

Fitting Tools



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ROCAM® EXPANDER Power Torque

For expanding, reducing and calibrating pipes
Ø 8 - 42 mm (5/16 - 1.3/4")



Product Profile

APPLICATION AREA

For efficient, fitting-free installation of pipes in sanitary heating, gas, refrigeration and air-conditioning systems

KEY FEATURES

- Eliminates the cost of purchase and storage of fittings
- Increased safety by reducing the number of joints
- Converts deformed pipes into fittings; saves resources
- ① 50% reduction of labour, soldering materials, joints and energy
- ② Protects against dirt with EPT®-Technology
- ③ Reliable pipe connection according to DVGW standards
- ④ Tough, light and wear-resistant
- ⑤ Automatic pin guide retraction enables faster operation
- ⑥ Fine adjustment of the capillary gap

TECHNICAL DATA

Suitable for pipes made of:

Copper (soft and semi-hard):

Ø 8 - 42 mm, 5/16 - 1.3/4"
max. wall thickness 1.6 mm

Aluminium (soft):

Ø 8 - 28 mm, 5/16 - 1.1/8"
max. wall thickness 1.6 mm

Precision steel (soft):

Ø 8 - 28 mm, 5/16 - 1.1/8"
max. wall thickness 1.6 mm

Stainless steel (soft):

Ø 8 - 22 mm, 5/16 - 7/8"
max. wall thickness 1.0 mm





ROCAM® EXPANDER Power Torque Sets

ROCAM® EXPANDER Power Torque sets include: ROCAM® EXPANDER Power Torque (No. 1.2000), with expander heads, internal and external deburrer (No. 1.1006), in a steel carrying case (No. 2.4022)



Fig. ROCAM® EXPANDER Power Torque Set

ROCAM® Power Torque Sets

Model			kg	No.
12 - 15 - 18 - 22 mm	1	5	2.9	1.2300
10 - 12 - 15 - 18 - 22 mm	1	5	3.3	1.2302
12 - 15 - 18 - 22 - 28 mm	1	5	3.3	1.2303
10 - 12 - 16 - 18 - 22 mm	1	5	3.3	1.2304
12 - 14 - 16 - 18 - 22 mm	1	5	3.3	1.2309
12 - 14 - 16 - 18 - 22 - 28 mm	1	5	3.3	1.2310
12 - 16 - 18 - 22 - 28 mm	1	5	3.2	1.2322
10 - 12 - 14 - 16 - 18 - 22 mm	1	5	3.6	1.2311
12 - 15 - 18 - 22 - 28 - 35 - 42 mm	1	5	4.2	1.2326
3/8 - 1/2 - 5/8 - 3/4 - 1 - 1.1/8"	1	5	3.7	1.2342
3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1.1/8"	1	5	3.6	1.2318
10 - 12 - 16 - 22 - 28 mm	1	5	3.3	1.2305
15 - 22 - 28 mm	1	5	2.9	1.2327
15 - 22 mm	1	5	2.5	1.2328
15 - 18 - 22 - 28 - 35 - 42 mm	1	5	4.0	1.2339
1/2 - 5/8 - 3/4 - 7/8"	1	5	2.9	1.2321
1/2 - 5/8 - 7/8 - 1.1/8"	1	5	3.0	1.2324
1/2 - 3/4 - 1"	1	5	2.9	1.2335
3/8 - 1/2 - 5/8 - 3/4 - 1"	1	5	3.3	1.2317

ROCAM® Power Torque Sets

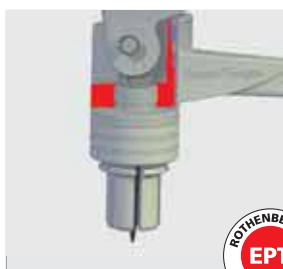
			kg	No.
10 - 12 - 15 - 16 - 18 - 22 - 28 mm	1	5	3.4	1.2337
3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1 - 1.1/8"	1	5	3.7	1.2336
12 - 15 - 22 - 28 mm	1	5	3.0	1.2329
3/8 - 1/2 - 5/8 - 3/4" - 22 - 28 mm	1	5	3.6	1.2320
3/8 - 1/2 - 5/8 - 3/4 - 7/8 - 1.1/8 - 1.3/8"	1	5	4.5	1.2341
Expander tool (without expander heads)	1	5	1.0	1.2000
for expander heads up to 42 mm / 1.3/4"				

ACCESSORIES



Description		Description	
Expander heads standard	12	Expander adaptor type S	14
Type S / riveted expander heads	14	Brazing solder	209
Pipe cutter	114	High-Performance torch	184
Internal / external deburrer	121		

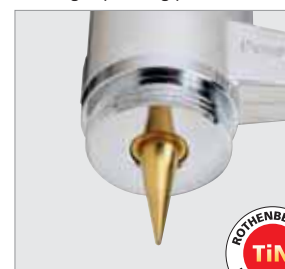
EPT®-Technologie – concealed bent lever



For efficient, fitting-free installation of pipes



Quality protection against wear with the **TiN** sealed pin drive
Lifelong expanding precision



EPT®-Technologie (Enclosed Power Transmission)

The expander head offers the following technical benefits:

Concealed bent lever:

Protection against dirt and external mechanical damage

Energy efficient through optimised force transmission:

Ergonomic, highly optimised force flow in relation to the hand force of the user, therefore reducing effort



The golden **Titanium Nitride coating (TiN)**

of the expander cone offers the following technical benefits:

High durability 2300 HV: Protection against abrasive wear

Lower friction value compared to steel: Less effort

Good chemical resistance:

Good protection against corrosion

Universal wear resistance: Long-lasting





Standard Expander Head

For producing standard precision flares Ø 8 - 42 mm (5/16 - 1.3/4") according to DVGW standards; as well as meet the specifications for the Gas de France

The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 40 years

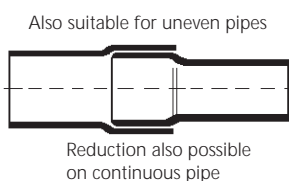
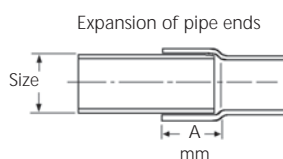
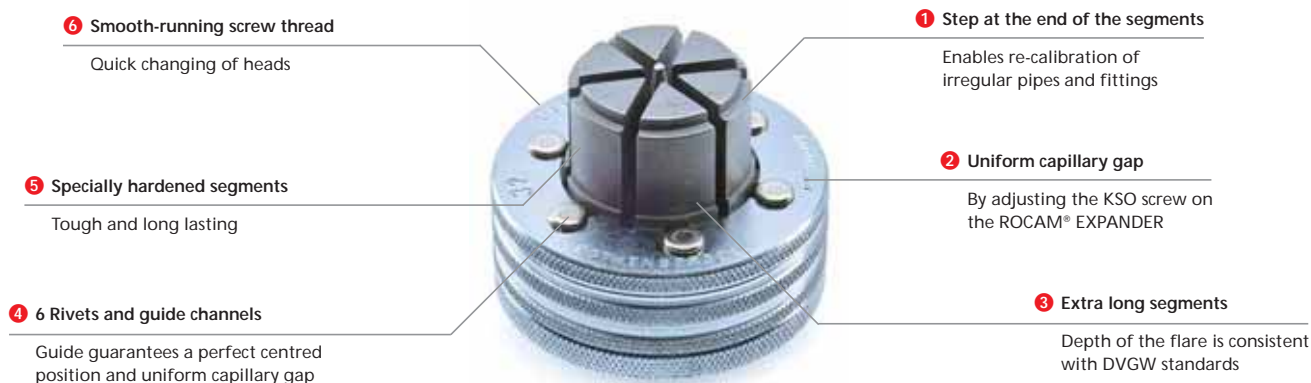
Product Profile

KEY FEATURES

- 50% reduction in labour, soldering materials and soldered joints
- ① Enables re-calibration of irregular pipes and fittings
- ② Uniform capillary gap by adjusting the KSO screw on the ROCAM® EXPANDER
- ③ Depth of the flare is consistent with DVGW standards

KEY FEATURES

- ④ Guide guarantees a perfect centred position and uniform capillary gap
- ⑤ Tough and long lasting with the hardened segments
- ⑥ Smooth-running screw thread enables quick changing of heads
- Fits similar expanders from other brands as well



Fits similar expanders from other brands as well

mm	Wall thickness mm				A mm	g	No.
	Cu	Al	Fe	Inox			
8	1.0	1.0	1.0	1.0	6.0	120	1.1008
10	1.0	1.0	1.0	1.0	10.0	120	1.1010
12	1.2	1.2	1.2	1.0	12.6	120	1.1012
14	1.2	1.2	1.2	1.0	12.6	120	1.1014
15	1.2	1.2	1.2	1.0	15.5	120	1.1015
16	1.2	1.2	1.2	1.0	15.5	120	1.1016
18	1.2	1.2	1.2	1.0	17.5	120	1.1018
20	1.2	1.2	1.2	1.0	17.5	140	1.1020
22	1.2	1.5	1.5	1.0	20.5	140	1.1022
28	1.5	1.5	1.5	–	18.5	390	1.1028
32	1.5	–	–	–	19.5	410	1.1032
35	1.6	–	–	–	19.5	430	1.1035
38	1.6	–	–	–	19.5	450	1.1038
40	1.5	–	–	–	19.5	470	1.1040
42	1.5	–	–	–	19.5	470	1.1042

Inch	Wall thickness max. mm				A mm	g	No.
	Cu	Al	Fe	Inox			
5/16"	1.0	1.0	1.0	1.0	6.0	120	1.1008
3/8"	1.0	1.0	1.0	1.0	7.4	120	1.1052
1/2"	1.2	1.2	1.2	1.0	11.0	120	1.1053
5/8"	1.2	1.2	1.2	1.0	14.0	120	1.1054
3/4"	1.2	1.2	1.2	1.0	18.1	120	1.1055
7/8"	1.2	1.2	1.2	1.0	18.0	140	1.1056
1"	1.5	1.5	1.5	–	15.8	150	1.1057
1.1/8"	1.6	1.6	1.6	–	17.0	390	1.1058
1.1/4"	1.6	–	–	–	17.0	410	1.1059
1.3/8"	1.6	–	–	–	17.0	430	1.1035
1.1/2"	1.6	–	–	–	17.0	450	1.1038
1.5/8"	1.6	–	–	–	17.5	470	1.1062
1.3/4"	1.6	–	–	–	17.5	500	1.1063

Suitable for ROTHENBERGER Expander



Description



Description



ROCAM® EXPANDER Power Torque

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ROMAX® EXPANDER AC ECO

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ROMAX® EXPANDER Compact

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Electro-Hydraulic Expander Pistol H 1

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Electro-Hydraulic Expander Pistol H 2

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COMBI KIT Expander / Tee-extractor

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EXPANDER A0

For expanding, reducing and calibrating thick walled pipes Ø 22 - 64 mm (1.3/8 - 2.1/8")

For efficient, fitting-free installation of pipes in sanitary heating, gas, refrigeration and air-conditioning systems

- Application and savings advantages similar to ROCAM® EXPANDER power torque
- Increased safety by reducing the number of joints
- ① Precise and exact flaring
- ② Full bearing of the expander head segments allows heavy loads
- ③ Reduces effort required with special fine screw thread

Functional Elements:

Expander A0 with a tightly guided and reinforced, long expander head, matches to the expander head Type S

- ④ Continuous adjustment of the socket size and capillary gap
- ⑤ Optimized action principle with long handles

TECHNICAL DATA

Suitable for pipes made of:

Copper and Aluminium:
(soft, semi-hard)

Ø 22 - 64 mm, 7/8 - 2.1/2"
max. wall thickness 2.5 mm

**Precision steel (soft):
and Stainless steel per
DVGW-GW541**

Ø 22 - 54 mm, 7/8 - 2.1/8"
max. wall thickness 1.5 mm

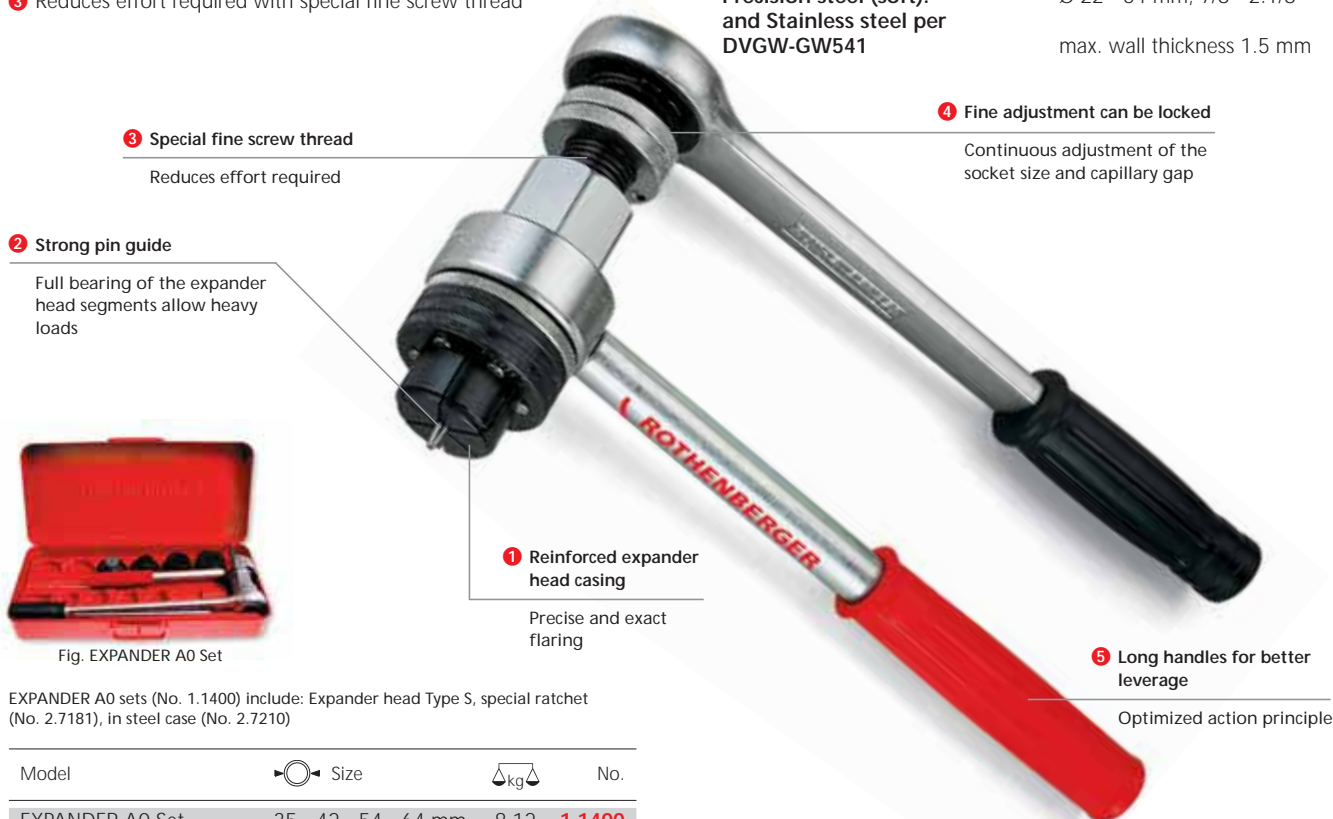


Fig. EXPANDER A0 Set

EXPANDER A0 sets (No. 1.1400) include: Expander head Type S, special ratchet (No. 2.7181), in steel case (No. 2.7210)

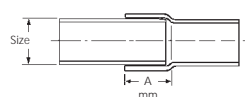
Model	Size	kg	No.
EXPANDER A0 Set	35 - 42 - 54 - 64 mm	8.12	1.1400
EXPANDER A0 Set	1.3/8 - 1.5/8 - 2.1/8"	7.48	1.1401
EXPANDER A0 basic unit		1.97	1.1004

EXPANDER A0 Basic Unit (No. 1.1004) scope of delivery: Square drive mechanism 3/4" with handle, without expander head and ratchet

Expander Head Type S

For the precise expansion of normal and thick walled pipes Ø 22 - 67 mm (1 - 2.1/2") and 2.5 mm wall thickness

mm	max. wall thickness mm				A - size mm	g	No.
	Cu	Al	Fe	Inox			
22	2	2	1.5	1.5	18.5	350	1.1323
25	2	2	1.5	1.5	18.5	350	1.1325
28	2	2	1.5	1.5	19.5	360	1.1328
30	2	2	1.5	1.5	19.5	370	1.1330
32	2	2	1.5	1.5	19.5	380	1.1332
35	2	2	1.5	1.5	19.5	400	1.1335
36	2	2	1.5	1.5	19.5	400	1.1336
38	2	2	1.5	1.5	19.5	430	1.1338
40	2	2	1.5	1.5	19.5	430	1.1340
42	2	2	1.5	1.5	19.5	450	1.1342
52	2.5	2.5	1.5	1.5	19.5	540	1.1345
54	2.5	2.5	1.5	1.5	19.5	570	1.1346
64	2.5	2.5	-	-	19.5	690	1.1348
67	2.5	2.5	-	-	19.5	730	1.1380



Accurate guidance of the segments through the reinforced expander head casing

inch	max. Wall thickness mm				A - size mm	g	No.
	Cu	Al	Fe	Inox			
1"	2	2	1.5	1.5	18.5	350	1.1376
1.1/8"	2	2	1.5	1.5	19.5	360	1.1358
1.1/4"	2	2	1.5	1.5	19.5	380	1.1332
1.3/8"	2	2	1.5	1.5	19.5	400	1.1335
1.1/2"	2	2	1.5	1.5	19.5	430	1.1338
1.5/8"	2	2	1.5	1.5	19.5	450	1.1362
2"	2	2	1.5	1.5	17.0	540	1.1364
2.1/8"	2.5	2.5	1.5	1.5	17.0	570	1.1346
2.1/2"	2.5	2.5	-	-	17.0	690	1.1348

Availability, delivery time and price of custom products for other pipe diameters available on request

Expander






Expander Adaptor Type S

To increase the application area of the ROCAM® EXPANDER Power Torque and Expander Pistol H1



Allows the use of the expander heads Type S with copper pipe (soft) up to 67 mm and/or 2.1/2"

Model	 max.	 max. mm	 g	No.
Adaptor Type S, without expander head	67 mm - 2.1/2"	2.0	630	1.1007




Flanged Riveted Expander Heads

For use with the ROCAM® EXPANDER, A0 and Hydraulic expander



For producing exact hose connections, for example vibrating power units in

- Air-conditioning technology
- Auto manufacturing
- Industrial applications

 mm	 mm	outer dia. Flange mm	Flange Distance / pipe end mm	 g	No.
15	1.5	18	4	110	1.1955
18	1.5	21	4	110	1.1958
22	1.5	25	6	120	1.1962
28	1.5	31	6	370	1.1968
35	1.5	38	6	400	1.1975
38	1.5	41	6	430	1.1978

Availability, delivery time and price of custom products for other pipe diameters available on request

STEP Expander A1

For expanding, reducing and calibrating thick walled pipes, Ø 35 – 108 mm (1.3/8 - 4.1/8")



Special ratchet
(No. 2.2081)

Product Profile

APPLICATION AREA

For efficient, fitting-free installation of pipes in sanitary heating, gas, refrigeration and air-conditioning systems

KEY FEATURES



- Affordable alternative when laying larger pipe dimensions with a considerable saving of soldering materials
- Expand without changing tools with the 6 size step Expander
- Full bearing of the expander head segments allows heavy loads
- Optimum adjustment of the socket size and capillary gap with the positive fine adjustment
- Optimised force transmission with the trapezoidal screw thread with self-lubricating bronze socket
- Guide guarantees a perfect centred position and uniform capillary gap with 6 rivets and guiding ridge

TECHNICAL DATA

Suitable for pipes made of:

Copper and aluminium: Ø 35 - 108 mm, 1.3/8 - 4.1/8"
(soft) max. wall thickness 2.5 mm

Scope of delivery: Step Expander with handle, without special ratchet

 Size	 kg	No.
35 - 42 - 54 - 64 - 76 - 108 mm	3.9	1.1087
35 - 42 - 54 - 67 - 80 - 104 mm	3.9	1.1089
35 - 42 - 54 - 70 - 88 - 108 mm	4.1	1.1088
42 - 54 - 64 - 76.1 - 88.9 - 108 mm	4.2	1.1086
1.3/8 - 1.5/8 - 2.1/8 - 2.5/8 - 3.1/8 - 4.1/8"	4.2	1.1078
1.1/4" - 4"	4.2	1.1093

Availability, delivery time and price of custom products for other pipe diameters available on request



ROMAX® EXPANDER AC ECO

Electro-hydraulic expander with a constant axial thrust of 32 kN, 230 Volt connection. For expanding, reducing and calibrating of pipes up to Ø 67 mm (2.1/2")



Product Profile

KEY FEATURES

- Ideal for batch production and suitable on large construction sites
- 1 Constant axial thrust with CFT®-Technology
- 2 Matching pin for each type of Expander head
- 3 Increased operating life of the Expander head
- 4 Long life and high functional safety
- 5 User safety with the emergency stop switch
- Precise adjustment of the capillary gap
- After pressing and holding the hold-to-run controller, expanding and calibration takes place
- Compatible with other ROTHENBERGER Expander heads
- Optimal operating range with the long 5 m cable length

TECHNICAL DATA

Suitable for pipes made of:

Copper (soft and semi-hard):

max. Ø 67 mm, 2.1/2"

Aluminium,

Precision steel (soft):

max. wall thickness 2 mm

Stainless steel:

max. Ø 15 mm

max. wall thickness 1 mm

Weight:

approx. 4.5 kg

Motor:

230 V / 50 Hz

1 CFT®-Technology for a constant axial thrust of 32 kN

Expansion with high power reserves up to Ø 67 mm (Copper) and/or Ø 15 mm (Stainless steel)



5 Emergency stop switch

High user safety with the immediate halt of the feeder

2 Matching pin for each type of expander head

Specially matched for the Expander heads Type Standard, Type S or PE-X for excellent expansion results

3 Internal piston block

Increases the operating life of the flaring head. Only the actual power needed is conveyed to the expander head

2 switches within easy reach

Various handling positions possible, also for use in confined spaces and over head

Balanced weight distribution

Safe handling in every position, ideal for one-handed operation and reduces the expander head load

Aluminium and precision steel (soft) up to a max. 2 mm wall thickness

5 m cable length

4 Powerful and robust motor

Long life and high operational reliability



Basic sets include:
ROMAX® EXPANDER AC ECO,
Plastic case (No. F81664),
(without Expander heads)

Model	kg	No.	
ROMAX® EXPANDER AC ECO Basic Set for Standard Expander Heads	14.7	1	1.5717
ROMAX® EXPANDER AC ECO Basic Set for Type S Expander Heads	14.7	1	1.5718
ROMAX® EXPANDER AC ECO Basic Set for Type PE-X Expander Heads	14.7	1	1.5719

Expander Heads / PE-X Expander Heads see 12 and 71

ROMAX® EXPANDER AC ECO MAXI

For copper and aluminium pipe (soft and / or relaxed) from 35 up to 108 mm

Metric: 42-54-64-76.1-88, 9-108 mm

Inch: 1.3/8-1.5/8-2.1/8-2.5/8-3.1/8-4.1/8"



Article available on request*

*Availability, delivery and price of custom products for other pipe diameters available on request

1 Hydraulic Expander



ROMAX® EXPANDER Compact

Compact, electro-hydraulic expander with a constant axial thrust of 19 kN and 12 Volt Battery for portable operation, for expanding, reducing and calibrating of pipes up to Ø 67 mm (2.1/2")



Product Profile

KEY FEATURES

- 1 Portable operation with the battery and AC adaptor (accessories)
- 2 Extremely light (approx. 2.2 kg), ideal for one-handed operation
- 3 Increases the operating life of the expander head
- 4 Constant axial thrust with CFT®-Technology
- 5 Accurate adjustment of the capillary gap
- 6 Specially matched for expander heads Type Standard, Type S or PE-X for excellent expansion results
- 7 User safety with the easy to reach emergency switch
- Security - inhibits start when battery charge condition is low
- Reliable hold in any position

TECHNICAL DATA

Suitable for pipes made of:

Copper, aluminium (soft): max. Ø 67 mm and/or 2.1/2" max. wall thickness 2 mm

Aluminium and Precision steel (soft): max. Ø 67 mm bzw. 2.1/2" max. wall thickness 1 mm

Stainless steel: max. Ø 15 mm max. wall thickness 1 mm

Dimensions: only 345 x 70 x 90 mm

Weight: approx. 2.56 kg

Battery: 12 V / 1.9 Ah (NiMH)



4 CFT®-Technology for a constant axial thrust of 19 kN

Expansion up to Ø 67 mm (Copper) and Ø 15 mm (Stainless steel)

3 Internal piston block

Increases the operating life of the expander head, only the actual power needed is conveyed to the expander head

2 Component Structure

Extremely light (2.56 kg)

Aluminium and precision steel (soft)
up to max. 1 mm wall thickness

5 Tool free KSO adjustment possible

Accurate adjustment of the capillary gap

6 Matched pin for each type of expander head

Specially matched for the Expander heads Type Standard, Type S or PE-X for excellent expansion results

Balanced weight distribution

Reliable hold in any position, ideal for one-handed operation

7 Emergency stop switch

High user safety with the immediate halt of the feed and reduction of the expander head load

1 Battery operation

Portable operation with battery and AC adaptor (accessories)

High savings potential

- Efficient, fitting-free installation of pipes in sanitary, heating, gas, refrigeration and air-conditioning systems
- Eliminates the cost of purchase and storage of fittings
- 50% reduction in labour
- 50% reduction of soldering materials and energy
- No additional costs for special expander heads

All-round application

- Expander head receiver is compatible with ROTHENBERGER expander heads
- Choice between the expander head standard, Type S or PE-X



ROMAX® EXPANDER Compact Basic Sets

5-part Basic Set I includes: ROMAX® EXPANDER Compact, 2 batteries 12 V / 1.9 Ah (No. 1.5019), quick-charger (No. 1.5017), in plastic carrying case (without expander heads)

3-part Basic Set II includes: ROMAX® EXPANDER Compact Basic Unit, power supply 230 V (No. 1.5037), in plastic carrying case, (without expander heads)

Battery version: 2 batteries are included in set! DUAL-POWER 12 or 230 Volt



5 m cable length

Large working radius

Fig. Power supply unit 230 V (accessory) with 5 m long cable (No. 1.5037)



Fig. ROMAX® EXPANDER Set Basic

Model	Version		No.
ROMAX® Expander Compact Basic Set I	for Expander Heads Standard	1	1.5714
ROMAX® Expander Compact Basic Set II	for Expander Heads Standard	1	1.5714R
ROMAX® Expander Compact Basic Set I	for Expander Heads Type S	1	1.5715
ROMAX® Expander Compact Basic Set II	for Expander Heads Type S	1	1.5715R
ROMAX® Expander Compact Basic Set I	for Expander Heads Type PE-X	1	1.5716
ROMAX® Expander Compact Basic Set II	for Expander Heads Type PE-X	1	1.5716R
Expander Heads / PE-X Expander Heads see 12 and 71			

ACCESSORIES



Description	No.	Description	No.
Power supply, 230 V	1.5037	Internal / external deburrer	121
Charger, 12 V / 230 V	1.5017	High-Performance Torches	184
Replacement battery, 12 V / 1.9 Ah (NiMh)	1.5019	Brazing Solder	209
Pipe Cutter	114	Plastic case with formed inlay 1	1.5016

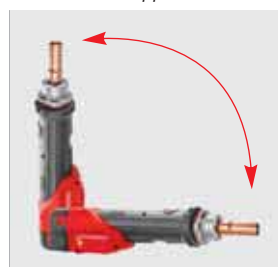
Universal adaptor for
ROTHENBERGER Expander Heads



Compatible with ROTHENBERGER
Expander Heads



Workbench function with the
stable surface support



Emergency stop switch



1 Hydraulic Expander



Hydraulic Expander System H 600

For expanding, reducing and calibrating normal and thick walled pipes in batch production



Product Profile	
KEY FEATURES	
1	Individual modular design
2	Industrial quality expansions
3	Proper and efficient handling of material
TECHNICAL DATA	
Suitable for normal and thick walled pipes made of:	
Copper and aluminium:	Ø 8 - 110 mm, 5/16 - 4.1/4" max. wall thickness 3.0 mm
Precision and stainless steel:	Ø 8 - 110 mm, 5/16 - 4.1/4" max. wall thickness 3.0 mm
TECHNICAL DATA	
Rated power:	1.2 kW
Rated current:	2.1 A
Operating pressure:	80 - 600 bar
Max. operating pressure:	700 bar
Delivery capacity:	0.82 l / min
Duty factor:	100% / 80 bar
Safety category:	IP 54
Actuation:	400 V / 1200 W

On-off switch with control light

Allows set-up and auto-mode

1 Connections for safety foot pedal, control wires for the expander pistol H 1 and/or H 2, quick coupling for hydraulic hose

Individual modular design

2 Fine adjustment of the tube socket size

Industrial quality expansions

3 Continuous, accurate and adjustable operating power with set-up and auto-mode

Allows proper, efficient handling of material

Powerful 400 V / 1200 W drive

Quick expansion of large, thick-walled pipes

Suitable for all types of expander heads

Multi-functional

Set No.1.3100 includes: Electro-Hydraulic Expander System H 600 complete with hydraulic unit H 600 (No. 1.3002), expander pistol H 1 (No. 1.2001), control cable, hydraulic hose 2.5 m with circuit points, adjusting tool, tool rack (No. 1.3023), safety foot pedal and hydraulic oil 1 l (No. 5.8185). Without expander heads.
Set No. 1.3002 includes: Electro-hydraulic unit H 600 with safety foot pedal, adjusting tool, tool rack (No. 1.3023) and hydraulic oil 1 l (No. 5.8185) without expander heads.

Model	kg	No.
Hydraulic System complete, without heads	36.0	1.3100
Hydraulic Tool H 600	33.1	1.3002

Electro-Hydraulic Expander Pistol H 1

For use with:

Expander heads Standard:	Ø 8 - 42 mm, 5/16 - 1.3/4" up to 1.6 mm wall thickness
Expander heads Type S: (with adaptor No. 1.1007)	Ø 22 - 67 mm, 7/8 - 2.1/2" up to 2.5 mm wall thickness

Scope of delivery: 2.5 m control cable (No. F88928), hydraulic hose (No. 1.2023), adjusting tool (No. 1.2017), hydraulic oil 1 l (No. 5.8185)

Model	kg	No.
Electro-Hydraulic Expander Pistol H 1	2.9	1.2001
ACCESSORIES		
S-Head adaptor for H 1	0.6	1.1007



Electro-Hydraulic Expander Pistol H 2

For use with Electro-Hydraulic Unit H 600, comes with:

Expander heads Type S: with adaptor (No. 1.2097)	Ø 22 - 67 mm, 7/8 - 2.1/2" up to 2.5 mm wall thickness
Expander heads H 2: Ø Type 2	Ø 28 - 70 mm, 1.1/8 - 2.3/4" up to 2.5 mm wall thickness
Expander heads H 2: Type 3	Ø 70 - 110 mm, 2.3/4 - 4.1/4" up to 3.0 mm wall thickness
Graduated Expander heads: HA 2	Ø 28 - 110 mm, 1.1/8 - 4.1/4" up to 3.0 mm wall thickness

Scope of delivery: Electro-Hydraulic Expander Pistol, 2.5 m control cable, hydraulic hose with quick coupling for H 600 and adjusting tool (without expander heads)

Model	kg	No.
Electro-Hydraulic Expander Pistol	7.5	1.2002
Electro-Hydraulic Expander Pistol HA 2	7.5	1.2003
S-head adaptor for H 2	1.1	1.2097



Riveted Expander Heads H 2

Only one head necessary for every pipe diameter.

Please state the applicable dimensions when ordering!

Graduated Expander Heads HA 2

With 6 aluminium graduated segments.

Please state the applicable pipe dimensions for each of the 6 steps when ordering!

Model	for pipe-Ø mm	max. mm	No.
H 2 / Type 2	28 - 70	2.5	1.2078
H 2 / Type 3	70 - 110	3.0	1.2080
HA 2	28 - 110	3.0	1.2070

Only suitable for copper and aluminium pipes



*Custom-made products:
Availability, delivery time and price available on request



Tee-Extractor

For efficient production of T-branches (extractions) for fitting-free pipe installations, Ø 12 - 42 mm (3/8 - 2.1/8")



Product Profile

KEY FEATURES

- Eliminates the cost for T-pieces, purchase and storage of fittings
- ① Up to 67% reduction in labour
- ① Up to 67% reduction in soldering materials and soldered joints
- ② Extractions even on installed pipes possible
- ③ Accurate drilling
- ④ Professional extractions with the optimum capillary gap
- ⑤ Optimal positioning with the cam pincher depth adjustment
- ⑥ Special screw thread reduces effort required

TECHNICAL DATA

Suitable for pipes made of:

Copper (soft, semi-, hard):

12 - 42 mm, 3/8 - 2.1/8"
max. wall thickness 2.5 mm

Aluminium:

12 - 42 mm, 3/8 - 2.1/8"
max. wall thickness 2.5 mm

Precision steel:

12 - 42 mm, 3/8 - 2.1/8"
max. wall thickness 2.5 mm



Tee-Extractor Sets

Sets include: Tee-Extractor according to chart, special ratchet (No. 2.2081), cam pincer (No. 2.2080) and special conical drill UNIDRILL Automatic 42 (No. 2.1575), in steel case (No. 2.4022)

The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 40 years

Double V-block

Accurate and firm positioning for exact 90° branches



Special hook design

Easy insertion into the drilled hole



Fig. Tee-Extractor Set

Model	Description	kg		No.
Tee-Extractor Set	12-15-18-22-28-35-42 mm	5.50	1 3	2.2126
Tee-Extractor Set	10-12-1-16-18-22 mm	3.78	1 5	2.2111
Tee-Extractor Set	10-12-15-18-22 mm	3.50	1 5	2.2102
Tee-Extractor Set	12-14-16-18-22 mm	3.65	1 5	2.2109
Tee-Extractor Set	12-15-18-22 mm	3.43	1 5	2.2100
Tee-Extractor Set	12-15-18-22-28 mm	3.90	1 5	2.2103

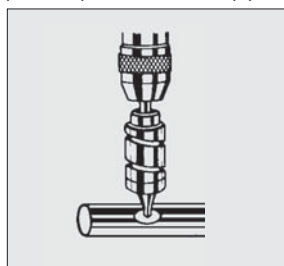
Model	Description	kg		No.
Tee-Extractor Set	12-15-22-28 mm	3.68	1 5	2.2101
Tee-Extractor Set	15-22-28 mm	3.65	1 5	2.2127
Tee-Extractor Set	1/2-5/8-3/4-7/8"	3.48	1 5	2.2121
Tee-Extractor Set	1/2-5/8-7/8-1.1/8"	3.74	1 5	2.2124
Tee-Extractor Set	1/2-3/4-1"	3.34	1 5	2.2135

ACCESSORIES

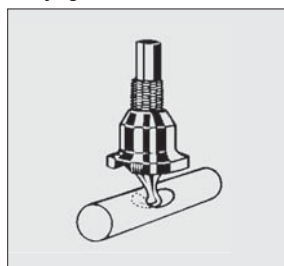


Description	No.	Description	No.
UNIDRILL automatic 28 / 42	23	Pipe cutter	114
Extractor cam pincer	23 2.2080	Internal / external deburrer	121
Extractor support plates	23	High-Performance torch	184
Evercool drill and extraction Paste	23 2.1549	Steel case	2.4022

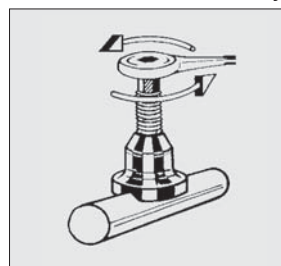
Precise drilling of the pipe without a centre punch – drill stop prevents perforation of the pipe



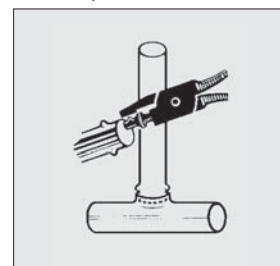
Insert extractor hook into the drilled hole and screw the bell firmly against the drill hole



Using the ratchet, turn the extractor to the left, while paying attention that the V-block is seated securely



After extraction, set correct insertion depth (dependant on pipe Ø) with cam pincer



Simply calibrate the tee Ø on the UNIDRILL Automatic and the drilled hole Ø will automatically correspond to the extractor hook required



Tee-Extractor

With double V-block for accurate 90° branches
Ø 10 - 54 mm (3/8 - 2.1/8")

Product Profile

KEY FEATURES

- Uniform and proper material extraction without scratches or burrs
- ① Optimum force transmission with special trapezoidal screw thread
- ② Burr-free operation with the specially polished extractor hooks
- ③ Easy insertion into the drilled hole with the special trapezoidal screw thread
- ④ Accurate and firm positioning for exact 90° branches



④ Double V-block

Accurate and firm positioning
for exact 90° branches

Additive adaptor include in delivery scope of
No. 2.2054 / 2.2050 / 2.2054



③ Special hook design

Easy insertion into
the drilled hole

② Forged and tempered extractor hooks with special polish

Burr-free operation



① Special trapezoidal screw thread

Optimum force transmission



mm /Inch	mm	Drill-Ø mm	SW mm	g	No.
10	1.0	6	11	130	2.2010
12	1.0	7	11	150	2.2012
14	1.0	8	11	160	2.2014
15	1.0	8	11	160	2.2015
16	1.0	8	11	220	2.2016
18	2.0	10	11	220	2.2018
22	2.0	12	11	350	2.2022
28	2.5	15	11	470	2.2028
32	2.5	19	11	700	2.2032
35	2.5	22	11	700	2.2035
38	2.5	22	11	700	2.2038
40	2.5	24	11	890	2.2040
42	2.5	26	11	890	2.2042
54	2.5	30	3/4"	1380	2.2054

■ Square

■ Hexagon

mm /Inch	mm	Drill-Ø mm	SW mm	g	No.
3/8"	1.0	6	11	110	2.2060
1/2"	1.0	7	11	140	2.2061
5/8"	1.0	8	11	220	2.2016
3/4"	2.0	10	11	220	2.2062
7/8"	2.0	12	11	350	2.2063
1"	2.5	14	11	470	2.2064
1.1/8"	2.5	15	11	480	2.2065
1.1/4"	2.5	19	11	700	2.2066
1.3/8"	2.5	22	11	700	2.2035
1.1/2"	2.5	22	11	700	2.2038
1.5/8"	2.5	26	11	900	2.2068
1.3/4"	2.5	26	11	900	2.2069
2"	2.5	30	3/4"	1380	2.2050
2.1/8"	2.5	30	3/4"	1380	2.2054

Spare Extractor Hooks

Forged hooks, specially polished, tempered and
burnished from Ø 10 - 54 mm (3/8 - 2.1/8")



Special trapezoidal screw
thread

Optimum force transmission

Note: For soft copper pipes, the use of an
extractor support is recommended (23)

mm	g	No.	mm	g	No.
10	60	2.2210	3/8"	60	2.2260
12	70	2.2212	1/2"	70	2.2261
14	90	2.2214	5/8"	140	2.2216
15	90	2.2215	3/4"	140	2.2263
16	140	2.2216	7/8"	200	2.2264
18	140	2.2218	1"	210	2.2265
20	200	2.2220	1.1/8"	220	2.2266
22	210	2.2222	1.1/4"	270	2.2267
28	220	2.2228	1.3/8"	290	2.2235
32	260	2.2232	1.1/2"	290	2.2268
35	290	2.2235	1.5/8"	320	2.2270
38	290	2.2268	1.3/4"	360	2.2244
40	300	2.2240	2"	520	2.2246
42	320	2.2242	2.1/8"	560	2.2254
54	560	2.2254			



Tee-Extractor Ratchet

Chrome vanadium steel, fine toothed and right/left reversible



No. 2.2081



No. 2.7181

Model	SW	g	No.
10 - 42 mm, 3/8 - 1.3/4"	11 mm	435	2.2081
54 - 70 mm, 2 - 2.3/4"	3/4"	1140	2.7181

Extractor Cam Pincer

KEY FEATURES

- Identification point marks insertion depth exactly and prevents over-insertion
- Cam depth adjustment wheel with scale



mm	Inch	mm	g	No.
12 - 42	1/2 - 1.5/8"	150	170	2.2080

EVERCOOL

Drill and extraction paste

KEY FEATURES

- Longer tool life
- All-purpose use except for drinking water installation
- Suitable for aluminium and precision steel
- Easy application with the integrated pen for applying the paste



Model	Contents	g	No.
EVERCOOL	50 g	80	2.1549

UNIDRILL Automatic 28 / 42

HSS special conical drill

KEY FEATURES

- Fast, burr-free drilling
- Precise location without need for centre punch special drill tip
- Calibrated drill Ø automatically corresponds to the correct extractor hook and branch size
- Drill stop prevents damage to pipe walls

UNIDRILL Automatic 28 / 42

Accurate drilling



No. 2.1583

No. 2.1575

Model	mm	Inch	SW	g	No.
UNIDRILL 28	10 - 28	3/8 - 1.1/8"	11	110	2.1583
UNIDRILL 42	10 - 42	3/8 - 1.5/8"	11	430	2.1575

Extractor Support

KEY FEATURES

- Prevents deformation during extraction, especially for soft pipe material

Extractor support plates

Prevents deformation during extraction



Mainpipe	Branchpipe	g	No.
22 mm	20 mm	250	2.2157
28 mm	25 mm	300	2.2158
1/2"	3/8"	120	2.2170
5/8"	1/2"	170	2.2153
3/4"	5/8"	250	2.2172
7/8"	3/4"	250	2.2157
1"	7/8"	300	2.2174
1.1/8"	1"	300	2.2158

COMBI KIT Expander / Tee-Extractor

Practical, compact and cost-saving set combinations with ROCAM® EXPANDER Power Torque and Tee-Extractors. For all common pipe dimensions Ø 12 - 28 mm (1/2 - 1.1/8")

The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 40 years



Product Profile

KEY FEATURES

- Saves time and facilitates installation
- Increases safety by reducing the number of connections
- Suitable for making branches even in confined spaces through the compact design
- ① Fine adjustment of the capillary gap using the KSO-screw
- ② Reduces effort required and increases work space
- ③ Up to 67% reduction of soldering materials and soldered joints
- ④ Accurate drilling

KEY FEATURES

- ⑤ Saves resources by converting scrap pipes into fittings
- ⑥ Protects against dirt with EPT®-Technology
- ⑦ Reliable pipe connections to DVGW standards

TECHNICAL DATA

Suitable for pipes made of:

Copper, aluminium and steel (soft):

Ø 12 - 28 mm and 1/2 - 1.1/8"

⑥ EPT®-Technology

– concealed bent lever

Protects against dirt and external mechanical damage

- ① Largest possible expansion size and capillary gap using the adjustable KSO-screw

② Long handles

Reduces effort required and increases work space

⑤ Utilisation of material

Saves resources by converting scrap pipes into fittings

③ Professional Extractions

Up to 67% reduction of soldering materials and soldered joints

Scale and cam depth adjustment



Extractor Cam Pincer

Limits insertion depth for Ø 12 - 42 mm (1/2 - 1.5/8")

No. 2.2080

④ UNIDRILL Automatic 28 / 42

Accurate drilling



No. 2.1583 / No. 2.1575



COMBI KIT Expander / Tee-Extractor Sets

Sets include: ROCAM® EXPANDER Power Torque (No. 1.2000), Standard expander heads, tee-extractor, special ratchet (No. 2.2081), UNIDRILL Automatic 28 (No. 2.1583), extractor cam pincer (No. 2.2080), steel case (No. 2.4022)



7 Proven expander heads with extra long segments
Reliable pipe connection to DVGW standards



Fig. COMBI KIT Expander / Tee-Extractor

The **EPT®-Technology** (Enclosed Power Transmission) of the expander heads offers the following technical benefits:

Concealed bent lever:

Protection against dirt and external mechanical damage

Energy efficient through the optimised operating principal:

Ergonomic, highly optimised force flow in relation to the hand force of the user, therefore reducing effort



The golden **Titanium-Nitride coating (TiN)**

of the expander cone offers the following technical benefits:

High durability 2300 HV: Protection against dirt and abrasive wear

Lower friction value compared to steel:

Energy efficient

Good chemical resistance:

Good protection against corrosion

Universal wear resistance layer: Long-lasting



Model	Description	kg			No.
COMBI KIT Expander / Tee-Extractor Set	12-15-18-22 mm	4.47	1	5	1.1180X
COMBI KIT Expander / Tee-Extractor Set	12-14-16-18 mm	2.61	1	5	1.1186X
COMBI KIT Expander / Tee-Extractor Set	15-22-28 mm	2.30	1	5	1.1187X
COMBI KIT Expander / Tee-Extractor Set	1/2-5/8-7/8-1.1/8"	2.88	1	5	1.1194X
COMBI KIT Expander / Tee-Extractor Set	1/2-3/4-1"	2.50	1	5	1.1195X

ACCESSORIES



Description	No.	Description	No.
Expander heads standard	12	Pipe cutter	114
UNIDRILL automatic 28 / 42	23	Internal / external deburrer	121
Extractor support plate	23	Steel case	2.4022
Evercool drill and extraction paste	23		
Extractor cam pincer	23		

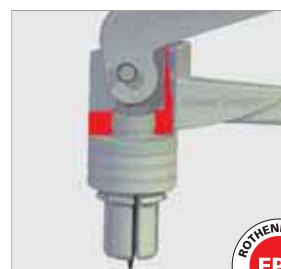
Quality protection against wear with the **TiN-sealed** expander heads. Lifelong expanding precision



KSO-Screw



EPT®-Technology – concealed bent lever



Tee-Extractor



Universal Tee-Extractor

For efficient production of T-branches (extractions) for fitting-free pipe installations, Ø 54 - 70 mm (2.1/8" - 2.3/4")

Product Profile

KEY FEATURES

- Suitable for making branches even in confined spaces through the compact design
- 1 Exact 90° branches through the accurate and firm positioning
- 2 Extractions even on installed pipes possible
- 3 Burr-free extractions through exact drilling
- 4 Cost-effective increase of the operating range
- 5 Optimum force transmission with the special trapezoidal screw thread
- 6 Quick and easy extraction

TECHNICAL DATA

Suitable for pipes made of:

Copper, Aluminium:

Ø 54 - 70 mm, 2.1/8" - 2.3/4"
max. wall thickness 5.0 mm

Precision steel:

Ø 54 - 70 mm, 2.1/8" - 2.3/4"
max. wall thickness 5.0 mm

6 ROKRAFT Power Multiplier

Quick and easy extraction

5 Hook and bell with special trapezoidal screw thread

Optimum force transmission

4 Other hook sizes usable within the operating area of a bell

Allows a cost-efficient increase of the operation range

3 Accurate drilling

Burr-free operation

1 Long double V-block

Accurate and firm positioning for exact 90° branches

2 No pipe removal

Extractions even on installed pipes possible

Attention:

When manually extracting on a copper pipe, warm-up approx. 20 mm around the drill hole to relax the material.

Fig. UNIVERSAL Tee-Extractor with optional accessories: ROKRAFT support (No. 2.2093), ROKRAFT power multiplier (No. 2.2090), and Special ratchet (No. 2.7181)

Availability, delivery time and price available on request

Scope of delivery: Universal Tee-Extractor with 2 chain wrenches (No. 2.2076), double arm telescopic receptacle (No. 2.2093) for ROKRAFT support, steel case (No. 3.6715)

mm	Inch	mm	Drill-Ø mm	SW	kg	No.
54	2.1/8"	3.0	30	3/4"	10.8	2.2052
60	2.3/8"	3.0	32	3/4"	10.9	2.2055
64	2.1/2"	3.0	32	3/4"	11.2	2.2056

Forged and tempered extractor hooks with special polish

Burr-free extraction

mm	Inch	mm	Drill-Ø mm	SW	kg	No.
67	2.5/8"	3.0	32	3/4"	11.5	2.2053
70	2.3/4"	3.0	35	3/4"	12.0	2.2057

Extractor Hooks

Interchangeable within the same bell size

- Easily refitted for other pipe sizes



Availability, delivery time and price available on request

mm	Inch	Bell Size	Drill-Ø mm	SW	kg	No.
54	2.1/8"	1	30	3/4"	0.9	2.2281
60	2.3/8"	1	32	3/4"	0.9	2.2282
64	2.1/2"	1	32	3/4"	0.9	2.2283
67	2.5/8"	1	32	3/4"	0.9	2.2284
70	2.3/4"	1	35	3/4"	0.9	2.2285

HSS Bi-Metal Hole Saw

Without adaptor



for Tee-Extractor-Ø	Drill-Ø mm	Mount Type	kg	No.
54 mm	2.1/8"	30 A 11	80	11.4030
60 - 67 mm	2.3/8" - 2.5/8"	32 A 2	104	11.4032
70 mm	2.3/4"	35 A 2	110	11.4035

For additional hole saws see 139 / 140

Chain Wrench

With quick-release lever for simple and secure fixing of the tee-extractor bells



Model	max mm	max. Inch	mm	kg	No.
Clamp pliers	80	3.1/2"	480	1.36	2.2076

Adaptor with Central Drill



Model	SW	kg	No.
A 11 for hole saw - Ø 14 - 30 mm	11 mm	75	11.4161
A 2 for hole saw - Ø 32 - 152 mm	11 mm	230	11.4162
HSS spare centre drills Ø 6.35 mm		20	11.4171

EVERCOOL

Drill and extraction paste

- Longer tool life
- All-purpose use except for drinking water installation
- Suitable for aluminium and high-precision pipes
- Easy application with the integrated pen for applying the paste






Model	Contents	kg	No.
EVERCOOL	50 g	80	2.1549

ROKRAFT Power Multiplier*

For fast and effortless operation, with epicyclic gear, multiplication factor 1:4, max. 1.7 kNm, without support



*Availability, delivery and price available on request

Model	for Extractor size	 Drive	 Hook	 kg	No.
ROKRAFT 54 - 70 mm, 2.1/8" - 2.3/4"		3/4"	3/4"	3.5	2.2090
Support, double arm				1.7	2.2093

Extractor Ratchet

Chrome vanadium steel, fine toothed and right/left reversible

Model	SW	mm	kg	No.
54 - 70 mm, 2.1/8" - 2.3/4"	3/4"	400	1.14	2.7181



Flaring Tools

Reeling Flaring Tool

For producing precision 45° single flares on copper pipes Ø 6 - 18 mm (1/8 - 3/4")



Reeling Flaring Tool set includes: Reeling Flaring Tool in plastic case with Mould in metric and/or imperial format

Model	mm / Inch	No.
Set EB	6 - 8 - 10 - 12 - 14 - 15 - 16 - 18 mm 1/8 - 3/16 - 1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4"	2224.01
Set EB	1/8 - 3/16 - 1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4"	2224.02
Set EB	6 - 8 - 10 - 12 - 14 - 15 - 16 - 18 mm	2224.03



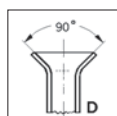
Fig. Reeling Flaring Tool Set

Mould	mm / Inch	No.
Metric	6 - 8 - 10 - 12 - 14 - 15 - 16 - 18 mm	2224.13
Imperial	1/8 - 3/16 - 1/4 - 5/16 - 3/8 - 1/2 - 5/8 - 3/4"	2224.12

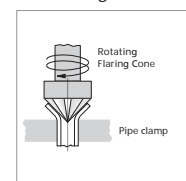
Universal Flaring Tool

For producing precision 45° single flares on copper pipes Ø 4 - 16 mm (3/16 - 5/8")

- Universal application and highest flare precision through self-centring pipe clamp for all diameters
- Controlled flaring without tearing, forming perfect surfaces
- Hardened flare cone with special geometry



Best flaring results



Universal Flaring Tool set (No. 2226.01) includes: Universal Flaring Tool for pipe diameters 4 - 16 mm, 3/16 - 5/8", in plastic case

Model	mm	Inch	g	No.
Set EB	4 - 16 mm	3/16 - 5/8"	900	2226.01



Precision Double Flaring Press DB 10

For standard precision expands according to DIN 74234
Ø 4.75 - 10 mm, wall thickness 0.7 - 1.0 mm

Product Profile

Application Area

On copper, aluminium and steel pipes, seamless pipe and double-walled pipes, for example Bundy®-pipe and KUNIFER brake pipes

KEY FEATURES

- 1 Ideal for endless pipes
- 2 For several flaring profiles, wall thickness 0.7 - 1 mm
- 3 Universal use with the pluggable pressure cone
- 4 Accurate and reproducible results
- 5 Clamping block for several pipe diameters
- 6 Reliable hold with the 25 mm pipe clamping length
- 7 Suitable for clamping in a vice

Formation of the various flares made possible with the appropriate flaring attachments

D - Contour:

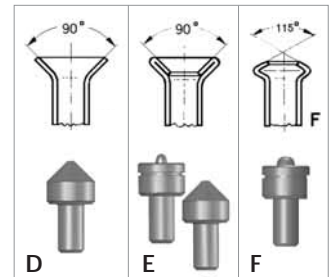
- Universal flaring contour

E and F - Contour:

- Extension of brake and / or hydraulic pipes
- Connection by means of coupling rings, sealed by means of flaring surface

F - Contour

- Mounting using coupling ring, for example hydraulic control block and / or distributor block
- Seal between drill-hole and flaring surface



Set (No. 2.6013) includes: Basic tool with pressure cone (No. 2.6010), flaring attachments, 1 set of clamping blocks (No. 2.6011)

Model	mm	kg	No.
DB 10 Set	4.75 - 5 - 6 - 8 - 9 - 10 mm	2.64	2.6013
Flaring attachments	4.75 / 5 mm	0.20	2.6001
Flaring attachments	6 mm	0.20	2.6002
Flaring attachments	8 mm	0.20	2.6003
Flaring attachments	9 mm	0.20	2.6004
Flaring attachments	10 mm	0.20	2.6005

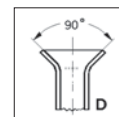
Accessories

Description	mm	kg	No.
Pressure cone		20	2.6010
Clamping spindle		90	2.6015
Flaring spindle		300	2.6016
Distance bolt		30	2.6017
Set of clamping blocks (2 pc.) for Pipes 4.75 - 5 - 6 - 8 - 9 - 10 mm		190	2.6011



ROFLARE

Flaring tool for producing precisions 45° single flares and precision soldered sockets on soft and hard pipes, Ø 6 - 16 mm (3/16 - 5/8")



Product Profile

Application Area

Application in the refrigeration and automotive (brakes) industries

KEY FEATURES

- 1 Accurate off-centre clamping of the pipe and automatic self-centring
- 2 Efficient and gentle handling of material
- 3 Light-weight and long-lasting
- 4 Controlled flaring and shaping without tearing

KEY FEATURES

- 5 Pipe will not slip
- With the ROFLARE double flare attachments, double flares are also possible

TECHNICAL DATA

Suitable for pipes up to a wall thickness of 1 mm made of: Copper, conifer, brass, aluminium and precision steel pipes



ROFLARE sets include: ROFLARE Basic Unit with integrated attachments

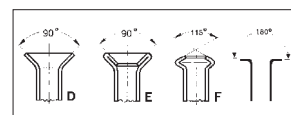
Model	Description	kg	No.
ROFLARE Set	6 - 8 - 10 - 12 - 14 - 16 mm	1.0	2.6038
ROFLARE Set	6 - 8 - 10 - 12 - 15 - 16 mm	1.0	2.6022
ROFLARE Set	3/16 - 1/4 - 5/16 - 3/8 - 1/2 - 5/8"	1.0	2.6033

ROFLARE / ROFORM accessories

Double flare attachment type E and F / Adaptor 180° fits ROFLARE flaring tools type EB as well as ROFORM socket and flaring tool



Adaptor 180°



Double flare attachment with pipe depth stop for pipe clamping

Model	Description	kg	No.
DB	6 - 8 - 10 - 12 - 15 mm	120	2.6023
DB	3/16 - 1/4 - 5/16 - 3/8 - 1/2"	120	2.6034
Adaptor for 180° Flare		50	2.6039



ROFORM Set

Double flare attachment Type E and F / Adaptor 180° fits ROFLARE flaring tools type EB as well as ROFORM socket and flaring tool



Fig. ROFORM Set



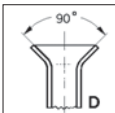
Model	Description	kg	No.
ROFORM Set	6 - 8 - 10 - 12 - 14 - 16 mm	2.2	2.6711
ROFORM Set	6 - 8 - 10 - 12 - 15 - 16 mm	2.2	2.6710
ROFORM Set	3/16 - 1/4 - 5/16 - 3/8 - 1/2 - 5/8"	2.2	2.6717

ROFORM sets include: ROFORM Basic Unit, 45° cone, expander pin, internal and external deburrer Ø 4 - 36 mm (No. 1.1006), pipe cutter TUBE CUTTER 28 Ø 3 - 28 mm (No. 7.0010), in plastic case

Standard Flaring Tool

For producing precision 45° single flares on copper, brass, aluminium, KUNIFER and precision steel pipes up to 1 mm wall thickness

Ideal for mobile use for pipes in refrigeration, air-conditioning and automotive (brakes) industries



Product Profile

KEY FEATURES

- Made of light, durable high-quality steel
- Special screw thread ensures efficient and gentle handling of material
- Highest flare precision with the self-centring die
- High-quality flare sealing surface due to hardened and polished flaring cone
- Non-slip die available in metric and imperial sizes

Made of light, durable high-quality steel



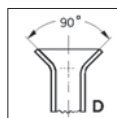
Model	mm / Inch	g	No.
Set EB	4 - 4.75 - 6 - 8 - 10 - 12 - 14 mm	980	2.6050
Set EB	3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8"	980	2.6051



Standard Flaring Tool Sets



For producing precision 45° single flares on copper, brass, aluminium, KUNIFER and precision steel pipes up to 1 mm wall thickness



Sets include: Standard Flaring Tool and TUBE CUTTER 30 PRO (No. 7.1019), for pipes Ø 3 - 30 mm and Z/or 1/8 - 1.1/8", plastic carrying case

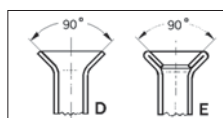
Model	mm / Inch	kg	No.
Set EB 4 - 4,75 - 6 - 8 - 10 - 12 - 14 mm		1.5	2.6053
Set EB 3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8"		1.5	2.6054



Standard Flaring Tool Sets



For producing 45° single and double flares on copper, brass, aluminium, KUNIFER and precision steel pipes up to 1 mm wall thickness



Sets include: Standard Flaring Tool and TUBE CUTTER 30 PRO (No. 7.1019), for pipes Ø 3 - 30 mm and/or 1/8 - 1.1/8", incl. 7 double flaring attachments, plastic carrying case

Model	mm / Inch	kg	No.
Set DB 4 - 4.75 - 6 - 8 - 10 - 12 - 14 mm		1.55	2.6048
Set DB 3/16 - 1/4 - 5/16 - 3/8 - 7/16 - 1/2 - 5/8"		1.55	2.6052



Flaring and Swaging Set



Universal applications in industry and trade for sanitary and heating installation, refrigeration and air-conditioning systems, automotive and hydraulic systems

Flaring and Swaging set (No. 2.6020) includes: MINICUT I, Ø 3 - 16 mm (No. 7.0401), internal and external deburrer, Ø 4 - 36 mm (No. 1.1006), double flare press DB 10 (No. 2.6013), TUBE BENDER set, Ø 4,75 - 10 mm (No. 2.4112), in steel carrying case (No. 2.4022)

Model	mm	kg	No.
Flaring / Swaging Set 4.75 - 5 - 6 - 8 - 9 - 10		5.5	2.6020
ACCESSORIES			
ROCOL Extraction and Flaring Lubrication (only suitable for heating installation)		0.1	2.2399
Steel case, empty		1.3	2.4022



TUBE BENDER

For accurate one handed bending up to 90°,
Ø 5 - 12 mm (1/4 - 1/2")

Product Profile

KEY FEATURES

- 1 Accurate bending even in restricted spaces
- 2 Production of U-bends, counter bends, swan-neck bends and connecting bends possible at all levels
- 3 Quick and simple change of the bending formers
- 4 Fast release and removal of the bending formers
- 5 One handed operation through the ergonomic design
- 6 Fast and accurate bending

TECHNICAL DATA

Suitable for pipe made of:

Copper (soft) and aluminium:	Ø 5 - 12 mm, 1/4 - 1/2"
Copper (soft, coated):	Ø 5 - 12 mm, 1/4 - 1/2"
Precision steel (soft):	Ø 5 - 12 mm, 1/4 - 1/2"



Various bends possible



TUBE BENDER



Bending Formers



Back Plates



Bending Segments



TUBE BENDER sets include: Basic tool complete with bending segments, bending formers, in plastic carrying case (No. 2.4025)

Model	kg			No.
Basic Set (basic tool , back plates, bending formers, plastic case)	1.00	1	5	2.4010
TB Set 5 - 6 - 8 - 10 mm	2.84	1	5	2.4131
TB Set 6 - 8 - 10 - 12 mm	3.03	1	5	2.4132
TB Set 8 - 10 - 12 mm	2.82	1	5	2.4133
TB Set 1/4 - 5/16 - 3/8 - 1/2"	2.92	1	5	2.4134
ACCESSORIES				
Basic tool without bending segments	0.36			2.4130
Plastic carrying case	0.60			2.4025

TUBE BENDER Bending Segments

Model	Size	g	No.
Bending Segments	5 mm		190 2.4001
Bending Segments	6 mm		210 2.4002
Bending Segments	8 mm		250 2.4003
Bending Segments	9 mm		360 2.4004
Bending Segments	10 mm		390 2.4005
Bending Segments	12 mm		390 2.4007
Bending Segments	1/4"		210 2.4002
Bending Segments	5/16"		250 2.4003
Bending Segments	3/8"		270 2.4006
Bending Segments	1/2"		380 2.4008

Previous bending segments are compatible (Without back plates)!

Please consult guide for accurate bending according to the chart starting on 44.



TUBE BENDER MAXI CT

For accurate one handed bending up to 90°,
Ø 10 - 18 mm and a wall thickness of 0.6 - 0.8 mm

Universally applicable bending unit, also suitable for coated, thin-walled, soft copper pipe

Endorsed by KM Europa Metal AG, the
outokumpu essen GmbH and the
Wieland-Werke AG

Product Profile

KEY FEATURES

- 1 Bending of copper, MSR (multi-layer) or coated pipes
- 2 Ideal for one handed operation and in restricted areas
- 3 Bending formers easily changeable through the bayonet coupling
- 4 Quick release and reset of the bending formers
- 5 Tough and long-lasting
- 6 Production of U-bends, counter bends, swan-neck bends and connecting bends possible at all levels
- 7 Optimum bending results with the plastic bending formers and supporters with low friction

TECHNICAL DATA

Suitable for pipe made of:

Copper pipe, according to
DIN EN 1057 standards
(thin-walled, soft, coated):

Ø 10 x 0.6 mm

Ø 12 x 0.6 mm

Ø 15 x 0.7 mm

Ø 18 x 0.8 mm

MSR (Multilayer):

Ø 14 - 32 mm

1 Universal supports

For bending of copper, MSR
(multi-layer) or coated pipes

3 Ratchet arm with
bayonet coupling
Bending formers
easily changeable

2 Ergonomic ratchet handle

Ideal in restricted spaces and
for one handed operation

7 Plastic bending formers and supports with low friction

Optimum bending
results

4 Side lever

Quick release and reset
of the bending former

5 Body made of die cast steel
Tough and long-lasting

6 Open bending frame

Production of U-bends, counter bends, swan-
neck bends, and connecting bends possible at all
levels

Bending former



Various bends possible



Fig. TUBE BENDER MAXI CT-Set

3-part set (No. 2.3054) includes: Basic tool (No. 2.3076), bending support
(No. 2.3080), bending formers in steel carrying case (No. 2.5197)

Model	kg	No.
TUBE BENDER MAXI CT-Set	3.46	2.3054




Please consult guide for accurate bending according to the
chart starting on 44.

TUBE BENDER MAXI CT Bending Formers

Model	Outer-pipe-Ø Part coating	g	No.
Bending Former CT 10 x 0.6 mm	14 mm	80	2.3003
Bending Former CT 12 x 0.6 mm	16 mm	100	2.3005

Model	Outer-pipe-Ø Part coating	g	No.
Bending Former CT 15 x 0.7 mm	19 mm	140	2.3059
Bending Former CT 18 x 0.8 mm	22 mm	170	2.3007



 Size	 mm	R Radius mm	L mm	 kg	No.
12 mm	1.0	43	460	1.4	46.2212
15 mm	1.0	60	600	2.3	46.2215
18 mm	1.0	74	860	3.2	46.2218
22 mm	1.0	87	900	4.3	46.2222




Standard Two Handed Bender 90°

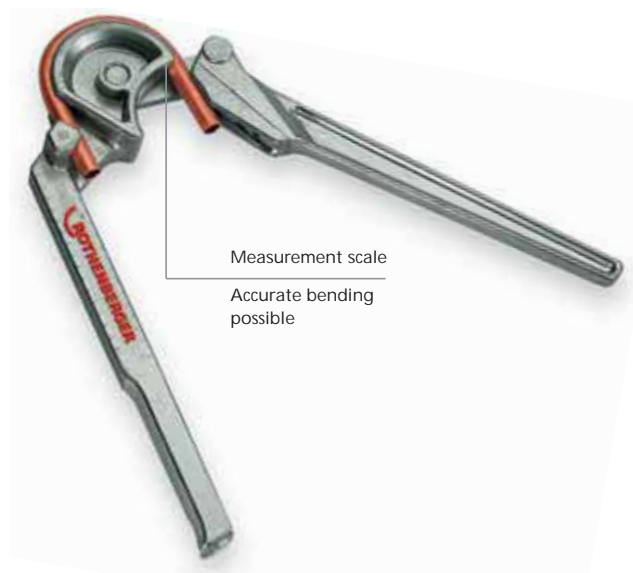
For accurate bending up to 90° for pipes made of soft and semi-hard copper according to DIN EN 1057
 Ø 12 x 1.0 - 28 x 1.0 mm

Universal bender for sanitary and heating installations refrigeration and air-conditioning systems

KEY FEATURES

- Long handles allow for better leverage in the bending of semi-hard copper pipes
- Bending pliers with sliding carriage for millimetre-exact bending
- Accurate adjustments between the bending radius and handle length reduces effort required

 Size	 mm	R Radius mm	L mm	 kg	No.
26 mm	1.0	107	960	6.3	46.2226
28 mm	1.0	108	1100	6.8	46.2228






MULTIBEND Two Handed Bender 180°

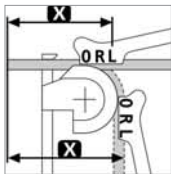
For accurate bending up to 180° of pipes made of soft and coated copper, as well as precision steel
 Ø 10 - 18 mm

KEY FEATURES

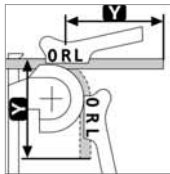
- Accurate bending with the bending radius display and measurement scale
- Fatigue-free hand operation

 Size	R Radius mm	 max. mm	 kg	No.
10 mm	30	1.0	0.37	2.5401
12 mm	36	1.0	0.64	2.5402
14 mm	42	1.0	0.98	2.5403
15 mm	48	1.0	1.45	2.5404
16 mm	48	1.0	1.46	2.5405
18 mm	54	1.0	2.00	2.5406

Method L



Method R



Accurate bending

supporters with low friction on measurement scale

MINIBEND

For accurate two handed bending up to 180° of pipes made of soft copper, brass, aluminium and precision steel Ø 6 - 10 mm, (1/4 - 3/8")

KEY FEATURES

- Suitable for use in refrigeration and air-conditioning, oil supply, automotive, hydraulic and pneumatic industries

Method L- Determination of the length of L - Left:



O: Reference to bending scale (0-0) and/or start/end of the bending radius

L: Used to determine/indicate the final dimension desired from the left (pipe beginning) up to top edge of the pipe (Mass X)

Method R: Determination of the length of R - Right:

O: Reference to bending scale (0-0) and/or start/end of the bending radius

R: Used to determine/indicate the final dimension desired from the right (pipe beginning) up to top edge of the pipe (Mass Y)

Model	 Size	 g	No.
MINIBEND	6 - 8 - 10 mm	420	2.5150
MINIBEND	1/4 - 5/16 - 3/8"	420	2.5151



Standard Two Handed Bender 180°

For accurate bending up to 180° of pipes made of soft copper, aluminium and precision steel Ø 6 - 18 mm (1/4 - 5/8")

KEY FEATURES

- Bending radius display of 0 - 180° for accurate bending
- Clamp mechanism for better pipe hold allows the bending of shorter pipe pieces
- Light construction allows for fatigue-free hand operation



Size	R Radius mm	mm	g	No.
18 mm	66	480	2110	2.5137
1/4"	18	305	560	2.5140
5/16"	24	305	640	2.5131
3/8"	30	390	970	2.5141
1/2"	42	390	1680	2.5142
5/8"	58	450	1830	2.5136

Size	R Radius mm	mm	g	No.
6 mm	18	305	550	2.5130
8 mm	24	305	640	2.5131
10 mm	30	390	970	2.5132
12 mm	36	390	980	2.5133
14 mm	47	450	1580	2.5134
15 mm	54	450	1830	2.5135
16 mm	58	450	1830	2.5136

EUROBEND ULTRA Two Handed Bender

For accurate bending up to 90°, Ø 12 - 16 mm

KEY FEATURES

- Accurate free-hand bending
- Bender made of sturdy, fibre glass reinforced plastic
- For copper pipes (soft and semi-hard)
- Also for thin-walled pipes and multi-layered composite pipes

Model	g	No.
EUROBEND ULTRA 12 mm	0.9	2.5301
EUROBEND ULTRA 14 mm (also for MSR pipe)	2.0	2.5302
EUROBEND ULTRA 15 mm	1.0	2.5303
EUROBEND ULTRA 16 mm (also for MSR pipe)	2.0	2.5304



Copper Tube Bending Spring

For free-handed bending of soft copper pipes Ø 6 - 16 mm (1/4 - 5/8")

KEY FEATURES

- Coiled cone for ideal handling even with longer pipes
- Tough and long lasting with the cadmium-plated spring steel
- Optimal spring form prevents buckling in bending radius area

Size	g	No.
6 mm	60	2.5180
10 mm	80	2.5182
12 mm	160	2.5183
14 mm	200	2.5184
15 mm	220	2.5185
16 mm	220	2.5186
1/4"	80	2.5187
5/16"	70	2.5181
3/8"	90	2.5188
7/16"	120	2.5189
1/2"	130	2.5190
5/8"	220	2.5186



ACCESSORIES



Description	No.
Internal / external deburrer	121
Bending Spray, 150 ml	2.5120

ROBEND® H+W PLUS

For accurate cold bending up to 180°, Ø 8 - 22 mm
(5/16 - 7/8")



Product Profile

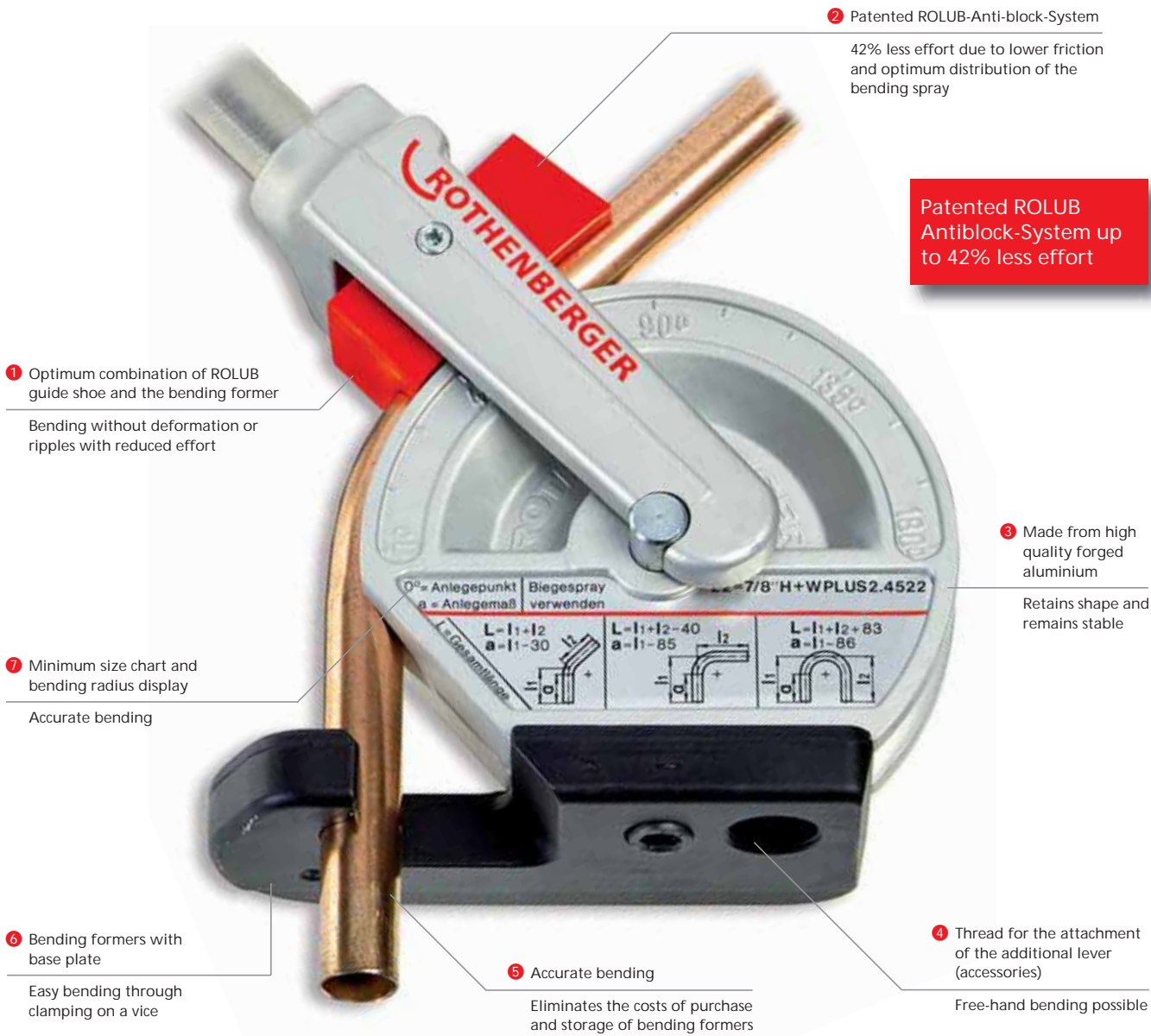
KEY FEATURES

- ➊ Exact bending to the mm on continuous pipe
- ➋ Bending without deformation or ripples with reduced effort
- ➌ 42% less effort due to lower friction
- ➍ Retains shape and remains stable
- ➎ Free-hand bending possible with the additional handle up to Ø 18 mm / 5/8"
- ➏ Eliminates the costs of purchase and storage of bending formers
- ➐ Easy bending through clamping on a vice
- ➑ Exact bending with the minimum size chart and bending radius display

TECHNICAL DATA

For accurate bending up to 180° on pipes made of:

Copper (soft, semi-hard, hard thin-walled):	Ø 8 - 22 mm,	5/16 - 7/8"
Copper (coated, also thin-walled):	Ø 10 - 18 mm,	3/8 - 5/8"
Aluminium and brass	Ø 8 - 22 mm,	5/16 - 7/8"
Precision steel: (also coated)	Ø 10 - 22 mm,	3/8 - 5/8"
Seamless stainless steel:	Ø 8 - 22 mm,	5/16 - 7/8"



Please consult guide for accurate bending according to the chart on 44.



ROBEND® H+W PLUS Bender

Universal hand bender complete with bending former, fork with ROLUB guide shoe and handle. Universal application in sanitary and heating installations, refrigeration and air-conditioning systems and industrial systems

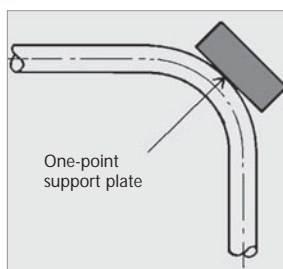


Fig. ROBEND® H+W Bender

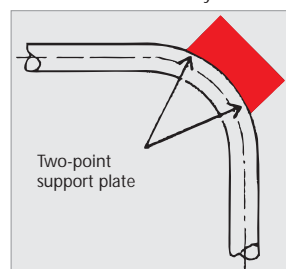
ROBEND® H+W PLUS Bender

Size	max mm	R Radius mm	g	No.
8 mm	1.0	22	660	2.4508
10 mm	1.0	32	1180	2.4510
12 mm	1.0	38	1110	2.4512
14 mm	1.0	45	1370	2.4514
15 mm	1.0	45	1370	2.4515
16 mm	1.0	64	2620	2.4516
18 mm	1.0	64	2620	2.4518
20 mm	1.0	81	3820	2.4520
22 mm	1.0	81	3800	2.4522
5/16"	1.0	22	660	2.4508
3/8"	1.0	32	1185	2.4551
1/2"	1.0	38	1110	2.4552
5/8"	1.0	64	2620	2.4516
3/4"	1.0	81	3850	2.4519
7/8"	1.0	81	3800	2.4522
Accessories (additional lever for free-hand bending)				
Lever for bending formers up to Ø 15 mm				2.5076
Lever for bending formers bigger than Ø 15 mm				2.5078
Bending spray 150 ml				2.5120

Conventional bender



ROBEND® with ROLUB System



Accurate bending



ROBEND® H+W PLUS Bending Sets

Sets include: Steel carrying case for a maximum of 4 bending formers, 2 levers for vice bending and bending spray (No. 2.5120). Bender corresponds to the respective pipe dimensions.



Fig. ROBEND® H+W PLUS Set

ROBEND® H+W PLUS Bending Sets

Model	Description	mm	kg	No.
ROBEND® H+W PLUS	12 - 15 - 18 - 22 mm	1.0	16.5	2.4500
ROBEND® H+W PLUS	10 - 12 - 14 - 16 mm	1.0	16.3	2.4501
ROBEND® H+W PLUS	12 - 14 - 16 - 18 mm	1.0	13.6	2.4502
ROBEND® H+W PLUS	15 - 18 - 22 mm	1.0	14.9	2.4505
ROBEND® H+W PLUS	1/2 - 5/8 - 3/4"	1.0	13.6	2.4503
ROBEND® H+W PLUS	1/2 - 5/8 - 7/8"	1.0	13.7	2.4504

ROLUB Anti-Block Special Guide Shoe

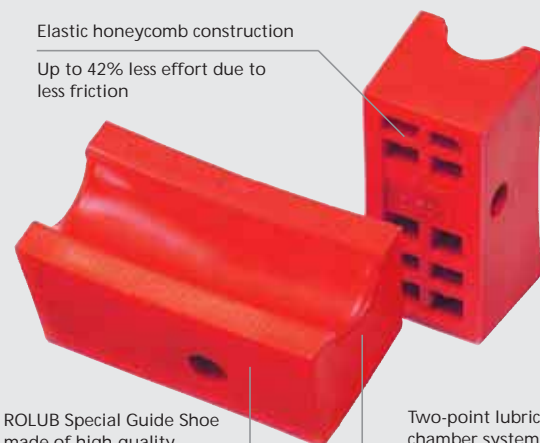
Size	g	No.	Size	g	No.
8 mm	20	2.5308	22 mm	90	2.5322
10 mm	20	2.5310	5/16"	20	2.5308
12 mm	30	2.5312	3/8"	25	2.5310
14 mm	30	2.5314	1/2"	30	2.5313
15 mm	30	2.5315	5/8"	50	2.5316
16 mm	50	2.5316	3/4"	90	2.5319
18 mm	50	2.5318	7/8"	90	2.5322
20 mm	90	2.5320			

ROLUB Anti-Block Special Guide Shoe

Especially adapted to the ROBEND® H+W bender the ROLUB guide shoe with two-point lubricating chamber system

Elastic honeycomb construction

Up to 42% less effort due to less friction



ROLUB Special Guide Shoe made of high-quality polyamide

Perfect bending results without friction marks

Two-point lubricating chamber system

Ensures optimum distribution of lubrication



ROBEND® 3000

Portable, sturdy power bender for cold bending up to 180°, Ø 12 - 28 mm (1/2 - 7/8")



Product Profile

Application Area

Universal application in sanitary and heating installations, in pipe-line 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

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

TECHNICAL DATA

Suitable for pipes made of:

Copper (hard, semi-hard and soft DIN EN 1057):

Ø 12 - 28 mm

Copper and precision steel (coated):

Ø 12 - 28 mm

Precision steel (soft

DIN 2391 / 2393 / 2394):

Ø 12 - 28 mm

Threaded steel (DIN 2440 / 2441): Ø 3/8 - 3/4"

Seamless stainless steel (GW 541): Ø 12 - 28 mm

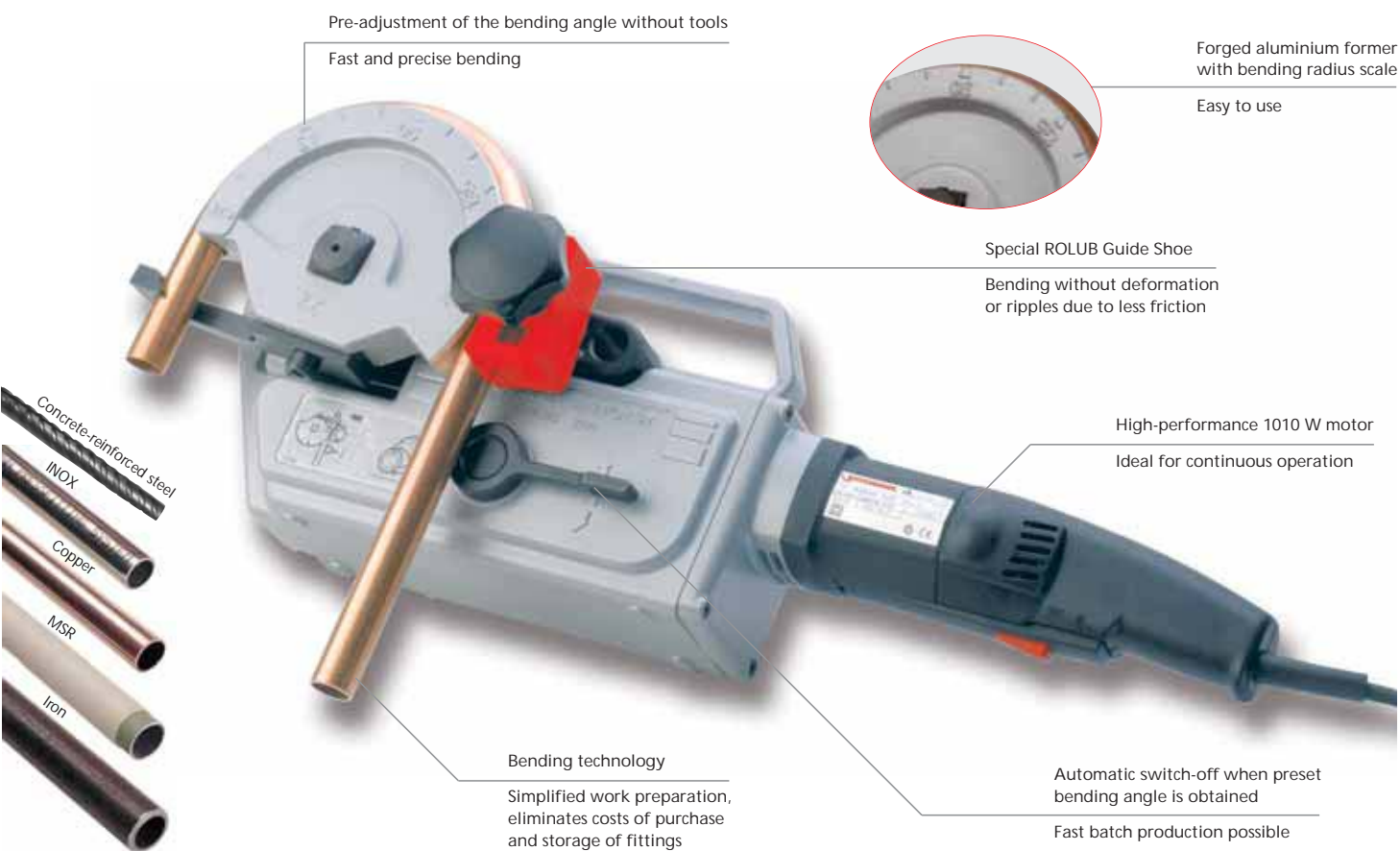
wall thickness 1.0 - 1.2 mm

MSR:

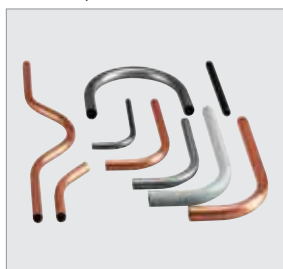
Ø 16 - 32 mm

Motor rating:

1010 Watt



Bending of pipes made of various materials possible



Seven-fold drive



Comfortable carry handle



Controlled bending process





ROBEND® 3000 Sets

Sets include: Basic 230 V Unit (No. 2.5740X), bending formers and guide shoes for respective pipe diameters, guide shoe axle (No. 2.5743), adaptor for tripod (No. 2.5748) in basic unit (tripod optional), in a plastic carrying case (No. 2.5745)

Patented ROLUB Anti-block System
Up to 42% less effort



Fig. ROBEND® 3000 Set 12 - 15 - 18 - 22 - 28 mm (No. 2.5703X)
(without tripod stand No. 2.5748, available as accessory)



Fig. ROBEND® 3000 Set

Model	Description	Pipe Type	kg	No.
ROBEND® 3000 Set	15 - 22 - 28 mm	Cu, Fe, et al.	21.10	2.5760
ROBEND® 3000 Set	12 - 14 - 16 - 18 - 22 - 28 mm	Cu, Fe, et al.	24.10	2.5710X
ROBEND® 3000 Set	12 - 14 - 16 - 18 - 22 mm	Cu, Fe, et al.	21.10	2.5709X
ROBEND® 3000 Set	12 - 15 - 18 - 22 mm	Cu, Fe, et al.	20.60	2.5700X
ROBEND® 3000 Set	12 - 15 - 18 - 22 - 28 mm	Cu, Fe, et al.	23.50	2.5703X
ROBEND® 3000 Set	15 - 18 - 22 - 28 mm	Cu, Fe, et al.	22.95	2.5705X
ROBEND® 3000 Set	1/2 - 5/8 - 3/4" - 7/8"	Cu, Fe, et al.	19.60	2.5711X
ROBEND® 3000 Set MSR	16 - 20 - 25 - 32 mm	MSR	23.50	2.5707X
ROBEND® 3000 Set MSR	20 - 25 - 32 mm	MSR	22.90	2.5706X

ACCESSORIES



Description	No.	Description	No.
Tripod Stand, dismountable	2.5748	Internal / external deburrer	121 1.1006
Bending spray 150 ml	2.5120	High-Performance torch	184
Pipe cutter	114	Brazing solder	209

Additional accessories starting on 42

Pre-adjustment of the bending angle without tools



Forged aluminium former with bending radius display



ROBEND® bending sets



ROLUB guide shoes



ROBEND® 3000 Bending Formers

For bending pipes Ø 9 - 28 mm (1/2 - 1.1/8")



Fig. ROBEND® 3000 Bending Former with ROLUB Guide Shoe

Size	wall thickness mm	Bending radius mm	kg	No.
PG-Sizes (protective pipe / casing pipe)				
9	1.2	55	0.7	2.5661
11	1.2	80	1.3	2.5662
16	1.5	88	1.4	2.5664
20	1.2	80	1.4	2.5620
21	1.5	112	2.8	2.5665

Size	wall thickness mm	Bending radius mm	kg	No.
For copper pipe DIN EN 1057, aluminium pipe, precision steel pipe DIN 2391/93/94, stainless steel pipe and others				
12 mm	1.0	42	0.48	2.5612
14 mm	1.0	49	0.48	2.5614
15 mm	1.0	52	0.53	2.5615
16 mm	1.0	56	0.60	2.5616
18 mm	1.0	72	1.17	2.5618
20 mm	1.0	80	1.42	2.5620
22 mm	1.2	88	1.42	2.5622
28 mm	2.0	112	2.90	2.5628

For copper pipe

1/2"	1.2	45	0.53	2.5652
5/8"	1.2	56	0.60	2.5616
3/4"	1.2	80	1.42	2.5619
7/8"	1.2	88	1.42	2.5622
1"	1.5	112	2.90	2.5625
1.1/8"	1.6	112	2.90	2.5626

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

1/2"	3.25	88	1.42	2.5684
3/4"	3.25	112	2.90	2.5685

ROBEND® 3000



Fig. ROBEND® 3000 Set 12 - 15 - 18 - 22 - 28 mm (No. 2.5703X) (without tripod (No. 2.5748), available as accessory)

Model	Description	kg	No.
ROBEND® 3000 Basic Unit	230 V - 50/60 Hz	13.0	2.5740X
ROBEND® 3000 Basic Unit	110/115 V - 60 Hz	13.0	2.5741X

ROBEND® 3000 parts and accessories



Fig. ROLUB Guide Shoes



Tripod Stand (No. 2.5748)

Description	kg	No.
Guide shoe axel	0.36	2.5743
Tripod Stand, dismountable	3.45	2.5748
Workbench clamp, screwable	0.55	2.5749
Bending Spray 150 ml	0.15	2.5120
ROBEND®-Carrying case, for 5 formers up to Ø 30 mm	3.30	2.5745



ROBEND® 3000 BS

Tough, portable power bender for quick, effort saving bending of reinforced concrete steel, Ø 10 - 16 mm



Product Profile

KEY FEATURES

- 1 Fast batch production possible
- 1 Automatic shut-off
- 2 Proven and tested for continuous operation
- 3 Bending of pipes and reinforced steel with one unit
- 4 Tough and long lasting
- 5 Larger application area up to Ø 16 mm reinforced steel
- 6 Precise bending with the angle pre-set

- 5 Bending of reinforced steel up to Ø 16 mm

Large application area

- 6 Pre-setting of the bending angle without tools

Precise bending

- 1 Automatic switch-off when preset bending angle is obtained

Fast batch production possible

- 2 High performance 1010 W motor

Proven and tested for continuous operation

- 4 Bending former and support roller made of high-quality steel

Tough and long-lasting

- 3 Adaptor suitable for bending formers and ROLUB Guide Shoes from the ROBEND® 3000 program

Bending of pipes and reinforced steel with one unit

Easy pre-setting of the bending angle without use of a tool



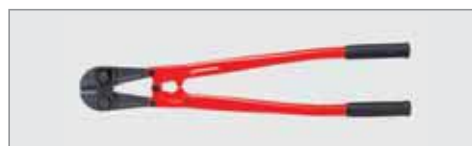
5-piece set (No. 2.5770) includes: Basic 230 V Unit (No. 2.5740X), bending formers, plastic carrying case (No. 2.5745)



Fig. ROBEND® 3000 BS SET

Model	Size	kg	No.
ROBEND® 3000 BS Bending Set	10 - 12 - 16 mm	15.6	2.5770

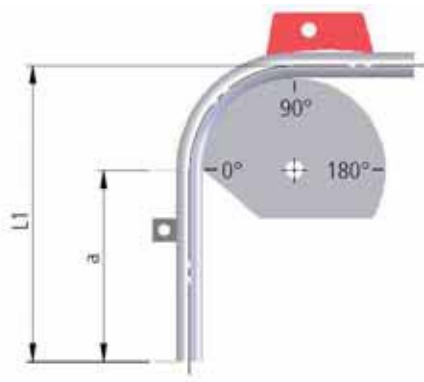
ACCESSORIES



Description	No.	Description	No.
ROBEND® 3000 BS bending former 10 mm	2.5630	ROBEND® 3000 BS bending former 16 mm	2.5632
ROBEND® 3000 BS bending former 12 mm	2.5631	Bending spray, 150 ml	2.5120
ROBEND® 3000 BS bending former 14 mm	2.5633	Bolt cutter	132



Draw-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 wall - pipe middle
 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)

Specifications:

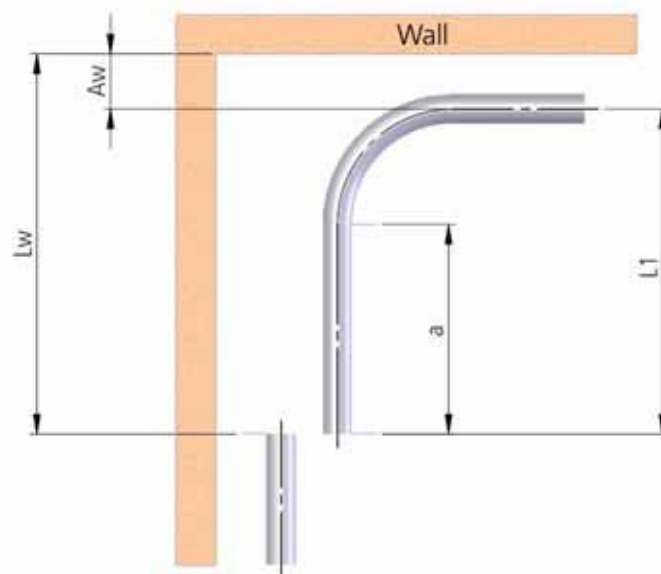
Installation in corner areas
 $L_W = 1200$ mm
 $A_W = 30$ mm
 Pipe-Ø 12 mm, 90°-Arc

Sought after:

Leg length L_1
 Applied size a

Solution:

Summary from the ROBEND® 3000 bending table



ROBEND® 3000			at 45°		at 90°		at 180°	
for Pipe Ø mm / Inch	Pipe type	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

Leg length

$$L_1 = L_W - A_W = 1200 - 30 = 1.170 \text{ mm}$$

Applied size

$$a = L_1 - L_R = 1170 - 42 = 1.128 \text{ mm}; L_R \dots \text{Tabular value}$$



H&W Plus		at 45°		at 90°		at 180°	
Pipe 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	32	34
12	38	15	-	40	20	38	39
14	45	17	-	44	22	44	51
15	45	17	-	44	22	44	51
16	64	25	-	67	30	68	65
18	64	25	-	67	30	68	65
20	81	30	-	85	40	86	83
22	81	30	-	85	40	86	83
5/16"	22	-	-	-	-	-	-
3/8"	32	12	-	32	20	32	34
1/2"	38	15	-	40	22	38	39
5/8"	64	25	-	67	30	68	65
3/4"	81	30	-	85	40	86	83
7/8"	81	30	-	85	40	86	83

MINIBEND		at 45°		at 90°		at 180°	
Pipe 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		at 45°		at 90°		at 180°	
For Pipe 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
8	24.0	9.5	1.0	24.0	12.0	24.0	27.0
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
3/8"	30.0	11.5	1.3	30.5	14.5	30.5	34.0
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

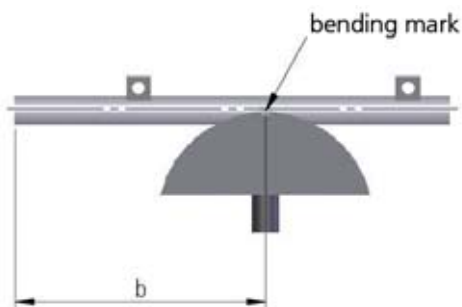
MULTIBEND		at 45°		at 90°		at 180°	
For Pipe Ø mm	Bending radius R (mm)	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm	Reserve length L _R mm	Minimum length L _M mm
8	24.0	9.5	1.0	24.0	10.0	24.0	26.0
10	30.0	12.0	1.3	30.5	14.5	30.5	32.5
12	36.0	14.0	1.5	36.5	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			at 45°		at 90°		at 180°	
For Pipe 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	coated	52.5	21	-	53	30	53	87
15		52.5	21	-	53	30	53	87
17	coated	72.0	28	-	72	41	72	107
18		72.0	28	-	72	41	72	107
20	coated	88.5	35	-	89	51	89	121
22		88.0	35	-	88	50	88	119
24	coated	112.0	43	-	110	62	110	144
28		112.0	44	-	112	64	112	148
30	coated	112.0	45	-	114	66	114	152
3/8"	Steel	80.0	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

*All sizes indicated are standard sizes which are dependant on the material and wall thickness. Bending dimensions are based on the bending radius - tabular value.



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 wall - pipe middle
 L_M = Minimum Length*
 L_R = Reserve Length*

45° - Arch



$$L = L_1 + L_2$$

$$b = L_1 - L_R$$

90° - Arch



$$L = L_1 + L_2 - L_M$$

$$b = L_1 - L_R$$

Calculation examples (ROBEND® 3000)

Specifications:

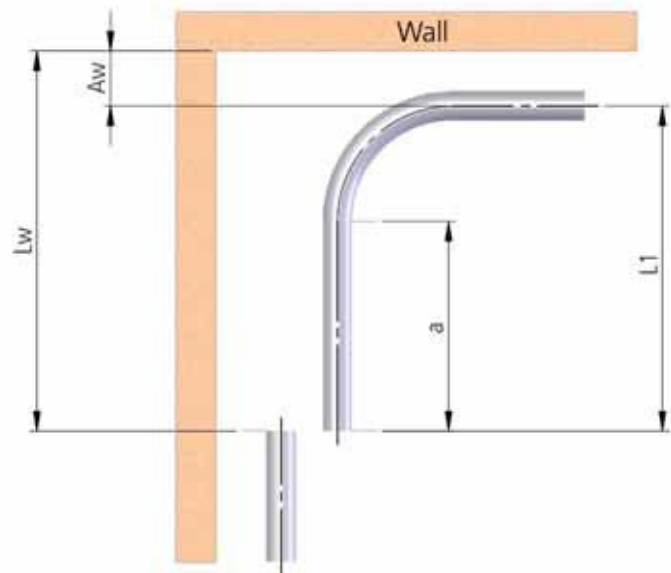
Installation in corner areas
 $L_W = 1200$ mm
 $A_W = 30$ mm
 Pipe-Ø 12 mm, 90°-Arch

Sought after:

Leg length L_1
 Applied size a

Solution:

Summary from the TUBE BENDER MAXI bending table



TUBE BENDER		at 45°		at 90°		at 180°	
for Pipe 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	-	-

Leg length $L_1 = L_W - A_W = 1200 - 30 = 1.170$ mm
 Applied size $b = L_1 - L_R = 1170 - 7.5 = 1.162,5$ mm; L_R .. Tabular value



TUBE BENDER		at 45°		at 90°		at 180°	
for Pipe Ø mm / Zoll	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 Pipe Ø mm / Zoll	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	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 composite pipes		at 45°		at 90°		at 180°	
Pipe 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	Minimum length L _M mm
14 x 2.0	42.5	0.9	12.5	9.0	42.5	-	-
16 x 2.0	49.0	1.1	14.5	10.5	49.0	-	-
18 x 2.0	49.0	1.7	22.0	16.0	49.0	-	-
25 x 2.5	74.0	2.0	26.0	19.0	74.0	-	-
32 x 3.0	128.0	2.8	26.0	27.5	74.0	-	-

TUBE BENDER MAXI CT		at 45°		at 90°		at 180°	
Pipe 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	Minimum length L _M 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	-	-

*All sizes indicated are standard sizes which are dependant on the material and wall thickness. Bending dimensions are based on the bending radius - tabular value.