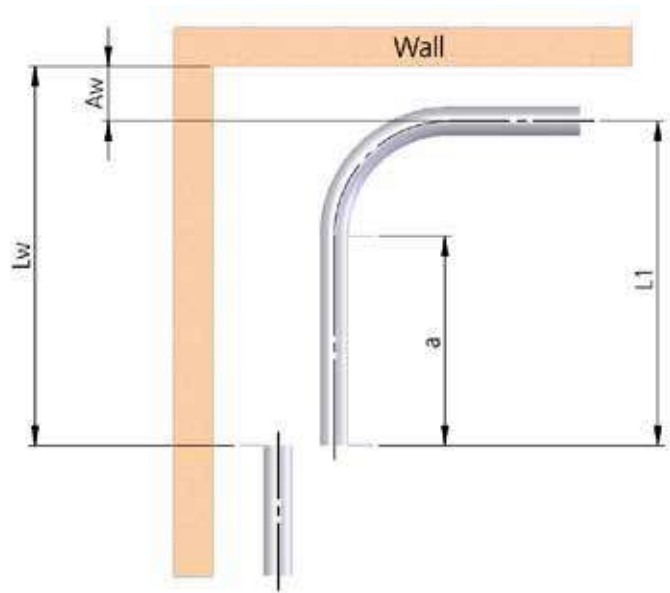
- Installation in corner areas
- $L_w = 1,200$ mm
- $A_w = 30$ mm
- Pipe-Ø 12 mm, 90°-arc

Sought after:

- Leg length L_1
- Applied size a

Solution:

Summary from the ROBEND 3000/4000/4000 E bending table



Leg length
Applied size

$$L_1 = L_w - A_w = 1,200 - 30 = 1,170 \text{ mm}$$

$$a = L_1 - L_r = 1,170 - 42 = 1,128 \text{ mm; } L_r \dots \text{ Tabular value}$$

Bending

Bending tables

ROBEND H+W Plus		at 45°		at 90°		at 180°	
Ø / Ws mm / Inch	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
8	22	9	-	22	9.5	22	47
10	32	12	-	32	15.0	32	34
12	38	15	-	40	20.0	38	39
14	45	17	-	44	22.0	44	51
15	45	17	-	44	22.0	44	51
16	64	25	-	67	30.0	68	65
18	64	25	-	67	30.0	68	65
20	81	30	-	85	40.0	86	83
22	81	30	-	85	40.0	86	83
5/16"	22	9	-	22	9.5	22	47
3/8"	32	12	-	32	20.0	32	34
1/2"	38	15	-	40	22.0	38	39
5/8"	64	25	-	67	30.0	68	65
3/4"	81	30	-	85	40.0	86	83
7/8"	81	30	-	85	40.0	86	83

MINIBEND		at 45°		at 90°		at 180°	
Ø / Ws mm / Inch	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
6	25.0	10.4	1.0	22.0	10.0	22.0	26.0
8	24.0	9.9	1.0	32.0	15.0	32.0	34.0
10	23.0	9.5	1.0	32.0	15.0	32.0	34.0
1/4"	25.0	10.4	1.0	22.0	10.0	22.0	26.0
5/16"	24.0	9.9	1.0	32.0	15.0	32.0	34.0
3/8"	23.0	9.5	1.0	32.0	15.0	32.0	34.0

Standard bender 180°		at 45°		at 90°		at 180°	
for Ø mm / Inch	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
6	18.0	7.0	0.8	18.5	8.0	18.5	20.0
10	30.0	11.5	1.3	30.5	14.5	30.5	34.0
12	36.0	14.0	1.5	36.5	15.0	36.5	37.5
14	47.5	18.5	2.0	48.5	20.5	48.5	52.5
15	54.0	21.0	2.3	56.0	24.5	56.0	58.0
16	58.0	22.5	2.5	64.0	28.5	64.0	67.0
18	66.0	25.5	2.8	68.0	31.0	68.0	72.0
1/4"	18.0	7.0	0.8	18.5	8.0	18.5	20.0
5/16"	24.0	9.5	1.0	24.0	12.0	24.0	27.0
1/2"	42.0	16.5	1.8	49.5	22.5	49.5	53.0
5/8"	58.0	22.5	2.5	64.0	28.5	64.0	67.0

Bending

Bending tables

MULTIBEND		at 45°		at 90°		at 180°	
for Ø mm	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
8	24.0	9.5	1.0	24.0	10.0	24.0	26.0
10	30.0	12.0	1.3	30.5	14.5	30.5	32.5
12	36.0	14.0	1.5	36.5	15.5	36.5	37.5
14	42.0	16.5	1.8	42.0	19.5	42.5	44.0
15	48.0	19.0	2.0	48.0	22.0	48.0	53.0
16	48.0	19.0	2.0	48.0	22.0	48.0	53.0
18	54.0	21.0	2.3	54.0	26.0	54.5	58.0

ROBEND 3000/4000/4000 E			at 45°		at 90°		at 180°	
for Ø mm / Inch	Pipe	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
12		42.0	16	-	42	24	42	68
14	wated	52.5	21	-	53	30	53	87
15		52.5	21	-	53	30	53	87
17	wated	72.0	28	-	72	41	72	107
18		72.0	28	-	72	41	72	107
20	wated	88.5	35	-	89	51	89	121
22		88.0	35	-	88	50	88	119
24	wated	112.0	43	-	110	62	110	144
28		112.0	44	-	112	64	112	148
30	wated	112.0	45	-	114	66	114	152
32 / 1.1/4"		128.0	52	-	140	70	135	140
35 / 1.3/8"		140.0	55	-	150	80	145	150
3/8"	steel	12.0	31	-	80	46	80	103
1/2"	copper	45.0	18	-	45	26	45	74
1/2"	steel	88.0	35	-	88	50	88	119
5/8"	copper	56.0	23	-	56	32	56	93
3/4"	steel	112.0	43	-	112	64	112	148
3/4"	copper	80.0	31	-	80	46	80	103
7/8"	copper	88.0	35	-	88	50	88	119
1"	copper	112.0	44	-	112	64	112	148
1.1/8"	copper	112.0	45	-	114	66	114	152