ROTHENBERGER
pipetool technologies at work



REFRIGERATION
AIR-CONDITIONING
CATALOG

Status: 01/2022











Welcome to ROTHENBERGER!

We at ROTHENBERGER are driven by the needs of ACR installers and service technicians. We develop pipe tools and machines that assist craftspeople, to ensure construction sites are always under control.

To achieve this, we see the world through your eyes, familiarise ourselves closely with your everyday work and listen to you if you provide us with suggestions or criticism. In addition, all of our new products undergo an on-site endurance test. Only if they pass this test do they make it to the market.





Focus on user!

Solutions for professionals: systems that fit.

Our system solutions extend beyond tools: Transport storage equipment and machines in the **ROCASE** system. Re-use our **ROBOX** packaging as containers for consumables in the **ROCASE**. Use our **CAS**[1)] batteries to operate more than 280 compatible machines.





Service for professionals: always prepared.

The **RO SERVICE+** takes care of maintenance and repairs: Our Service After Sales team quickly gets equipment back up and running without any detours, because we have your tool collected where you are and also deliver it to you at the construction site, upon request.[2)]



[1)] More information at cordless-alliance-system.com

[2)] Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries





We are here for you.

You can reach us through many channels – the website **rothenberger.com**, by email at **info@rothenberger.com**, by phone on our customer hotline and on our technical customer service hotline.

Visit us on Facebook, Instagram and YouTube!





Applications

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1

TUBE CUTTER 35/42 Pro

Proven pipe cutter for the precise cutting of pipes Ø 6–42 mm (1/4–1.5/8")

DURAMAG® HI-Tec magnesium body

APPLICATION AREA

TC 35/TC 42
For copper, brass, aluminium, thin-walled steel pipes
TC 35 Ø 6–35 mm/TC 42 Ø 6–42 mm

INOX TC 35/INOX TC 42 Pro
Stainless steel pipes INOX TC 35 Ø 6–35 mm/
INOX TC 42 Ø 6–42 mm

KEY FEATURES

- Optimal for confined spaces
- Quick adjustment of the working area
- Spare cutter wheel in handle
- Cuts near to flares are possible
- Retractable internal pipe deburrer
- Robust and extremely stable



Metal casing with DURAMANT coating: Robust and extremely stable!

Model	mm	inch	g		No.
TUBE CUTTER 35 DURAMAG (Cu, brass, Al, thin-walled pipe)	6–35	1/4"–1.3/8"	255	4	70027
TUBE CUTTER 35 DURAMAG display (6 pcs.)	6–35	1/4"–1.3/8"	1,700		070027DB
TUBE CUTTER 42 PRO (Cu, brass, thin-walled steel pipe)	6–42	1/4"–1.5/8"	540	4	70029
INOX TUBE CUTTER 35 PRO DURAMAG (stainless steel)	6–35	1/4"–1.3/8"	470	4	70055
INOX TUBE CUTTER 42 PRO	6–42	1/4"–1.5/8"	540		70070

ROTRAC 28 PLUS CHROM/28/42

High-precision pipe cutter Ø 3–42 (1/8"–1.5/8")

KEY FEATURES

- Constant working radius
- Cast aluminium design
- Protection of the cutter wheel with the rolling stop
- Retractable internal deburrer and spare cutter wheel in handle
- Protected screw spindle – protection against dirt and jamming



Model	mm	inch	g	No.
ROTRAC 28 PLUS CHROM	3–28	1/8–1.1/8"	220	1000000046
ROTRAC 28	3–28	1/8–1.1/8"	220	70010
ROTRAC 42	6–42	1/4–1.5/8"	255	70011
Spare cutter wheel (3 pcs.) Cu, Al, brass			20	070007D

Packaging unit for specialist dealers

1

MINICUT I PRO/II PRO MINICUT 2000

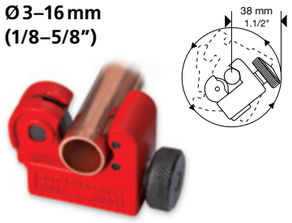
Copper pipe cutter

Ergonomic design of body and knob with seating surface for the hand during turning

KEY FEATURES

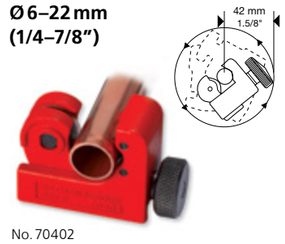
- For copper, brass, aluminium, thin-walled steel pipes
- Handy design with small working radius (38 mm and/or 1.1/2" I PRO/42 mm and/or 1.5/8" II PRO) allows use in hard-to-reach places
- Effortless pressure control with the large knurled knob and handy design
- Two guide rollers with recess for cuts near flares

Ø 3–16 mm (1/8–5/8")



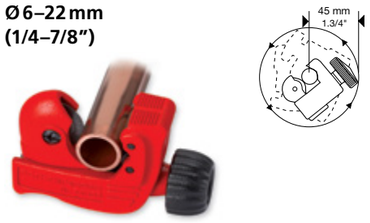
No. 70401

Ø 6–22 mm (1/4–7/8")



No. 70402

Ø 6–22 mm (1/4–7/8")



No. 70105

Model	mm	inch	g		No.
MINICUT I PRO	3–16	1/8–5/8"	115	4	70401
MINICUT I PRO display (incl. 20x 70017)					070401D
MINICUT II PRO	6–22	1/4–7/8"	125	4	70402

Model	mm	inch	g		No.
MINICUT 2000	6–22	1/4–7/8"	140	4	70105
Spare cutter wheel (5 pcs.)			20		070017D
Spare axle			5		70041

ROSLICE

Copper pipe cutter Ø 12–22 mm (1/2–1.1/8")

KEY FEATURES

- Quick cutting of copper pipes with less turns
- No deformation of the pipe: self-clamping and self-alignment
- Less space required, ideal for hard-to-reach places
- Reliable hold with the non-slip surface



Model	mm/inch	g	No.
ROSLICE	12 mm	240	88812
ROSLICE	15 mm	230	88815
ROSLICE	18 mm	260	88818
ROSLICE	22 mm	250	88822
Spare cutter wheel (5 pcs.)	1.1/8", 12 mm	36.3	088840D
Spare cutter wheel (5 pcs.)	5/8"–7/8", 15–22 mm	34.6	088841D
Spare cutter wheel (5 pcs.)	1/2"–3/4", 18 mm	37.4	088842D

Chain pipe cutter

For pipes Ø 20–100 mm (1–4")



KEY FEATURES

- For copper, brass, aluminium, thin-walled steel pipes, as well as plastic coated pipes
- Ideal for working in confined spaces, e.g. parallel-running pipes
- Stable chain with 15 mini cutter wheels, two-step adjustment, chrome plated with plastic covered handles

Model	mm	inch	g	No.
Chain pipe cutter	20–100	1–4"	575	70285
Spare cutter wheel chain			180	70286

Packaging unit for specialist dealers


No. 70030

Automatic ratchet telescopic pipe cutter

Telescopic pipe cutter Ø 6–67 mm (1/4–2.5/8")

KEY FEATURES

- For copper, brass, aluminium, thin-walled steel pipes, as well as plastic coated pipes
- Retractable internal deburrer and spare cutter wheel in handle
- Monoblock design

Model	mm	inch	g		No.
Size 1	6–67	1/4–2.5/8"	755	4	70030
Size 1 Spare deburring blade			10	10	21652
Size 1 Spare cutter wheel (5 pcs.)			20		070017D
Size 2 Spare cutter wheel (2 pcs.)			20		070057D
Size 2 Spare deburring blade			5	10	21652

Model	mm	inch	g	No.
Size 2	50–127	2–5"	1,850	70142
Size 1 Spare axle			20	70042
Size 1 Spare axle complete			5	70041


No. 52031



ROCUT TC 63 Professional

Plastic pipe shears up to Ø 63 mm (2.1/2")

For precise cutting of PP, PE, PEX, PB and PVDF pipes up to Ø 75 mm.

Model	mm	inch	g		No.
ROCUT TC 63 Prof.	0–63	0–2.1/2"	700	6	52030
Spare stainless steel blade	0–63	0–2.1/2"	130		52031

Pipe cutters, cutting wheels and spare parts

Only original ROTHENBERGER cutting wheels made of high-alloyed hardened steel guarantee an exact, right-angled cut.

Pipe cutter type		Model for pipe–Ø	No.	Cutting wheel No.	Sizes d / L / D mm	Cutting depth	Spare axle No.	Ø mm Length mm Thread	Spare roller No.	Deburring blade No.	Application area
MINICUT I PRO MINICUT II PRO		3–16 mm 6–22 mm	70401 70402	070017D 070017D	4.8/5.90/18.5 4.8/5.90/18.5	3.0 3.0	70041 70041	4.7/14/M3 4.7/14/M3	70023 70023		Copper pipe (Cu), Brass pipe (Ms), Aluminium pipe (Al), thin-walled Steel pipe (Fe), PVC hard plastic pipe, Plastic coated pipe
MINICUT 2000		3–22 mm	70105	070017D	4.8/5.90/18.5	3.0	70041	4.7/14/M3			
MINIMAX		3–28 mm	70015	070017D	4.8/5.90/18.5	3.0	70041	4.7/14/M3			
TUBE CUTTER 30 PRO		3–30 mm	71019	070017D	4.8/5.90/18.5	3.0	70041	4.7/14/M3	70067		Copper pipe (Cu), Brass pipe (Ms), Aluminium pipe (Al), thin-walled Steel pipe (Fe), PVC hard plastic pipe, Plastic coated pipe
TUBE CUTTER 35 + 35 C TUBE CUTTER 42 PRO		6–35 mm 6–42 mm	070027(C) 70029	070017D 070017D	4.8/5.90/18.5 4.8/5.90/18.5	3.0 3.0	70041 70041	4.7/14/M3 4.7/14/M3	70067 70067	21652 21652	
TUBE CUTTER 35 MSR TUBE CUTTER 42 PRO MSR		6–35 mm 6–42 mm	70108 70109	070188D 070188D	4.8/5.90/19.3 4.8/5.90/19.3	4.0 4.0	70041 70041	4.7/14/M3 4.7/14/M3	70067 70067	21652 21652	
TUBE CUTTER 50		12–50 mm	70065	070017D	4.8/5.90/18.5	3.0	70006	4.7/16/M4			Multi-layered composite pipe
AUTOMATIK pipe cutter	Size 1	6–67 mm	70030	070017D	4.8/5.90/18.5	3.0	70042	4.7/16/M4		21652	thin-walled Cu, Ms, Al, Fe
			70031	070028D	4.8/5.90/23.6	7.0	70042	4.7/16/M4		21652	PE-, PP- VPE, PB- and PVDF pipes
	Size 2	50–127 mm	70142	070057D	8.0/14.0/29.0	7.0	751004200	7.9/23.5/1/4"		21652	thin-walled Cu, Ms, Al, Fe
			70032	055054D	8.0/13.0/40.0	13.0	751004200	7.9/23.5/1/4"		21652	PE-, PP- VPE, PB- and PVDF pipes
				055053D	8.0/13.0/30.5	8.0	751004200	7.9/23.5/1/4"		21652	thin-walled PP pipes
	Size 3	100–168 mm	70033	055074D	8.0/11.0/45.0	16.0	751004200	7.9/23.5/1/4"		21652	PE-, PP- VPE, PB- and PVDF pipes
				055053D	8.0/11.0/30.5	8.6	751004200	7.9/23.5/1/4"		21652	thin-walled PP pipes
TUBE CUTTER 28 TUBE CUTTER 42		3–28 mm 3–42 mm	70010 70011	070007D 070007D	4.8/3.0/16.0 4.8/3.0/16.0	2.5 2.5	70080 + 70081 70080 + 70081	4.7/9/SR 4.7/9/SR	80679 80679		thin-walled Cu, Ms, Al, Fe thin-walled Cu, Ms, Al, Fe
TUBE CUTTER 42 PRO PVC		6–42 mm	70072	070028D	4.8/9.5/23.6	7.0	70041	4.7/14/M3	70067		PE-, PP- VPE, PB- and PVDF pipes
Steel pipe cutter SUPER		1/8"–1.1/4" 1/8"–2"	70040 70045	070046D 070051D	7.5/14.0/25.7 9.0/17.0/31.5	5.5 6.0	70048 70053	7.4/30/– 8.9/35/–	70047 70052		Steel pipe Steel pipe
Steel pipe cutter ENORM		2"–4"	70060	070061D	9.7/20.0/41.0	8.0	70064	9.4/52/–	70063		Steel pipe
INOX TUBE CUTTER 30 PRO		3–30 mm	71085	070056D	4.8/5.9/18.5	5.5	70041	4.7/14/M3	70068		Stainless steel pipe
INOX TUBE CUTTER		10–54 mm	70340	70341	5.0/21.0/30.0	3.5	70041	4.7/14/M3	70068	21652	Stainless steel pipe
INOX TUBE CUTTER 35 INOX TUBE CUTTER 42 PRO		6–35 mm 6–42 mm	70055 70070	070056D 070056D	4.8/5.90/18.5 4.8/5.90/18.5	4.0 4.0	70041 70041	4.7/14/M3 4.7/14/M3	70068 70068	21652 21652	Stainless steel pipe Stainless steel pipe
INOX SUPER		1/8"–1.1/4" 1/8"–2"	70086 70087	070088D 070089D	4.8/5.90/19.3 9.0/19.0/31.5	4.0 7.0	70048 70053	7.4/30/– 8.9/35/–	70047 70052		Stainless steel pipe Stainless steel pipe
Chain pipe cutter		100 mm	70285		4.0/3.80/17.8	3.0			Spare chain 70286		thin-walled Cu, Ms, Al, Fe

Universal internal & external deburrer

Quick and easy deburring Ø 4–54 mm (1/8–2")

For copper, steel and stainless steel pipes, with polished cutting blade made of hardened special steel, smooth running


No. 11006


No. 1500000237
No. 1500000236

Model	mm	inch	g	No.
Internal and external deburrer for copper and plastic	4–36	1/8–1.3/8"	30	11006
Internal and external deburrer for copper and INOX (stainless steel)	6–35	1/4–1.3/8"	100	1500000237
Internal and external deburrer for copper and INOX (stainless steel)	10–54	1/2–2"	390	1500000236


No. 11045

Drive shaft

For the deburring with portable screwdriver or drill

Deburrer adaptor I/II

Adaptor for the use of the internal and external deburring with portable screwdriver or drill

KEY FEATURES

- User-friendly solution for deburring pipes "internal and external"
- Huge time-savings
- Precise, burr-free deburring without effort





Model	g	No.
Deburrer adaptor I for No. 1500000237	160	11044
Deburrer adaptor II for No. 1500000236	280	11045

GRATFIX HSS/UNIGRAT

Deburrer

KEY FEATURES

- Replaceable blades
- GRATFIX with plastic cartridge-grip
- Grip recess is raised at the end and prevents slippage out of the hand
- One-handed use with the retractable locking head
- Offset surfaces provide a good torque
- Pluggable handle ends for the storage of associated blades


UNIGRAT (No. 21660)

Model	g		No.
UNIGRAT with HSS deburring blade	30	10	21660
GRATFIX with deburring blade No. 1	50	3	21655
GRATFIX with deburring blade No. 1–2–3	80	3	21651

Ideal for deburring of edges, pipes and steel, aluminium, brass, copper sheets, cast-iron and plastic plates!


Nr. 1 (No. 21652)


GRATFIX HSS (No. 21655)

Model	g		No.
HSS deburring blade No. 1 Universal	10	10	21652

Electrical power combination pliers

- Equipped with an integrated ring spanner for M8 and M10 nuts/screws
- Inductive hardened blade to ensure a higher service life
- Asymmetric grip function can be used to grab round or flat materials



1000 V IEC 60900

mm	g	No.
180	250	1500003163

Electrical edge cutter, Electrical power edge cutter

- Inductive hardened blade to ensure a higher service life
- Wave profile of the blade provides an anti-slip function: The wire does not slip out while being cut
- Comfortable handling thanks to ergonomic 3K handles



1000 V IEC 60900

mm	g	No.
160	210	1500003164
200	300	1500003166

Electrical multi insulation stripper

- Improvement of the common insulation stripper and does not need an adjusting screw
- Ideally suitable to strip Ø 5–16 mm cable coatings
- The stripping function enables cable stripping of single- or multicore cables up to Ø 5.0 mm



1000 V IEC 60900

mm	g	No.
180	230	1500003167

Voltage Detector E-Detector 90–1000 V

The non-contact voltage tester detects AC voltage in a range of 90–1000 V. When voltage is detected, a red LED lights up. In addition, a flashlight is attached to the voltage tester.



Model	g	No.
Voltage E-Detector 90–1000 V	30	1500003374

Electrical long nose pliers

- Inductive hardened blade to ensure a higher service life
- Integrated M10 ring spanner to tighten/loosen nuts and screws
- Grab wires precisely, the serrated gripping surface ensures a tight, firm grip



1000 V IEC 60900

mm	g	No.
200	200	1500003168

Ergonomic electrical installation pliers

- Integrated stripping function, ring spanner and gripping zone for flat and round material
- Multi purpose tool makes lots of other tools obsolete
- Angled design enables low-fatigue working

1000 V IEC 60900



mm	g	No.
200	290	1500003169

VDE screwdriver set

Blades made of chrome vanadium molybdenum steel, thoroughly hardened, extrusion-coated blade insulation tightly joined with handle, 1,000 Volt



1000 V

Model	g	No.
VDE screwdriver set, includes:	680	323126
Slot 2.5 x 75; 4.0 x 100; 5.5 x 125; 6.5 x 150		
Phillips PH 1x 80; PH 2x 100 and live-wire-tester		

SWO adjustable wrench

Chrome-Vanadiumsteel, chrome-plated and polished finish

KEY FEATURES

- Metric measuring scale on jaws for easy jaws pre-setting and sizing of nuts, bolts, pipes etc.
- Great accessibility in confined spaces, non-protruding jaw shank at maximum opening
- Absolutely parallel jaw surfaces ensure perfect grip of nuts and screws



No. 1500001509

Size	mm	Clamping width up to mm (inch)	g		No.
6"	176	34 (1.3/8")	205	6	1500001509
8"	216	39 (1.1/2")	345	6	1500001510

ROCLICK

Combined open-ended / hinged ratchet wrench

Chrome vanadium steel, polished and high shine chrome-plated

KEY FEATURES

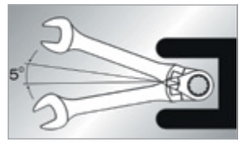
- Moveable ring ratchet allows for use even in tight spaces
- Precise work with the fine-running ratchet (72 teeth)



7-part set (No. 70490) includes: ROCLICK combined spanner 8–10–11–13–14–17–19 mm, plastic case

Model	g	No.
ROCLICK spanner set, 7 pieces	1,150	70490

Small 5° operating radius



Adjustable inclination angle



Small operating radius of only 5°!



Fig. ROCLICK wrench set

ROCASE 4407 with ROBOX

The ROCASE with a transparent lid is compatible with the other cases. In the inside of the case there is a structure to fix the ROBOXes.

KEY FEATURES

- Optimisation of the daily work because items are perfectly organised into the case

Set (No. 1000002625) includes: ROCASE 4407, 6x ROBOX B2350 (No. 1500002641)

Model	g	No.
ROCASE 4407 with ROBOX, 39 x 39 x 7 cm	1.700	1000002625



ROGRIP M

Quickly adjustable water pump pliers

KEY FEATURES

- **Durable:** Due to double hardening, the teeth are particularly wear-resistant
- **Slip-resistant:** The shape of the teeth (self-locking), the 3-touch-point grip on the pipe and the soft-touch handle, prevent slipping of the pliers
- **Large gripping capacity:** 30 % more gripping capacity* (10" pliers up to 2" pipe diameters)

TECHNICAL DATA

- **Chrome vanadium steel** tempered, drop forged with heavy-duty box joint
- **Polished head and joint**
- **Double hardened jaws**, extremely durable



Model	Working range		No.
ROGRIP M 7" 1K	Ø 1.1/4" / 43 mm	6	1000002697
ROGRIP M 7" 2K	Ø 1.1/4" / 43 mm	6	1000002698
ROGRIP M 10" 1K	Ø 2" / 60 mm	6	1000002699
ROGRIP M 10" 2K	Ø 2" / 60 mm	6	1000002700

ROTHENBERGER Curve-Shape-Design – 7" pliers grip like 10" pliers!

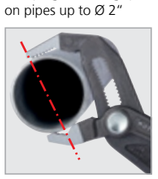
ROGRIP F

Quickly adjustable water pump pliers

KEY FEATURES

- **Durable:** Due to double hardening, the teeth are particularly wear-resistant
- **Slip-resistant:** The shape of the teeth (self-locking), the 3-touch-point grip on the pipe and the soft-touch handle, prevent slipping of the pliers
- **Large gripping capacity:** 30 % more gripping capacity* (10" pliers up to 2" pipe diameters)
- **Safety lock system:** Prevents unintentional opening and enables a 50 % quicker adjustment

3-touch-point grip over the middle for reliable clamping. Perfect grip on pipes up to Ø 2"





Model	Working range		No.
ROGRIP F 7" 1K	Ø 1.1/4" / 43 mm	6	1000002701
ROGRIP F 7" 2K	Ø 1.1/4" / 43 mm	6	1000002702
ROGRIP F 10" 1K	Ø 2" / 60 mm	6	1000002704
ROGRIP F 10" 2K	Ø 2" / 60 mm	6	1000002705

ROTHENBERGER Curve-Shape-Design – 7" pliers grip like 10" pliers!

* than previous model

ROFAST

Pliers wrench

For gripping, holding, clenching and bending of chrome-plated fittings with delicate surfaces

KEY FEATURES

- **Gentle to surfaces:** Smooth, parallel jaws enable use on delicate surfaces
- **Versatile:** Replaces spanner sets (0–50 mm or 0–1.7/8") and dispenses with use of other tools
- **Convenient handling:** Excellent pressing and clamping force with 10x force transfer for high gripping power



inch	mm	max. inch	max. mm	g	No.
10"	254	1.7/8"	50	580	1500003170

ROGRIP XL

Quickly adjustable water pump pliers

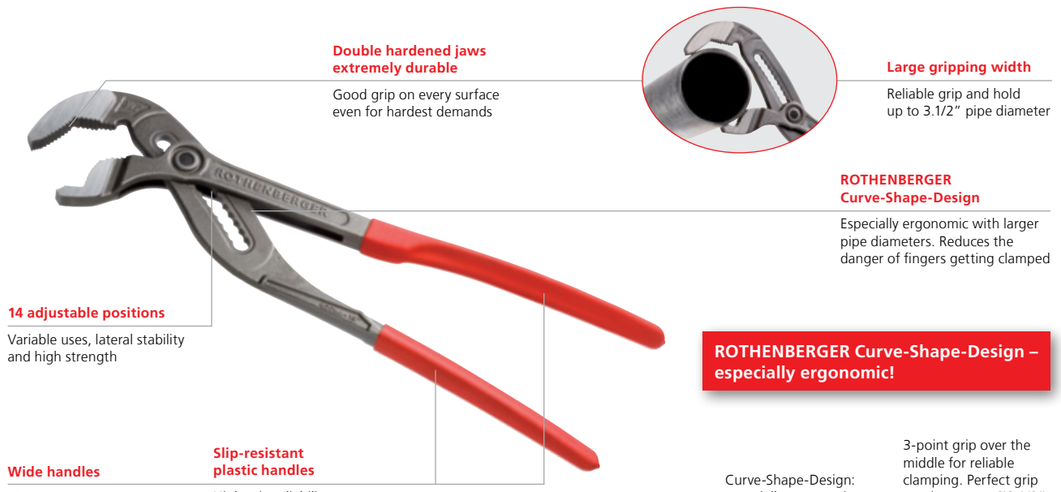
KEY FEATURES

- 16" pliers up to 3.1/2" pipe diameters
- 3-point grip: reliable clamping and perfect grip up to the maximal pipe diameter
- ROTHENBERGER Curve-Shape-Design: especially ergonomic by large pipe diameters. Reduces the danger of fingers getting clamped
- Wide handle for more comfort and better transmission of power
- 14 point size adjustment

TECHNICAL DATA

- **Chrome vanadium steel** tempered, drop forged with heavy-duty box joint
- **Polished head and joint**
- **Double hardened jaws**, extremely durable

Enormous gripping width of 3.1/2" – reliable grip during application



inch	mm	max. inch	max. mm	g	No.
16"	440	3.1/2"	102	1,400	1000000328

ROTHENBERGER Curve-Shape-Design – especially ergonomic!

Curve-Shape-Design: especially ergonomic



3-point grip over the middle for reliable clamping. Perfect grip on pipes up to Ø 3.1/2"



3

ROTHENBERGER
pipetool technologies at work

JOIN THE PRESS REVOLUTION!

>B< MaxiPro
In partnership with Conex | Bänninger

Press machine for Conex Bänninger ›B‹ MaxiPro

ROMAX Compact TT (TWIN TURBO)

Electrohydraulic press machine for battery operated pressing of Conex Bänninger ›B‹ MaxiPro copper refrigeration fittings up to 1.1/8" with 19 kN

APPLICATION AREA

The ROMAX Compact TT is 3 seconds fast, 2.5 kg light and 19 kN strong. Through the perfect handling the machine is particularly suitable for ACR installations, high volume pressings or service installations.

COMPATIBLE PRESS MACHINES

The ROMAX Compact TT and the Compact press jaws are suitable for the innovative ›B‹ MaxiPro ACR fitting system from Conex Bänninger. Press jaws see page 19.

TECHNICAL DATA

Dimension:	336 x 143 x 76 mm (with 2.0 Ah battery)
Weight:	2.5 kg (without press jaw)
Piston force / hub:	19 kN / 30 mm
Nominal size:	1/4"–1.1/8" Conex Bänninger ›B‹ MaxiPro copper
Service interval:	40,000 pressings / 2 years
Press jaw fixture:	270° rotation
Power supply:	RO BP 18 V / 2.0 Ah Li-Ion battery RO BP 18 V / 4.0 Ah Li-Ion battery
Operating temperature:	-10 °C up to 60 °C
Pressings:	approx. 150 press cycles with 2.0 Ah battery tested with 1" Conex Bänninger ›B‹ MaxiPro fittings



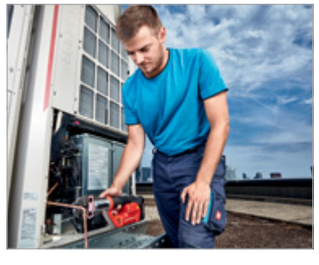
No Nitrogen purge: Conex Bänninger ›B‹ MaxiPro is a mechanical joint, thus eliminating the need for nitrogen purge during the jointing process.



Flame-free: Flame-free installation avoids the need for a hot work permit and the risk of fire on site.



Effect of the two cylinder-strucure: The machine can be used with one hand.



* Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries

Press machine for Conex Bänninger ›B‹ MaxiPro

ROMAX 4000

Electrohydraulic press machine for battery operated pressing of Conex Bänninger ›B‹ MaxiPro copper refrigeration fittings up to 1.3/8" with 32–34 kN

APPLICATION AREA

The ROMAX 4000 operates in just 5 seconds, weighs only 3.6 kg and uses a force of 32–34 kN. It can press from 1.4" up to 1.3/8" Conex Bänninger ›B‹ MaxiPro fittings and is therefore the perfect all-rounder amongst the ROTHENBERGER press machines.

COMPATIBLE PRESS MACHINES

The ROMAX 4000 and the Standard press jaws are suitable for the innovative ›B‹ MaxiPro ACR fitting system from Conex Bänninger. Press jaws see page 19.

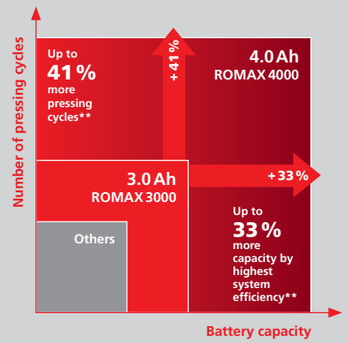
TECHNICAL DATA

Dimensions:	467 x 125 x 80 mm (with 4.0 Ah battery) 445 x 125 x 75 mm (with 2.0 Ah battery)
Weight:	3.6 kg (without press jaw)
Piston force / hub:	32–34 kN / 40 mm
Nominal size:	1/4"–1.3/8" Conex Bänninger ›B‹ MaxiPro copper
Service interval:	40,000 pressings / 2 years
Press jaw fixture:	270° rotation
Power supply:	RO BP 18 V / 2.0 Ah Li-Ion battery RO BP 18 V / 4.0 Ah Li-Ion battery
Operating temperature:	-10 °C up to 60 °C



Enter a new dimension of efficiency!

- Powerful 18 V / 4.0 Ah battery pack
- Up to 41 % more pressing cycles**
- Up to 33 % more capacity due to enhanced system efficiency**
- All this without a cord-maximum efficiency and on-site freedom for you!



* Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries

** Tested with SV 18 copper fittings (in comparison with ROMAX 3000)

DURA LAZR TEC

The unique laser hardening process

Long-lasting. Safe. Precise. Our DURA LAZR TEC press jaws set a new industry standard. The unique ROTHENBERGER laser hardening process, which is implemented in our own production, provides maximum stability and wear resistance. And, therefore, more safety and a longer service life!

Depth distribution of hardness was tested by the independent test laboratory of the State Materials Testing Institute Darmstadt (MPA).

Partial Laser-hardening for highly stressed surfaces

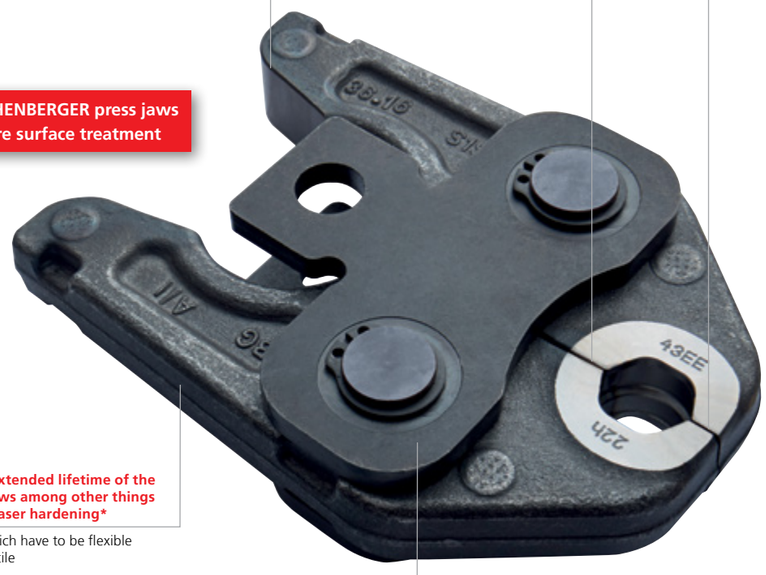
- Ideal accuracy of contour for highest precission during the complete live time
- 40 % increase in hardness*

Highest degree of hardness

- ROTHENBERGER press jaws are performing with the highest degree of hardness at highest stressed areas
- Even in the case of high burr formation during compression, the wear is reduced to a minimum

DURA LAZR TEC LASER HARDENING

ROTHENBERGER press jaws before surface treatment



100 % extended lifetime of the press jaws among other things due to laser hardening*

Parts which have to be flexible stay ductile

Adjustment of the plate

Durability increased by approx. 45 %*

+ 40 % HARDNESS AT HIGHLY STRESSED AREAS*

+100% PRESS CYCLES WITH LASER HARDENING*

Standard press jaws

Model	Press jaws Ø	kg		No.
Standard press jaw	1/4"	1.93	1	1000001889
Standard press jaw	3/8"	1.93	1	1000001890
Standard press jaw	1/2"	1.93	1	1000001891
Standard press jaw	5/8"	1.93	1	1000001892
Standard press jaw	3/4"	1.93	1	1000001893
Standard press jaw	7/8"	1.93	1	1000001894
Standard press jaw	1"	1.93	1	1000001895
Standard press jaw	1.1/8"	1.93	1	1000001896

Compact press jaws

Model	Press jaws Ø	kg		No.
Compact press jaw	1/4"	1.93	1	1000001749
Compact press jaw	3/8"	1.93	1	1000001750
Compact press jaw	1/2"	1.93	1	1000001751
Compact press jaw	5/8"	1.93	1	1000001752
Compact press jaw	3/4"	1.93	1	1000001753
Compact press jaw	7/8"	1.93	1	1000001754
Compact press jaw	1"	1.93	1	1000001755
Compact press jaw	1.1/8"	1.93	1	1000001756

* In comparison to previous models

The press revolution!

An innovative press system suitable for air-conditioning and refrigeration applications consisting of Conex Bänninger ›B‹ MaxiPro fittings and suitable press jaws and press machines from ROTHENBERGER.

DURA LAZR TEC LASER HARDENING · RO CASE · Conex | Bänninger ›B‹ MaxiPro

TIGHT CONNECTIONS UP TO 48 BAR

- The O-ring is resistant against several oils including ester oil*
- The 3-point press, one each side of the bead and one press compressing the O-ring, provides a permanent and secure joint

THE ADVANTAGES

- Only 3 seconds per joint completion
- Saves approx. 3 minutes per connection
- Flame-free joint, no hot work permit needed
- No need for nitrogen purge

LONG-LASTING DUE TO LASER HARDENING

The press jaws are partially laser-hardened. This makes them particularly durable in those places that take the most pressure and increases their lifetime considerably.



Press jaw for ROMAX Compact TT No. 1000001751



Press jaw for ROMAX 4000 No. 1000001891



Standard press ring set No. 1000003532



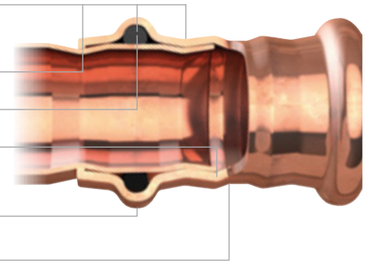


DATA CONEX BÄNNINGER ›B‹ MAXIPRO FITTING

Application:	Air-conditioning and refrigeration
Connections:	Copper to copper
Fitting / tube range:	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1.1/8", 1.3/8"
O-ring:	HNBR
Max. operating pressure:	48 bar / 4800 kPa / 700 psig
Leak tightness:	Helium ≤ 7.5 x 10^{-7} Pa.m^3/s at +20 °C, 10 bar
Vaccum:	200 microns
Operating temperature:	-40 °C up to 140 °C
UL listing continues operating temperature:	121 °C
Compatible refrigerants:	R32, R134a, R404A, R407C, R407F, R410A, R507, R1234ze, R1234yf, R718, R450A, R513A, R448A, R449A, R407A, R427A, R438A, R417A and R422D
Approved tube:	For full information, please visit conexbanninger.com
Approvals, standards and test compliance:	For full information, please visit conexbanninger.com

3-POINT PRESS TECHNOLOGY

Three press points: one on each side of the bead and one compressing the O-ring for a permanent and secure joint



Set (No. 1000002121) includes: ROMAX Compact TT press machine, 1x RO BP 18 V/2.0 Ah battery (No. 1000001652), RO BC battery charger EU (No. 1000001654), 8x press jaws (No. see below), TC 35 (No. 70027), internal/external deburrer (No. 1500000237), UNIGRAT pencil deburrer (No. 21660), ROVLIES cleaning pads (No. 45268), depth gauge (No. 1000002400), 2x ROCASE 4414 case system

Model	Press jaws Ø	kg	No.
ROMAX Compact TT + press jaw set 1/4"–1.1/8" + hand tools, EU	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	21.2	1000002121
ROMAX Compact TT + press jaw set 1/4"–1.1/8" + hand tools, UK	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	21.2	1000002125
Compact press jaw set 1/4"–1.1/8" + hand tools	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	14.0	1000001989
ROMAX 4000 + press jaw set 1/4"–1.1/8" + hand tools, EU	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	24.3	1000002945
ROMAX 4000 + press jaw set 1/4"–1.1/8" + hand tools, UK	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	24.3	1000002946
Standard press jaw set 1/4"–1.1/8" + hand tools	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	18.1	1000002207
Standard press jaw	1.3/8"	2.2	1000002943

* For full information, please visit conexbanninger.com

Press rings

Makes work significantly easier, even in confined spaces



Press ring for Standard and Compact Actuator jaws

Same press ring for Standard and Compact Actuator jaws

Initially available with profile for Conex Bänninger ›B‹ MaxiPro

Press ring for the flame-free pipe connection in Air Conditioning

DURA LAZR TEC

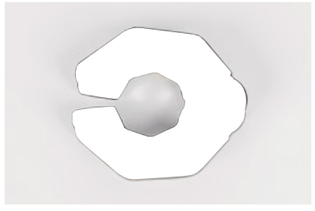
For 40 % more hardness and 100 % more press cycles

180° Swivel

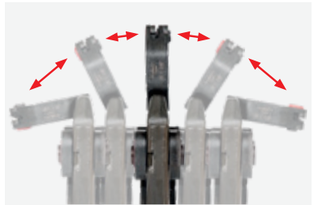
Freely adjustable positioning of the press machine

Locking position

For the one-handed installation on the fitting



The locking position allows to place the press ring on the fitting with one hand



The 180° swivel allows a freely adjustable positioning of the press machine



Press rings compatible with Standard and Compact Actuator jaws

Model	Press ring Ø	kg	No.
Standard press ring set	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1.1/8"	6.25	1000003532
Compact press ring set	1/4", 3/8", 1/2", 3/4", 5/8", 7/8", 1", 1.1/8"	5.26	1000003536
Standard press ring set	1/4", 3/8", 1/2", 5/8"	4.84	1000003625
Compact press ring set	1/4", 3/8", 1/2", 3/4", 5/8"	3.85	1000003624
Press ring	1/4"	0.24	1000003610
Press ring	3/8"	0.23	1000003611
Press ring	1/2"	0.22	1000003612
Press ring	5/8"	0.29	1000003613
Press ring	3/4"	0.28	1000003614
Press ring	7/8"	0.31	1000003615
Press ring	1"	0.42	1000003616
Press ring	1.1/8"	0.40	1000003617
Actuator jaw Standard	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1.1/8"	2.36	1000003589
Actuator jaw Compact	1/4", 3/8", 1/2", 5/8", 3/4", 7/8", 1", 1.1/8"	1.37	1000003590

How is the Conex Bänninger ›B‹ MaxiPro system installed?

Conex Bänninger ›B‹ MaxiPro benefits from a 3-point radial press – three press points, one on each side of the bead and one press point compressing the O-ring. This provides a permanent and secure joint. As the connection is a mechanical joint, there is no need for nitrogen purge during the joining process.

1. Cut the tube to length.

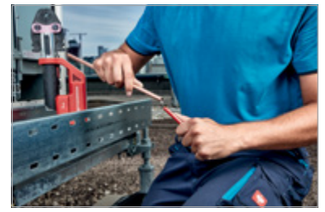


No. 70027

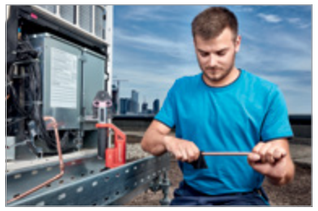
2. Deburr and remove all external sharp edges.



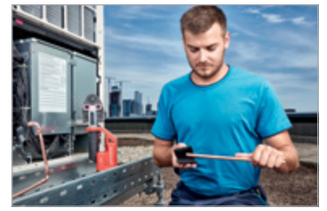
3. Use a pencil deburrer on internal edges.



4. Clean the tube end while rotating the tube about length axis, avoiding grooves that run parallel to the tube.



5. Check for defects.



6. Ensure the O-ring is seated.



7. Mark insertion depth using depth gauge and insert tube fully into the fitting.



8. Align jaws squarely on the fitting and complete the joint.



9. Mark the completed joint.

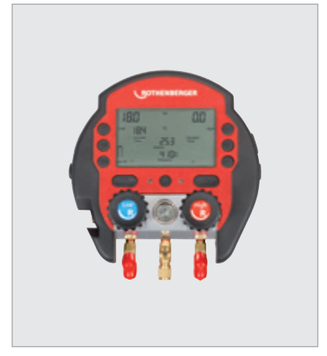


Please note: To ensure a safe and tight connection please follow the detailed Conex Bänninger ›B‹ MaxiPro installation process. For more information, please visit the Conex Bänninger website: conexbanninger.com

COMPATIBLE PRODUCTS (SELECTION)



ROAIRVAC R32 2.0/5.0 CL
No. 1000003229 / No. 1000003231



ROCOOL 600
No. 1000000569



ROREC PRO Digital
No. 1500002637

ROLOCK expander power torque

For expanding, reducing and calibrating soft and semihard pipes Ø 8–42 mm (5/16–1.3/4”), as well as producing tapers

APPLICATION AREA

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

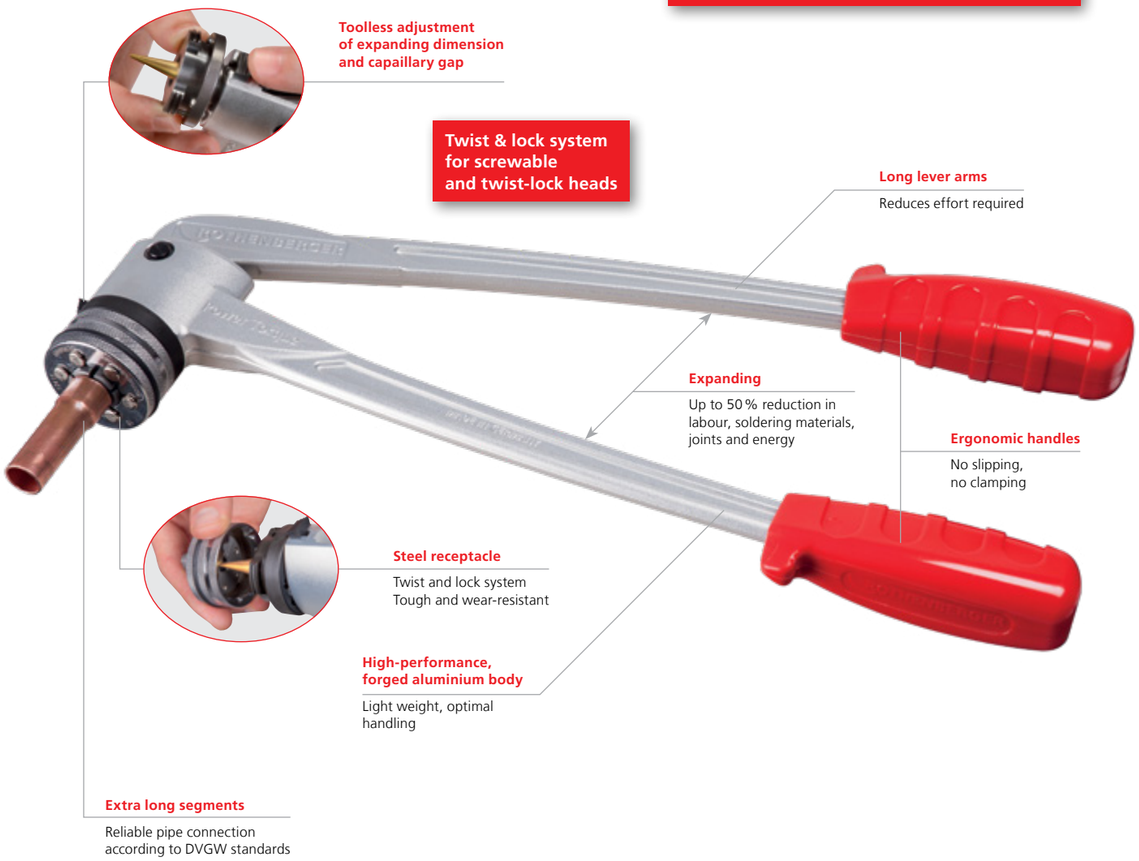
Suitable for pipes made of:

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

KEY FEATURES

- Eliminates the cost of purchase and storage of fittings
- Converts deformed pipes into fittings; saves resources
- 50 % reduction of labour, soldering materials, joints and energy
- Reliable pipe connection according to DVGW standards
- Tough, light and wear-resistant
- Fine adjustment of the capillary gap
- **EPT – concealed bent lever**

Made in Germany!
The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 50 years!



Model	kg	No.
ROLOCK expander power torque	1	12400

ROLOCK expander power torque sets

ROLOCK expander power torque sets include: ROLOCK expander power torque (No. 12400), expander heads, internal and external deburrer (No. 11006), carrying case (No. 24022), plastic inlay (No. 11002)



New expander head with twist & lock system for quick and easy change between nominal diameters



Standard screwable expander head, still compatible with the ROLOCK Expander

Size	kg	No.
12 – 15 – 18 – 22 mm	2.9	12500
12 – 15 – 18 – 22 – 28 mm	3.3	12503
10 – 12 – 16 – 22 – 28 mm	3.3	12505
12 – 14 – 16 – 18 – 22 mm	3.3	12509
10 – 12 – 14 – 16 – 18 – 22 mm	3.6	12511
10 – 12 – 15 – 16 – 18 – 22 – 28 mm	3.6	12537
12 – 14 – 16 – 18 – 22 – 28 – 32 mm	3.7	12538
3/8 – 1/2 – 5/8 – 3/4 – 1”	3.3	12517
3/8 – 1/2 – 5/8 – 3/4 – 7/8 – 1.1/8”	3.6	12518
1/2 – 5/8 – 3/4 – 7/8”	2.9	12521
12 – 16 – 18 – 22 – 28 mm	3.2	12522
1/2 – 5/8 – 7/8 – 1.1/8”	3.0	12524
12 – 15 – 18 – 22 – 28 – 35 – 42 mm	4.2	12526
1/2 – 3/4 – 1”	2.9	12535
3/8 – 1/2 – 5/8 – 3/4 – 7/8 – 1 – 1.1/8”	3.7	12536
3/8 – 1/2 – 5/8 – 3/4 – 7/8 – 1.1/8 – 1.3/8”	4.5	12541

The **EPT-Technology (Enclosed Power Transmission)** 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.

For efficient, fitting-free installation of pipes



ACCESSORIES



Expander heads for ROLOCK expander power torque (see page 24–25)



Expander heads type S/riveted expander heads (see page 24–25)



Pipe cutter No. 70027



Internal/external deburrer No. 1500000237



Brazing solder (see page 52)



SUPER FIRE 4 with MAPP* gas (see page 42)

* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

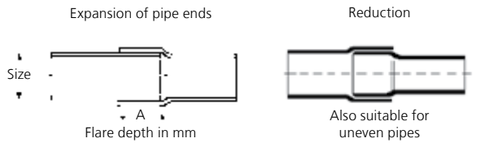
Standard expander head

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

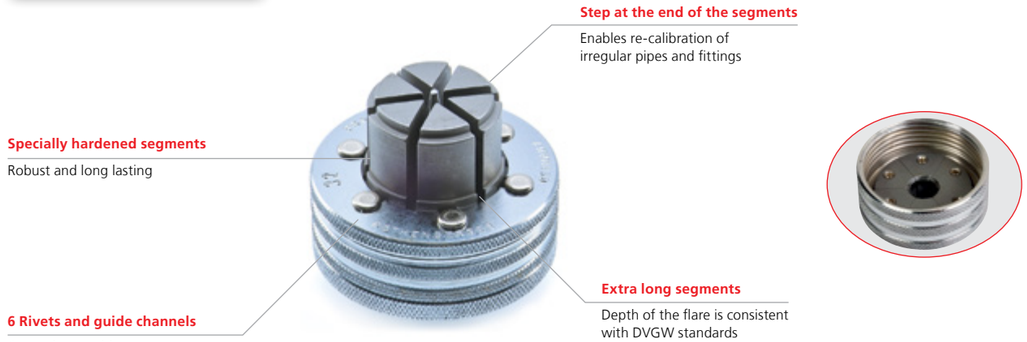
Made in Germany!
The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 50 years!

KEY FEATURES

- 50 % reduction in labour, soldering materials and soldered joints
- Depth of the flare is consistent with DVGW standards
- Compulsory guidance guarantees a perfect centred position and uniform capillary gap
- Robust and long lasting with the hardened segments



Fits similar expanders from other brands as well!



mm	max. wall thickness mm (soft) Cu	Al	Fe	Inox	A mm	g	No.
8	1.0	1.0	1.0	1.0	6.0	120	11008
10	1.0	1.0	1.0	1.0	10.0	120	11010
12	1.2	1.2	1.2	1.0	12.6	120	11012
14	1.2	1.2	1.2	1.0	12.6	120	11014
15	1.2	1.2	1.2	1.0	15.5	120	11015
16	1.2	1.2	1.2	1.0	15.5	120	11016
18	1.2	1.2	1.2	1.0	17.5	120	11018
20	1.2	1.2	1.2	1.0	17.5	140	11020
22	1.2	1.5	1.5	1.0	20.5	140	11022
28	1.5	1.5	1.5	–	18.5	390	11028
32	1.5	–	–	–	19.5	410	11032
35	1.6	–	–	–	19.5	430	11035
38	1.6	–	–	–	19.5	450	11038
40	1.5	–	–	–	19.5	470	11040
42	1.5	–	–	–	19.5	470	11042

inch	max. wall thickness mm (soft) Cu	Al	Fe	Inox	A mm	g	No.
5/16"	1.0	1.0	1.0	1.0	6.0	120	11008
3/8"	1.0	1.0	1.0	1.0	7.4	120	11052
1/2"	1.2	1.2	1.2	1.0	11.0	120	11053
5/8"	1.2	1.2	1.2	1.0	14.0	120	11054
3/4"	1.2	1.2	1.2	1.0	18.1	120	11055
7/8"	1.2	1.2	1.2	1.0	18.0	140	11056
1"	1.5	1.5	1.5	–	15.8	150	11057
1.1/8"	1.6	1.6	1.6	–	17.0	390	11058
1.1/4"	1.6	–	–	–	17.0	410	11059
1.3/8"	1.6	–	–	–	17.0	430	11035
1.1/2"	1.6	–	–	–	17.0	450	11038
1.5/8"	1.6	–	–	–	17.5	470	11062
1.3/4"	1.6	–	–	–	17.5	500	11063

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

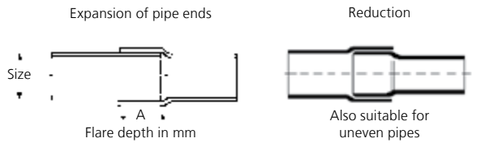
ROLOCK expander head

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

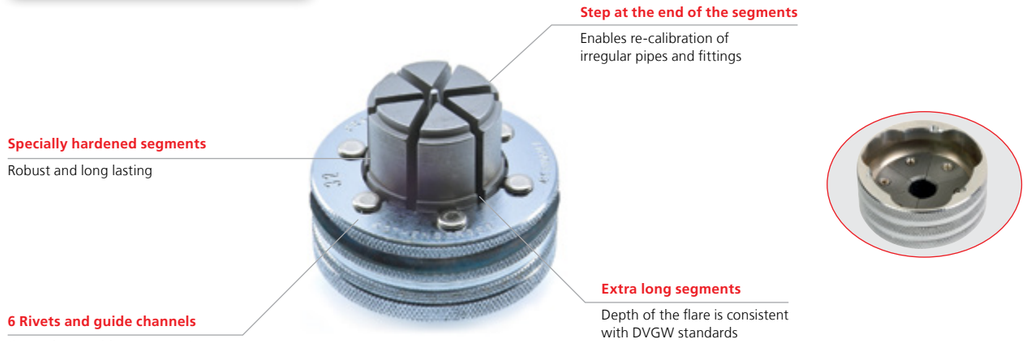
Made in Germany!
The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 50 years!

KEY FEATURES

- 50 % reduction in labour, soldering materials and soldered joints
- Depth of the flare is consistent with DVGW standards
- Compulsory guidance guarantees a perfect centred position and uniform capillary gap
- Robust and long lasting with the hardened segments



Twist & lock heads for ROLOCK expander power torque



mm	max. wall thickness mm (soft) Cu	Al	Fe	Inox	A mm	g	No.
8	1.0	1.0	1.0	1.0	6.0	120	12408
10	1.0	1.0	1.0	1.0	10.0	120	12410
12	1.2	1.2	1.2	1.0	12.6	120	12412
14	1.2	1.2	1.2	1.0	12.6	120	12414
15	1.2	1.2	1.2	1.0	15.5	120	12415
16	1.2	1.2	1.2	1.0	15.5	120	12416
18	1.2	1.2	1.2	1.0	17.5	120	12418
20	1.2	1.2	1.2	1.0	17.5	140	12420
22	1.2	1.5	1.5	1.0	20.5	140	12422
28	1.5	1.5	1.5	–	18.5	390	12428
32	1.5	–	–	–	19.5	410	12432
35	1.6	–	–	–	19.5	430	12435
38	1.6	–	–	–	19.5	450	12438
40	1.5	–	–	–	19.5	470	12440
42	1.5	–	–	–	19.5	470	12442

inch	max. wall thickness mm (soft) Cu	Al	Fe	Inox	A mm	g	No.
5/16"	1.0	1.0	1.0	1.0	6.0	120	12408
3/8"	1.0	1.0	1.0	1.0	7.4	120	12452
1/2"	1.2	1.2	1.2	1.0	11.0	120	12453
5/8"	1.2	1.2	1.2	1.0	14.0	120	12454
3/4"	1.2	1.2	1.2	1.0	18.1	120	12455
7/8"	1.2	1.2	1.2	1.0	18.0	140	12456
1"	1.5	1.5	1.5	–	15.8	150	12457
1.1/8"	1.6	1.6	1.6	–	17.0	390	12458
1.1/4"	1.6	–	–	–	17.0	410	12459
1.3/8"	1.6	–	–	–	17.0	430	12435
1.1/2"	1.6	–	–	–	17.0	450	12438
1.5/8"	1.6	–	–	–	17.5	470	12462
1.3/4"	1.6	–	–	–	17.5	500	12463

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

ROLOCK COMBI KIT expander/tee-extractor

Practical, compact and cost-saving set combinations with ROLOCK expander power torque and tee-extractors. For all common pipe dimensions Ø 10–28 mm (3/8–1.1/8")

Made in Germany!
The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 50 years!

APPLICATION AREA

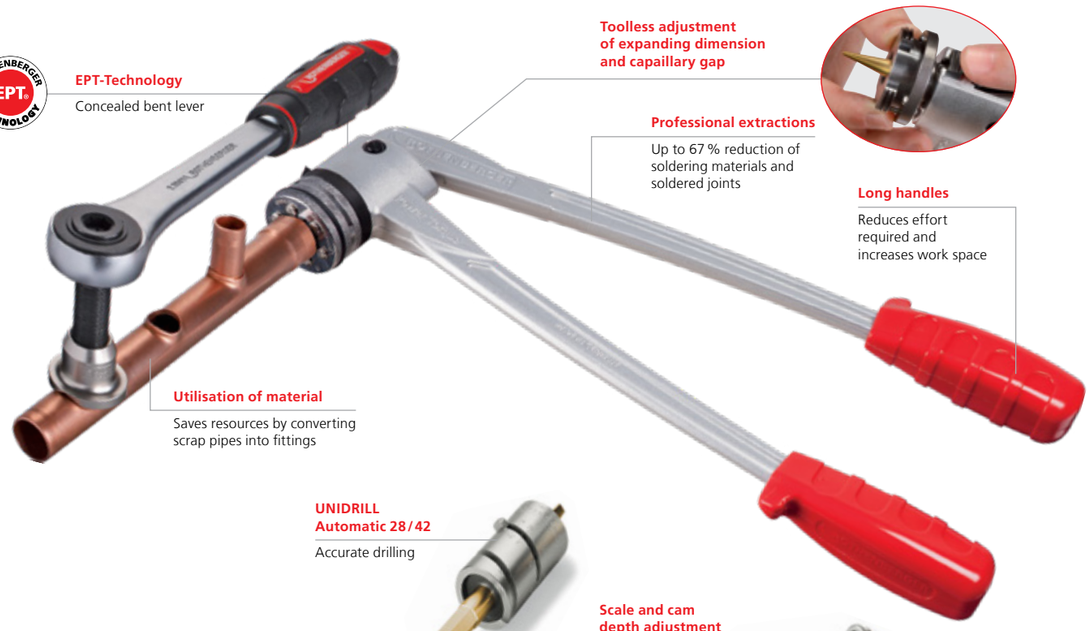
Suitable for pipes made of **copper, aluminium and steel (soft):** Ø 10–28 mm and 3/8–1.1/8"

KEY FEATURES

- Increases safety by reducing the number of connections
- Suitable for making branches even in confined spaces through the compact design

KEY FEATURES

- Toolless adjustment of the capaillary gap
- Reduces effort required and increases work space
- Up to 67 % reduction of soldering materials and soldered joints
- Accurate drilling
- Saves resources by converting scrap pipes into fittings
- Reliable pipe connections to DVGW standards



No. 21583/No. 21575



No. 22080



Fig. similar

ROLOCK COMBI KIT set includes: ROLOCK expander power torque (No. 12400), ROLOCK expander heads, tee-extractor, special ratchet (No. 27180), adaptor (No. 1500002894), UNIDRILL Automatic 28 (No. 21583), extractor cam pincer (No. 22080), steel carrying case (No. 24022)

Model	Size	kg	No.
ROLOCK COMBI KIT	12–15–18–22 mm	4.4	12601
ROLOCK COMBI KIT	12–14–16–18 mm	2.6	12602
ROLOCK COMBI KIT	1/2–5/8–7/8–1.1/8"	2.8	12604
ROLOCK COMBI KIT	1/2–3/4–1"	2.5	12605

Tee-extractor sets

For efficient production of T-branches (extractions) for fitting-free pipe installations, Ø 10–28 mm (3/8–1.1/8")

Made in Germany!
The know-how from the pioneer of expanding technology and the leading manufacturer of expanding tools for over 50 years!

APPLICATION AREA

Suitable for pipes made of:

Copper (soft, semi-soft, hart):	10–42 mm, 3/8–2.1/8" max. wall thickness 2.5 mm
Aluminium:	10–42 mm, 3/8–2.1/8" max. wall thickness 2.5 mm
Precision steel:	10–42 mm, 3/8–2.1/8" max. wall thickness 2.5 mm

KEY FEATURES

- Eliminates the cost for T-pieces, purchase and storage of fittings
- Extractions even on installed pipes possible
- Accurate drilling
- Optimal positioning with the cam pincher depth adjustment



No. 21583/ No. 21575



Fig. similar

Tee-extractor sets include: Tee-extractor according to chart, special ratchet (No. 27180), adaptor (No. 1500002894), cam pincer (No. 22080) and special conical drill, UNIDRILL Automatic 42 (No. 21575), in steel carrying case (No. 24022)

Model	Size	kg	No.
Tee-extractor set	12–15–18–22 mm	3.4	22100
Tee-extractor set	12–15–22–28 mm	3.6	22101
Tee-extractor set	12–15–18–22–28 mm	3.9	22103
Tee-extractor set	10–12–15–18–22 mm	3.5	22102
Tee-extractor set	12–14–16–18–22 mm	3.6	22109
Tee-extractor set	10–12–14–16–18–22 mm	3.7	22111
Tee-extractor set	12–15–18–22–28–35–42 mm	5.5	22126
Tee-extractor set	15–22–28 mm	3.6	22127
Tee-extractor set	1/2–5/8–3/4–7/8"	3.4	22121
Tee-extractor set	1/2–5/8–7/8–1.1/8"	3.7	22124
Tee-extractor set	1/2–3/4–1"	3.3	22135

Tee-extractor

Tee-extractor with double v-block for accurate 90° branches, Ø 10–54 mm (3/8–2.1/8")

KEY FEATURES

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



mm/inch	mm	Drill Ø mm	mm	g	No.
10	1.0	6	11	130	22010
12	1.0	7	11	150	22012
14	1.0	8	11	160	22014
15	1.0	8	11	160	22015
16	1.0	8	11	220	22016
18	2.0	10	11	220	22018
22	2.0	12	11	300	22022
28	2.5	15	11	470	22028
35	2.5	22	11	700	22035
38	2.5	22	11	700	22038
42	2.5	26	11	890	22042
54	2.5	30	19 ■	1,380	22054
3/8"	1.0	6	11	110	22060
1/2"	1.0	7	11	140	22061

⬣ Hexagon ■ Square

mm/inch	mm	Drill Ø mm	mm	g	No.
5/8"	1.0	8	11	220	22016
3/4"	2.0	10	11	220	22062
7/8"	2.0	12	11	350	22063
1"	2.5	14	11	470	22064
1.1/8"	2.5	15	11	480	22065
1.1/4"	2.5	19	11	700	22066
1.3/8"	2.5	22	11	700	22035
1.1/2"	2.5	22	11	700	22038
1.5/8"	2.5	26	11	900	22068
2"	2.5	30	19 ■	1,380	22050
2.1/8"	2.5	30	19 ■	1,380	22054

ACCESSORIES

Socket 19 mm	F80053
Square connection 3/4"	F80054

Spare extractor hooks

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



mm	g	No.
10	60	1300005045
12	70	1300005046
14	90	1300005047
15	90	1300005048
16	140	1300005049
18	140	1300005050

mm	g	No.
22	210	1300005051
28	220	1300005052
35	290	1300005054
38	290	1300005055
42	320	1300005056
54	560	1300005057

inch	g	No.
3/8"	60	1300005058
1/2"	70	1300005059
5/8"	140	1300005049
3/4"	140	1300005060
7/8"	200	1300005061
1"	210	1300005062
1.1/8"	220	1300005063

inch	g	No.
1.1/4"	270	1300005064
1.3/8"	290	1300005054
1.1/2"	290	1300005055
1.5/8"	320	1300005065
2"	520	1300005067
2.1/8"	560	1300005057

Tee-extractor ratchet

Chrome vanadium steel, fine toothed and right/left reversible

Model	SW	g	No.
10–42 mm, 3/8–1.3/4"	3/4" ■	435	27180*
50–54 mm, 2–2.1/8"	3/4" ■	1,140	27181



No. 27180*
(Fig. similar)



No. 27181

* In order to use the Tee-extractor ratchet, an additional adapter (No. 1500002894) is required.

TUBE BENDER

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

APPLICATION AREA

Suitable for pipes made of:

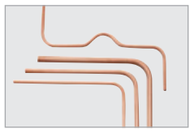
Copper (soft) and aluminium:	Ø 5–12 mm, 1/4–1/2"
Precision steel (soft):	Ø 5–12 mm, 1/4–1/2"

KEY FEATURES

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



Various bends possible



TUBE BENDER (No. 24130)



Bending formers (No. 24048)



Back plates (No. 24049)



Bending segments



TUBE BENDER sets include: basic tool complete with bending segments, back plates, ROCASE 4212 (No. 1300003334), inlay for ROCASE 4212 (No. 1300004003)

Model	kg	No.
Basic set	1.00	24010
(basic tool, back plates, plastic case)		
TB set 5–6–8–10 mm	2.84	24131
TB set 6–8–10–12 mm	3.03	24132
TB set 8–10–12 mm	2.82	24133
TB set 1/4–5/16–3/8–1/2"	2.92	24134
Basic tool without bending segments	0.36	766004016
Support segment	0.05	24048
Back plate without support segment	0.14	24049
ROCASE 4212	0.60	1300003334

TUBE BENDER bending segments

Model	Size	g	No.
Bending segments	5 mm	192	24001
Bending segments	6 mm	210	R2403200
Bending segments	8 mm	250	R2403300
Bending segments	9 mm	360	R2403400
Bending segments	10 mm	390	R2403500
Bending segments	12 mm	390	24007
Bending segments	1/4"	210	R2403200
Bending segments	5/16"	250	R2403300
Bending segments	3/8"	270	24006
Bending segments	1/2"	380	24008

Previous bending segments and back plates including support segments from earlier models are compatible!

TUBE BENDER MAXI

**For accurate one handed bending up to 90°,
Ø 10–26 mm (3/8–7/8")**

APPLICATION AREA

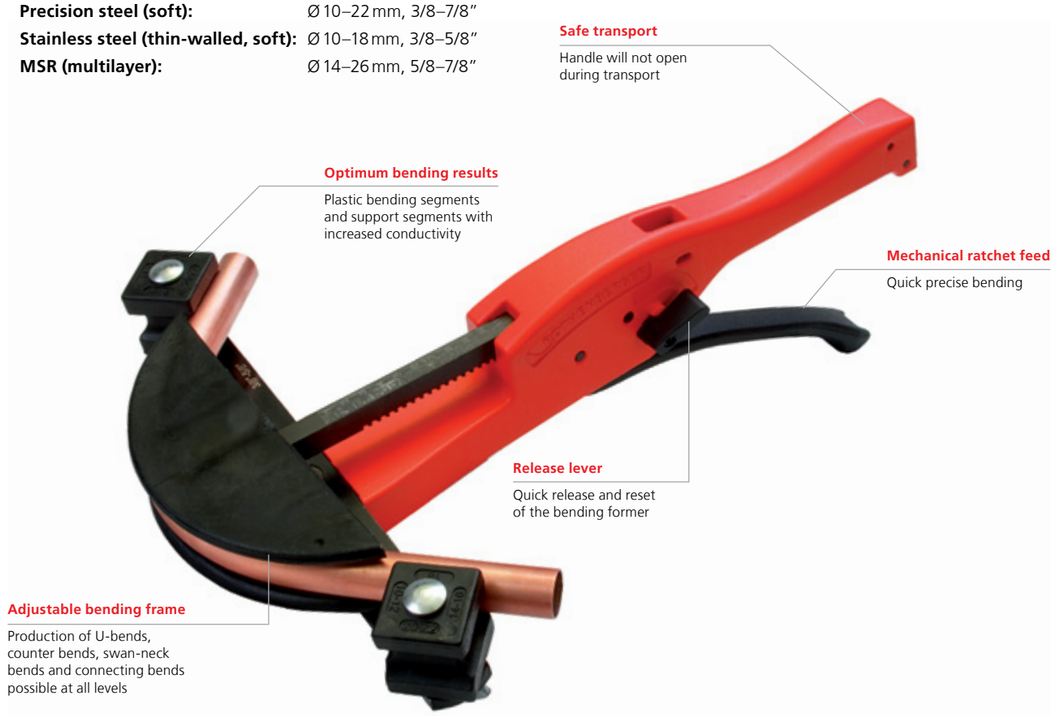
For the bending of pipes made of soft copper and aluminium, coated copper and precision steel pipes, as well as multi-layered composite pipes (only in MSR-sets) and stainless steel (soft).

Suitable for pipes made of:

Copper (soft) and aluminium:	Ø 10–22 mm, 3/8–7/8"
Copper (coated):	Ø 10–18 mm, 3/8–5/8"
Precision steel (soft):	Ø 10–22 mm, 3/8–7/8"
Stainless steel (thin-walled, soft):	Ø 10–18 mm, 3/8–5/8"
MSR (multilayer):	Ø 14–26 mm, 5/8–7/8"

KEY FEATURES

- Eliminates the cost for bending formers, storage and purchase
- Quick release and reset of the bending segments
- Bending segments are easily exchanged
- Optimum bending results



TUBE BENDER MAXI sets include: basic unit (No. 766100016), back plate support with segments (Cu set No. 23001, MSR set No. 23001, MSR set No. 24022), ROCASE 4414 (No. 1300003541), inlay for ROCASE 4414 (No. 1300004708)

Model	kg	No.
TB MAXI set 12–15–18–22 mm	3.5	023020X
TB MAXI set 12–14–16–18–22 mm	3.5	023021X
TB MAXI set 3/8–1/2–5/8–3/4–7/8"	3.3	023022X
TB MAXI set MSR 14–16–18–20–25 mm	3.3	023090X
TB MAXI set MSR 14–16–18–20–26 mm	3.3	023091X
Basic tool without back plate support	1.0	766100016
Back plate support without support segments	0.5	R2301500
Support segments MSR R/L 10–25 mm	0.5	23008
Support segments R/L 12–22 mm	0.1	23047
ROCASE 4414	1.1	1300003541

Previous bending segments and support segments from earlier models are compatible!

TUBE BENDER MAXI bending segments

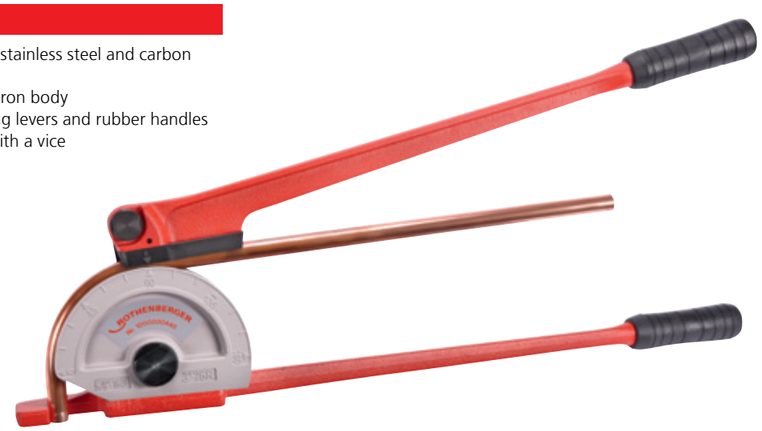
Model	Size	max. mm	g	No.
Bending segments	10 mm	1.0	80	23001
Bending segments	12 mm	1.0	80	23002
Bending segments	14 mm	1.0	80	23003
Bending segments	15 mm	1.0	90	23004
Bending segments	16 mm	1.0	100	23005
Bending segments	18 mm	1.0	140	23006
Bending segments	22 mm	1.0	170	23007
Bending segments	3/8"	1.0	70	23010
Bending segments	1/2"	1.0	80	23011
Bending segments	5/8"	1.0	100	23012
Bending segments	3/4"	1.0	120	23013
Bending segments	7/8"	1.0	170	23014

Pro Bender

For bending of pipes out of copper, stainless steel and carbon steel in the sizes 10 and 16 mm / 3/8"–3/4"

KEY FEATURES

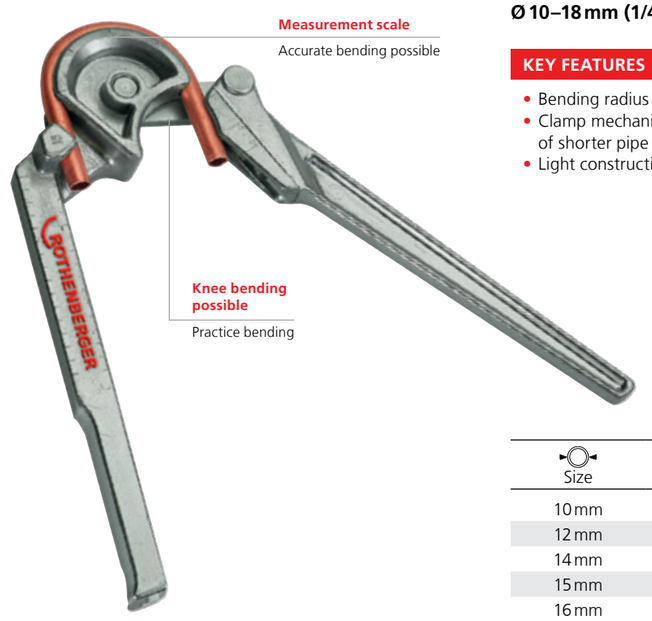
- Bending of pipes out of copper, stainless steel and carbon steel possible
- Long lasting due to forged cast iron body
- Comfortable working due to long levers and rubber handles
- Clamping surface for working with a vice



Size	max. mm	R Radius mm	mm	kg	No.
3/8" / 10 mm	1.0	40	530	2.2	1000001431
1/2"	1.0	47	530	2.1	767050016
5/8" / 16 mm	1.0	76	770	4.0	1000000445
3/4"	1.0	76	770	3.9	767750016

MULTIBEND

For accurate bending up to 180° of pipes made of soft copper, aluminium and precision steel Ø 10–18 mm (1/4–5/8")

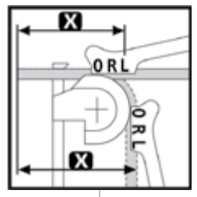


KEY FEATURES

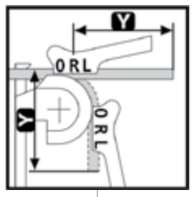
- Bending radius display of 0–180° for accurate bending
- Clamp mechanism for better pipe hold allows the bending of shorter pipe pieces
- Light construction allows for fatigue-free hand operation

Size	max. mm	R Radius mm	kg	No.
10 mm	1.0	30	0.37	25401
12 mm	1.0	36	0.64	25402
14 mm	1.0	42	0.98	25403
15 mm	1.0	48	1.45	25404
16 mm	1.0	48	1.46	25405
18 mm	1.0	54	2.00	25406

Method L



Method R



MINIBEND

For accurate two handed bending up to 180° of pipes made of soft copper, brass, aluminium and precision steel Ø6–10mm (1/4–3/8")

KEY FEATURES

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



Accurate bending

Minimum size chart and bending radius display on measurement scale

Model	Size	g	No.
MINIBEND	6–8–10mm	420	25150
MINIBEND	1/4–5/16–3/8"	420	25151

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 (Measure X)

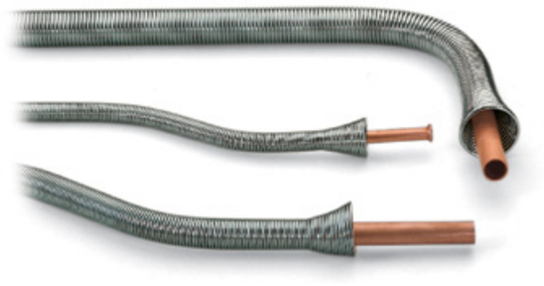
Method R: Determination of the length of R-Right
O: Reference to bending scale (0–0) and/or start/end of the bending radius
R: Used to determine/indicate the final dimension desired from the right (pipe beginning) up to top edge of the pipe (Measure Y)

Copper tube bending springs

For free-handed bending of soft copper pipes Ø8–16mm (5/16–5/8")

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.	Size	g	No.
8mm	70	25181	16mm	220	25186
10mm	80	25182	5/16"	70	25181
12mm	160	25183	1/2"	130	25190
15mm	220	25185	5/8"	220	25186

ROBEND H+W PLUS

For accurate cold bending up to 180°, Ø8–22mm (5/16–7/8")

KEY FEATURES

- Exact bending to the mm on continuous pipe
- Retains shape and remains stable
- Two-hand bending possible with the additional handle up to Ø18mm/5/8"
- Eliminates the costs of purchase and storage of bending formers

KEY FEATURES

- Easy bending through clamping on a vice
- Exact bending with the minimum size chart and bending radius display

ROLUB-Anti-Block-System!

Optimum combination of ROLUB guide shoe and the bending former
Perfect bending results without friction marks

Minimum size chart and bending radius display
Accurate bending

Bending formers with base plate
Easy bending through clamping on a vice



ROLUB-Anti-Block-System
Less effort due to lower friction and optimum distribution of the bending spray

Made from high quality forged aluminium
Retains shape and remains stable

Thread for the attachment of the additional lever (accessories)
Free-hand bending possible

Size	max. mm	R Radius mm	g	No.
8mm	1.0	22	660	24508
10mm	1.0	32	1,180	24510
12mm	1.0	38	1,110	24512
14mm	1.0	45	1,370	24514
15mm	1.0	45	1,370	24515
16mm	1.0	64	2,620	24516
18mm	1.0	64	2,620	24518
22mm	1.0	81	3,800	24522

ACCESSORIES (ADDITIONAL LEVER FOR TWO-HAND BENDING)*

Lever (short) for bending formers Ø8mm/3/8"	25075
Lever for bending formers Ø10–15mm	25076
Lever for bending formers bigger than Ø15mm	25078
Bending spray 150ml	25120

* possible from 10mm

ROBEND H+W PLUS bending sets

Sets include: ROCASE case system for a maximum of 5 bending formers, 2 levers for vice bending and bending spray (No. 25120), bending segements correspond to the respective pipe dimensions



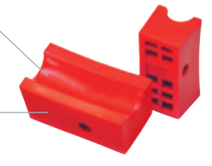
Size	mm	kg	No.
12–15–18–22mm	1.0	16.5	24500
15–18–22mm	1.0	14.9	24505
1/2–5/8–3/4"	1.0	13.6	24503
1/2–5/8–7/8"	1.0	13.7	24504

ROLUB-Anti-Block special guide shoe

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

ROLUB guide shoe made of high-quality polyamide
Perfect bending results without friction marks

Two-point lubricating chamber system
Ensures optimum distribution of lubrication



Size	g	No.	Size	g	No.
8mm	20	25308	22mm	90	25322
10mm	20	25310	5/16"	20	25308
12mm	30	25312	1/2"	30	25313
14mm	30	25314	5/8"	50	25316
15mm	30	25315	3/4"	90	25319
16mm	50	25316	7/8"	90	25322
18mm	50	25318			

ROBEND 4000 E

Electrical bending machine for bending pipes with Ø 12 - 35 mm (1/2 - 1.3/8")

APPLICATION AREA

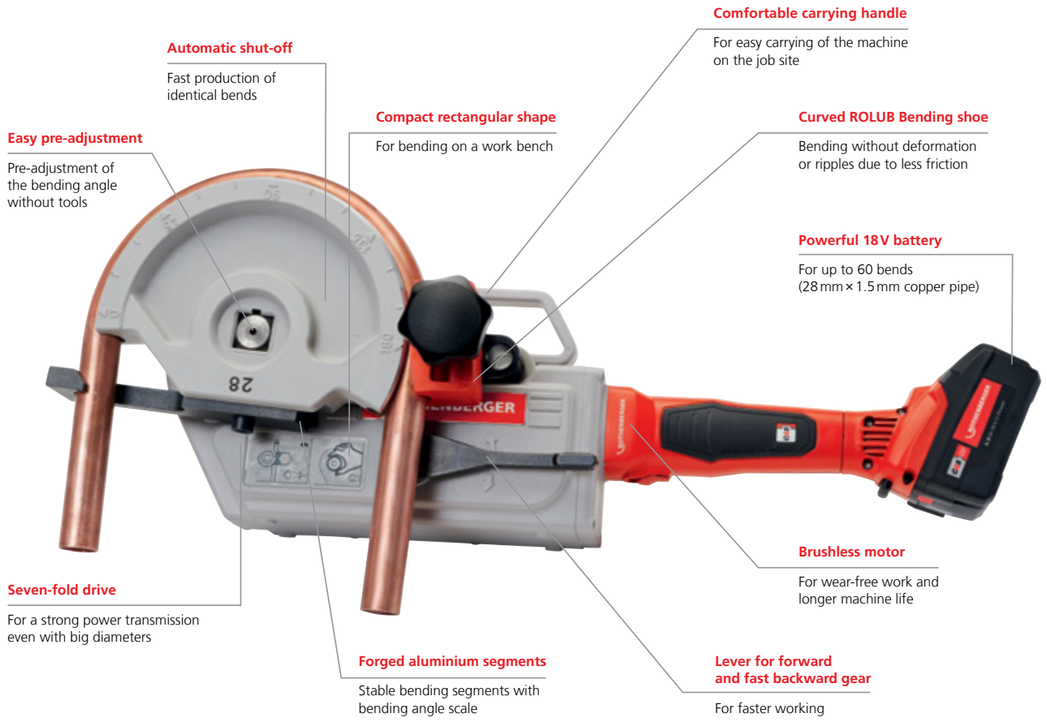
Universal application in sanitary and heating installations, in pipeline construction, refrigeration and air-conditioning systems as well as industrial systems and batch production. Fewer joints means less potential for leaks. Safety implies less likelihood of injury.

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



Forged aluminium segments with bending angle scale



Working with a Tripod



Comfortable carry handle



Compact, rectangular shape for bending on a work bench



[1] Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries
[2] More information at cordless-alliance-system.com

ROBEND 4000

Portable, sturdy and powerful. Cold bending up to 180°, Ø 12–35 mm (1/2–1.3/8")

APPLICATION AREA

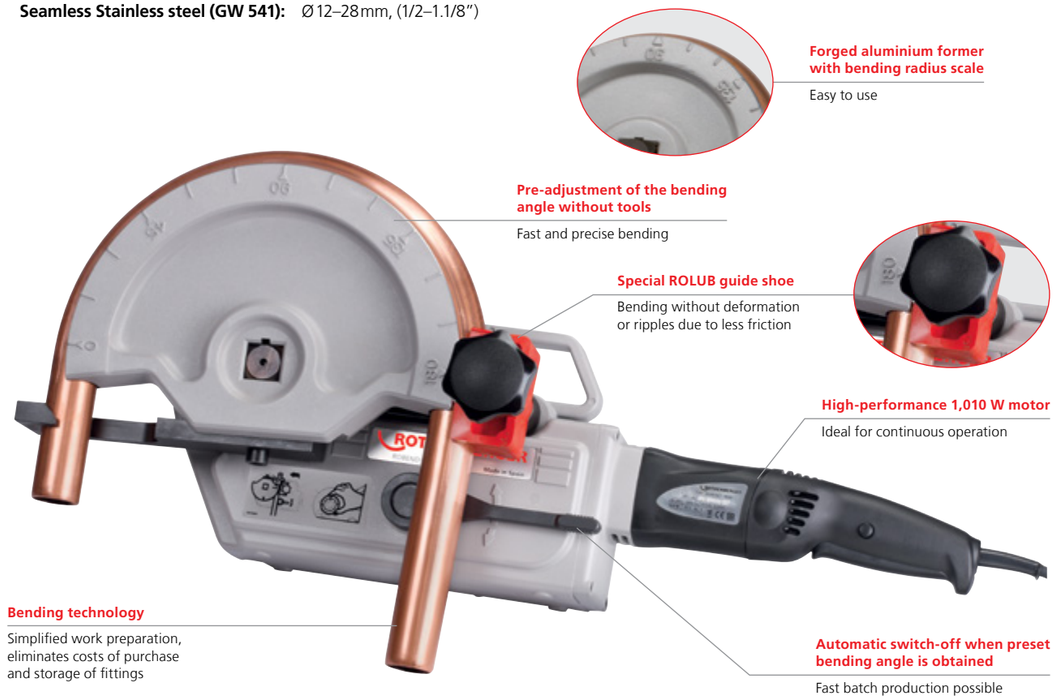
Universal application in sanitary and heating installations, in pipeline construction, refrigeration and air-conditioning systems as well as industrial systems and batch production. Fewer joints means less potential for leaks. Safety implies less likelyhood of injury.

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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: 1010 Watt, 50/60 Hz



Bending of pipes made of various materials possible



Seven-fold drive



Comfortable carry handle



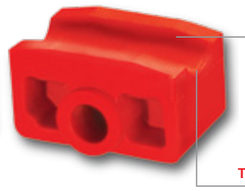
ROBEND 4000 with stand



* Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries

ROBEND 4000/4000 E sets

Sets include: basic 230 V unit (No. 1000001559), bending formers and guide shoes for respective pipe diameters, guide shoe axle (No. 25743), adaptor for tripod stand (No. 25748) in basic unit (tripod stand optional), carrying case



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







Fig. similar



Model	Description	Pipe type	kg	No.
ROBEND 4000 set	15 – 18 – 22 mm	Cu, Fe et al.	24.12	1000001554
ROBEND 4000 set	15 – 18 – 22 – 28 mm	Cu, Fe et al.	24.12	1000001550
ROBEND 4000 set	12 – 14 – 16 – 18 – 22 mm	Cu, Fe et al.	21.90	1000001551
ROBEND 4000 set	15 – 22 – 28 mm	Cu, Fe et al.	21.10	1000001545
ROBEND 4000 set	12 – 14 – 16 – 18 – 22 – 28 mm	Cu, Fe et al.	24.10	1000001552
ROBEND 4000 set	12 – 15 – 18 – 22 – 28 mm	Cu, Fe et al.	23.50	1000001549
ROBEND 4000 set	15 – 18 – 22 – 28 – 35 mm	Cu, Fe et al.	32.00	1000001567
ROBEND 4000 set	1/2 – 5/8 – 3/4" – 7/8"	Cu, Fe et al.	19.60	1000001553
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 4000 set	7/8 – 1.1/8 – 1.3/8"	Cu, Fe et al.	22.00	1000001566
ROBEND 4000 set	15 – 18 – 22 – 28 – 35 mm	Cu, Fe et al.	29.00	1000001738
ROBEND 4000 basic unit	in carrying case without bending segments	Cu, Fe et al.	14.50	1000001559
ROBEND 4000 E base machine without battery and charger		Cu, Fe et al.	17.45	1000003391
ROBEND 4000 E set with battery, 4.0 Ah 18 V and battery charger	15 – 18 – 22 – 28 mm	Cu, Fe et al.	29.15	1000003392
ROBEND 4000 E set with battery, 4.0 Ah 18 V and battery charger	12 – 14 – 16 – 18 – 22 – 28 mm	Cu, Fe et al.	30.15	1000003393
ROBEND 4000 E set with battery, 4.0 Ah 18 V and battery charger	1/2 – 5/8 – 3/4 – 7/8 – 1.1/8"	Cu, Fe et al.	29.45	1000003394

ACCESSORIES















Model	No.	Model	No.
Bending spray, 150 ml	25120	RO BP18/4, 4.0Ah 18 V Li-Power Akku	1000001653
Guide shoe axle	25743	RO BC14/36 Charger, 230 V, EU	1000001654
ROBEND carrying case, for 5 segments up to Ø 30 mm	995830200		
Tripod stand, foldable	25748	Pipe cutter	Page 6 – 8
ROBEND carrying case, for 32 mm (1.1/4") and 35 mm (1.3/8")	1000001564	Internal / external deburrer	Page 9

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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	mm	Bending radius	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 & others

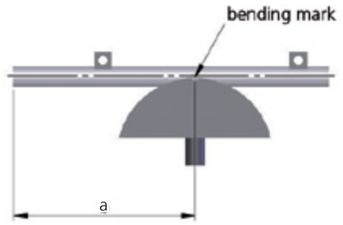
Size	mm	Bending mm	kg	No.
12 mm	1.0	42	0.48	25612
14 mm	1.0	49	0.48	25614
15 mm	1.0	52	0.53	25615
16 mm	1.0	56	0.60	25616
18 mm	1.0	72	1.17	25618
20 mm	1.0	80	1.42	25620
22 mm	1.2	88	1.42	25622
28 mm	2.0	112	2.90	25628
32 mm*	2.0	128	3.40	1000001561
35 mm*	2.0	140	3.60	1000001563

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	mm	Bending 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_s = Minimum length**
L_R = Reserve length**

45°-arc



$L = L_1 + L_2$
$a = L_1 - L_s$

90°-arc



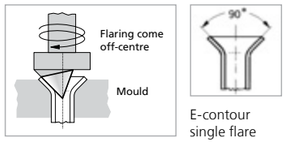
$L = L_1 + L_2 - L_w$
$a = L_1 - L_s$

** 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

ROFLARE REVOLVER

Revolver reeling flaring tool

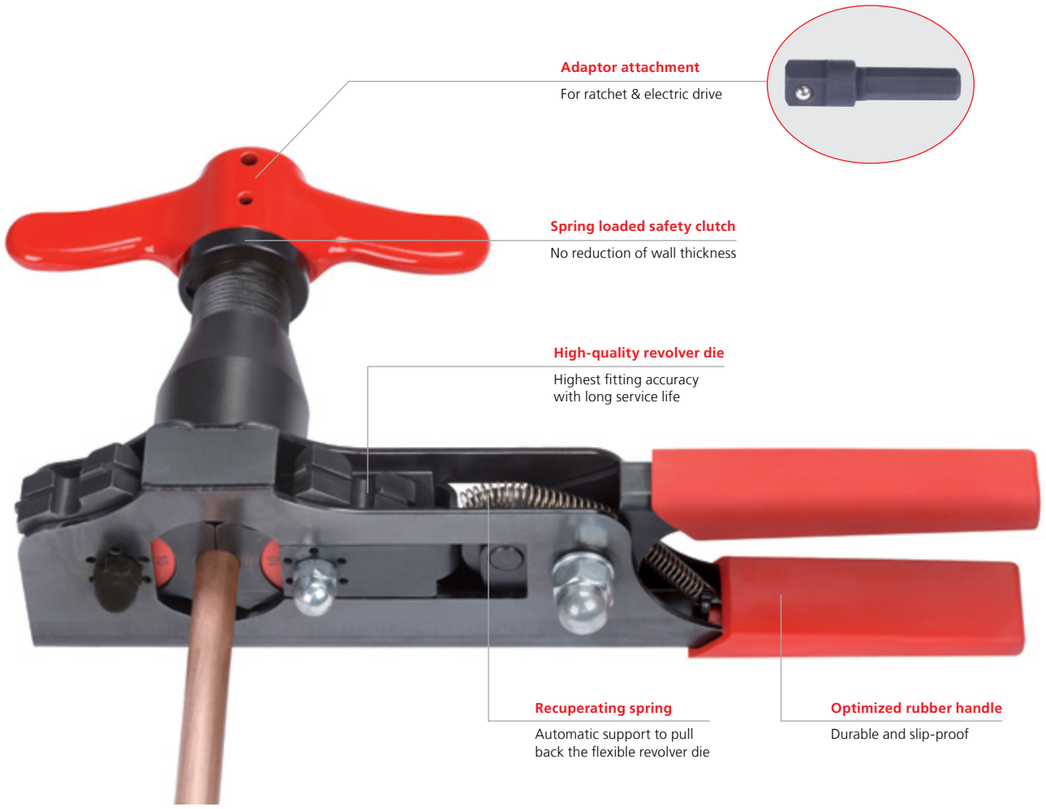
For the reliable and fast production of standard single 45° flares in accordance with **EN 14276-2** and **JIS B8607:2008** on copper soft pipes Ø 6–18 mm and 1/4–3/4"



E-contour single flare

KEY FEATURES

- Guaranteed norm flares
- Produces leak free joints
- One-handed quick clamping system
- Automatic depth stop: perfect positioning of the pipe to the flaring cone



Set (No. 1000000230) includes: ROFLARE REVOLVER metric incl. ratchet adaptor, dies Ø 6, 8, 10, 12, 16 and 18 mm, pipe cutter ROTRAC 28 PLUS CHROM (No. 1000000046), ROCASE 4212 (No. 1300003334)

Set (No. 1000000231) includes: ROFLARE REVOLVER imperial incl. ratchet adaptor, dies Ø 1/4, 5/16, 3/8, 1/2, 5/8 and 3/4", pipe cutter ROTRAC 28 PLUS CHROM (No. 1000000046), ROCASE 4212 (No. 1300003334)

Model	No.
Set, metric with ROTRAC 28 PLUS CHROM	1000000230
Set, imperial with ROTRAC 28 PLUS CHROM	1000000231
Metric, Ø 6, 8, 10, 12, 16, 18 mm	1000000222
Imperial, Ø 1/4, 5/16, 3/8, 1/2, 5/8, 3/4"	1000000223

Compact design enables use in confined spaces



Automatic depth stop: Perfect positioning of the pipe to the flare cone



Reeling flaring tool

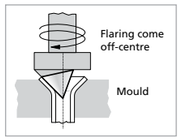
For producing precision 45° single flares on copper pipes Ø 6–18 mm (1/8–3/4")



Fig. similar

No. 222401 / No. 222402 / No. 222403





E-contour single flare

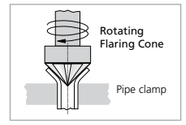
Reeling flaring tool set includes: Reeling flaring tool in plastic case with mould in metric and/or imperial format

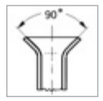
Model	mm/inch	No.
Set EB	6–8–10–12–14–15–16–18 mm	222401
	1/8–3/16–1/4–5/16–3/8–1/2–5/8–3/4"	
Set EB	1/8–3/16–1/4–5/16–3/8–1/2–5/8–3/4"	222402
Set EB	6–8–10–12–14–15–16–18 mm	222403

Standard flaring tool

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

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





E-contour single flare



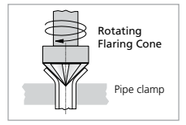
Fig. similar

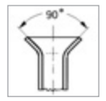
Model	mm/inch	g	No.
SF	4–4.75–6–8–10–12–14 mm	980	26050
SF	3/16–1/4–5/16–3/8–7/16–1/2–5/8"	980	26051

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 selfcentring pipe clamp for all diameters





E-contour single flare



Fig. similar

Set (No. 222601) 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	222601

ROTORQUE AIRCON/REFRIGERATION

Step-less torque wrench

APPLICATION AREA

Self-locking rack and pinion drive enables quick and reliable fastening of flare nuts sizes 15–32 mm in accordance with **EN 378-2:2012-08**

KEY FEATURES

- Always fits, covers all flare nut sizes from 15–32 mm
- Won't slip thanks to the self-locking rack and pinion drive and ratchet function
- Simple and reliable: required torque in accordance with **EN 378-2:2012-08** is embossed on the head for every size and can not be rubbed off
- Embossed torque data: easy tightening according to norm
- ROTORQUE REFRIGERATION is suitable for cylinder heads' work

Connection 9 x 12

Head can be exchanged between ROTORQUE AIRCON and ROTORQUE REFRIGERATION

All-In-One: One head fits all sizes!

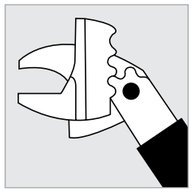


The torque can be read off

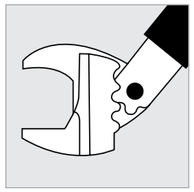
Always tighten according to the standard



Closed head



Fully opened head



ROTORQUE sets include: Torque wrench, head, carrying bag

Model	kg	No.
ROTORQUE AIRCON	1.5	1000000224
ROTORQUE REFRIGERATION	1.4	1000000225

ROTORQUE AIRCON torque wrench

- 10–110 Nm
- ± 4 % accuracy
- 1 Nm adjustment steps

ROTORQUE REFRIGERATION torque wrench

- 10–70 Nm
- ± 3 % accuracy
- 1/2 Nm adjustment steps
- Suitable for cylinder heads' work



Fig. ROTORQUE AIRCON torque wrench



Fig. ROTORQUE REFRIGERATION torque wrench

Torque wrench set

For proper tightening of flange connections

Set with adjustable torque wrench (10–70 Nm) and 6 spanner inserts sizes 17, 22, 24, 26, 27 and 29 mm for flange connections on 1/4", 3/8", 1/2" and 5/8" pipe lines according to **DIN EN 378-2:2012-08**

DIN -Norm

Fix with torque urgently necessary!



7 piece set (No. 175001) includes: Spanner wrench sizes 17, 22, 24, 26, 27, 29 mm, torque wrench, carrying bag

Pipe-Ø	Spanner width	Locking torque
1/4" / 6 mm	17 mm	14–18 Nm
3/8" / 10 mm	22 mm	33–42 Nm
1/2" / 12 mm	24 mm	50–62 Nm
1/2" / 12 mm	26 mm	50–62 Nm
5/8" / 15/16 mm	27 mm	63–77 Nm
5/8" / 15/16 mm	29 mm	63–77 Nm

Model	kg	No.
Torque wrench set, 7 piece	3.5	175001

ROFIRE GLOBAL

Ergonomic torch for brazing and soft soldering applications

Piezo · Fine · Hot · IDEAL FOR up to 28 mm BRAZING · IDEAL FOR up to 35 mm SOFT SOLDERING

APPLICATION AREA

Brazing: up to Ø 28 mm (with flame reflector in a wind protected environment)

Soft soldering: up to Ø 35 mm

KEY FEATURES

- Long service life, with cyclone effect for rapid heat-up
- Reliable up to 30.000 ignitions
- Protection against triggering of the Piezo ignition when falling down accidentally
- Precise flame adjustment
- Durable plastic for ergonomic handling
- Longer handle for stable positioning on gas cartridges



Model	g	No.
ROFIRE GLOBAL, 7/16"-EU	250	1500002869

ROFIRE SWIVEL PRO cyclone piezo

Cyclone burner with piezo ignition

APPLICATION AREA

Coupling: 1"-US

Brazing: up to Ø 18 mm

Soft Soldering: up to Ø 42 mm

Piezo · Fine · Hot · IDEAL FOR up to 42 mm SOFT SOLDERING · IDEAL FOR up to 18 mm BRAZING



Model	g	No.
ROFIRE SWIVEL PRO cyclone piezo, US	330	35016

ROFIRE SWIVEL PRO twin

Twin cyclone burner

APPLICATION AREA

Coupling: 1"-US

Brazing: up to Ø 28 mm

Soft Soldering: up to Ø 64 mm

Fine · Hot · IDEAL FOR up to 64 mm SOFT SOLDERING · IDEAL FOR up to 28 m BRAZING



Model	g	No.
ROFIRE SWIVEL PRO twin, US	400	35012

SUPER FIRE 3

Ergonomic HEAVY-DUTY brazing unit

For brazing up to Ø 28 mm and soft soldering up to Ø 35 mm as well as other applications such as removal of paint or shrinking of hoses

lock · Piezo · Fine · Hot · IDEAL FOR up to 28 mm BRAZING · IDEAL FOR up to 35 mm SOFT SOLDERING

APPLICATION AREA

Brazing: up to Ø 28 mm (with flame reflector in a wind protected environment)

Soft soldering: up to Ø 35 mm

KEY FEATURES

- Rapid material heat-up, less consumption!
- "Twist 'N' Load" system (5 different burners available)
- Precise flame adjustment
- Long service life
- Up to 2.5 hours of brazing with one cartridge

KEY FEATURES

- Even more comfortable for longer jobs
- Reliable piezo ignition (up to 30,000 ignitions)
- Double the safety because there is no gas leakage without locked burner (piezo ignition)

KEY FEATURES

Coupling: 7/16"-EU or 1"-US

Handle: Aluminium, bolted

Burner: Brass/stainless steel

SUPER FIRE burners

Quick exchange with the "Twist 'N' Load" system

"Twist 'N' Load"

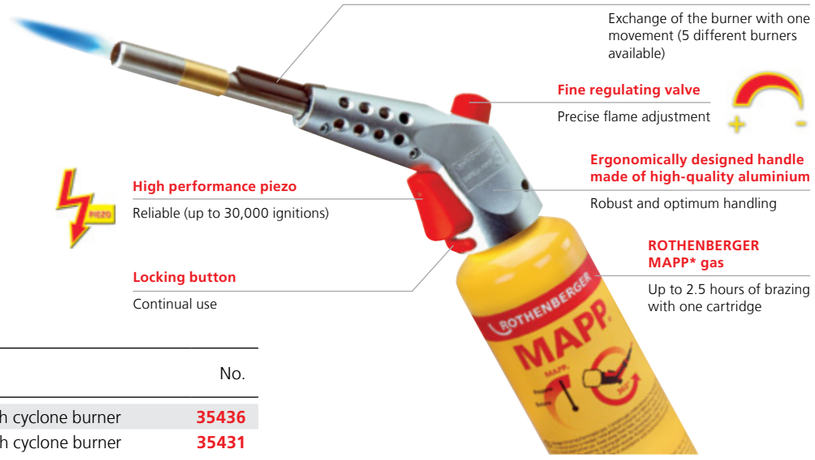
Pin-point burner (No. 35455)

Standard burner (No. 35456)

Cyclone burner (No. 35457)

Hot air burner (No. 35458)

Shrinking burner (No. 35459)



Model	No.
SUPER FIRE 3 basic set EU, with cyclone burner	35436
SUPER FIRE 3 basic set US, with cyclone burner	35431

SUPER FIRE 3 HOT BOX

KEY FEATURES

- The ideal service kit
- For repairs, heating installations and refrigeration/air-conditioning technology



Flame reflector included!

5-part set (No. 1000002369) includes: Handle (No. 35445), cyclone burner (No. 35457), pin-point burner (No. 35455), flame reflector (No. 31043), universal torch support (No. 35461), 2x MAPP* gas A cartridges (No. 035521-A), ROCASE 4414 (No. 1000001945)

Model	No.
SUPER FIRE 3 HOT BOX EU (incl. MAPP* gas A)	1000002369
SUPER FIRE 3 HOT BOX EU (incl. MAPP* gas B)	1000002370
SUPER FIRE 3 HOT BOX EU (incl. MAPP* gas C)	1000002371

RO CASE · Hot



* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

SUPER FIRE 4

Ergonomic brazing unit

For brazing up to Ø 28 mm and soft soldering up to Ø 35 mm as well as other applications such as removal of paint or shrinking of hoses

lock · Piezo · Fine · Hot · IDEAL FOR up to 28 mm BRAZING · IDEAL FOR up to 35 mm SOFT SOLDERING

APPLICATION AREA

Brazing: up to Ø 28 mm (with flame reflector in a wind protected environment)

Soft soldering: up to Ø 35 mm

KEY FEATURES

- Rapid material heat-up, less consumption!
- "Twist 'N' Load" system (5 different burners available)
- Precise flame adjustment
- Long service life
- Up to 2.5 hours of brazing with one cartridge

KEY FEATURES

- Reliable piezo ignition (up to 30,000 ignitions)
- Double the safety because there is no gas leakage without locked burner (piezo ignition)
- Longer handle for an even more stable positioning of the cartridge

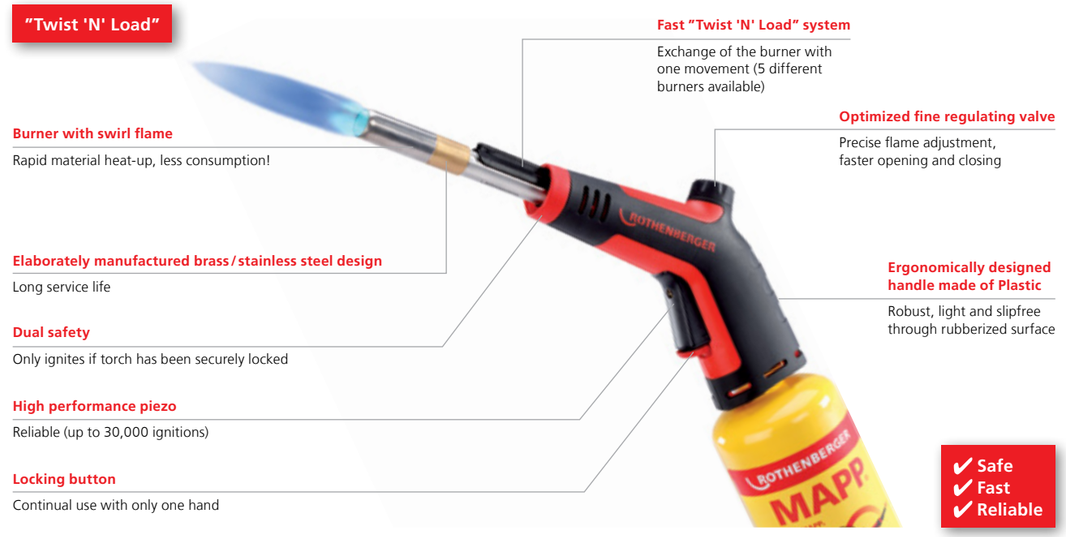
KEY FEATURES

Coupling: 7/16"-EU or 1"-US

Handle: Plastic, rubberized

Burner: Brass/stainless steel

"Twist 'N' Load"



SUPER FIRE 4 HOT BOX

Hot · RO CASE

APPLICATION AREA

- The ideal service kit
- For repairs, heating installations and refrigeration/air-conditioning technology



5-part set (No. 1000002364) includes: Handle (No. 1500001354), cyclone burner (No. 35457), pin-point burner (No. 35455), flame reflector (No. 31043), universal torch support (No. 35461), 2x MAPP* gas A cartridges (No. 035521-A), ROCASE 4414 (No. 1000001945)

Model	No.
SUPER FIRE 4 HOT BOX EU (incl. MAPP* gas A)	1000002364
SUPER FIRE 4 HOT BOX EU (incl. MAPP* gas B)	1000002366
SUPER FIRE 4 HOT BOX EU (incl. MAPP* gas C)	1000002368
SUPER FIRE 4 HOT BOX US (incl. MAPP* gas US)	1000001630

SUPER FIRE 4 basic set



No. 035648X



No. 1500001355

Set (No. 1500001355) includes: Handle (No. 1500001354), cyclone burner (No. 35457)

Model	No.
SUPER FIRE 4 EU basic set	1500001355
SUPER FIRE 4 US basic set	1500001503
SUPER FIRE safety adaptor 7/16" to 1"	035648X

* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

MAPP* gas EU

High performance brazing and soldering gas

Flame temperatures up to 2,700 °C and 35 % faster than propane

Hot

KEY FEATURES

- Superior heat transfer, higher than propane, especially in winter below 0 °C
- Increased safety and stability based on massive brass valve and protective collar
- Provides superior flame performance in any position (360°)

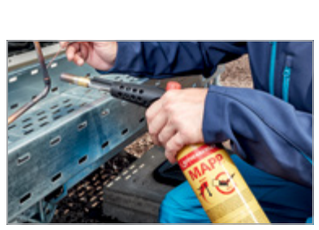
KEY FEATURES

- Easy to use
- Guaranteed constant top torch performance
- Longer periods of use




SUPER FIRE 3 HOT BOX

SUPER FIRE 4 HOT BOX







Protective collar stabilizes the torch and protects against accidental drops

Packaging profile

Model	MAPP*
No.	035521-A
EAN code	4004625400180
Product size (mm) (W x H)	70 x 270
Contents (ml)	800
Net weight (g)	400
Pieces per order multiple	12
PU per layer / pallet	10
Layer per pallet	3
Units per pallet	360
Number of pallets per truckload	60
Units per truckload	21,600
Pallet weight (kg)	324
Pallet size (mm) (L x W x H)	800 x 1,200 x 1,000
Carton size (mm) (L x W x H)	290 x 310 x 240

Model	Volume		No.
MAPP* gas 7/16"-EU, A	800 ml	12	035521-A
Languages: DE, GB, FR, ES, IT, PT			
MAPP* gas 7/16"-EU, B	800 ml	12	035521-B
Languages: DK, NL, SE, FI, FR, RUS			
MAPP* gas 7/16"-EU, C	800 ml	12	035521-C
Languages: CZ, PL, HU, BG, TR, RO			

* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

Pieces per order multiple for specialist dealers

Maxigas 400

High-performance welding, cutting and brazing gas for flame temperatures **up to 2,200 °C**. Gas cartridge with 7/16"-EU coupling thread

Hot





Packaging profile

Model	Maxigas 400
No.	035570-A/-B
EAN code	4004625355701 (A)
Product size (mm) (W x H)	65 x 260
Contents (ml)	600
Net weight (g)	352
Pieces per order multiple	24
PU per layer / pallet	9
Layer per pallet	3
Units per pallet	648
Number of pallets per truckload	60
Units per truckload	38,880
Pallet weight (kg)	195
Pallet size (mm) (L x W x H)	800 x 1,200 x 1,000
Carton size (mm) (L x W x H)	405 x 272 x 264

Multigas 300

Propane/butane gas mixture for flame temperatures **up to 1,900 °C**. Gas cartridge with 7/16"-EU coupling thread

Basic





Packaging profile

Model	Multigas 300
No.	035510-A/-B
EAN code	4004625355107 (A)
Product size (mm) (W x H)	65 x 260
Contents (ml)	600
Net weight (g)	338
Pieces per order multiple	24
PU per layer / pallet	9
Layer per pallet	3
Units per pallet	648
Number of pallets per truckload	60
Units per truckload	38,880
Pallet weight (kg)	191
Pallet size (mm) (L x W x H)	800 x 1,200 x 1,000
Carton size (mm) (L x W x H)	405 x 272 x 264

Oxygen

Technical oxygen for professional brazing and welding applications. Disposable steel cylinder with M 10 x 1 LH coupling thread and 930 ml cylinder volume

Max



Packaging profile

Model	Oxygen
No.	35750
EAN code	400462505422
Product size (mm) (W x H)	70 x 340
Contents (ml)	103
Net weight (g)	136
Pieces per order multiple	12
PU per layer / pallet	11
Layer per pallet	2
Units per pallet	264
Number of pallets per truckload	60
Units per truckload	15,840
Pallet weight (kg)	343
Pallet size (mm) (L x W x H)	800 x 1,200 x 1,000
Carton size (mm) (L x W x H)	290 x 220 x 350

MAPP* gas US

Welded steel cylinder filled with high performance gas for flame temperatures **up to 2,700 °C**. 1"-US coupling thread

Hot



Packaging profile

Model	MAPP* gas US
No.	35698
EAN code	4004625355398
Product size (mm) (W x H)	80 x 250
Contents (ml)	750
Net weight (g)	400
Pieces per order multiple	12
PU per layer / pallet	12
Layer per pallet	3
Units per pallet	432
Number of pallets per truckload	60
Units per truckload	25,920
Pallet weight (kg)	364
Pallet size (mm) (L x W x H)	800 x 1,200 x 1,000
Carton size (mm) (L x W x H)	450 x 280 x 150

* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

TURBOPROP

Propane high-performance torch for brazing up to Ø 28 mm and soft soldering Ø 54 mm

For brazing and soft soldering of copper and steel pipes **up to 2,200 °C** without oxygen, as well as for warming up, shrinking and flame cleaning

click · Fine · 360° · Hot · IDEAL FOR up to 22 mm BRAZING

KEY FEATURES

- High flame temperature due to turbine with increased oxygen self-induced air and 4- to 5-fold flame chamber
- Fast burner exchange without tools
- Gas-saving operation with the smooth-running economy valve
- Shut-off valve prevents uncontrolled gas escape

TECHNICAL DATA

Self-induced air:	Turbine and combustion chamber
Torch:	Surface treated, chromed brass
Hose coupling:	G 3/8" LH

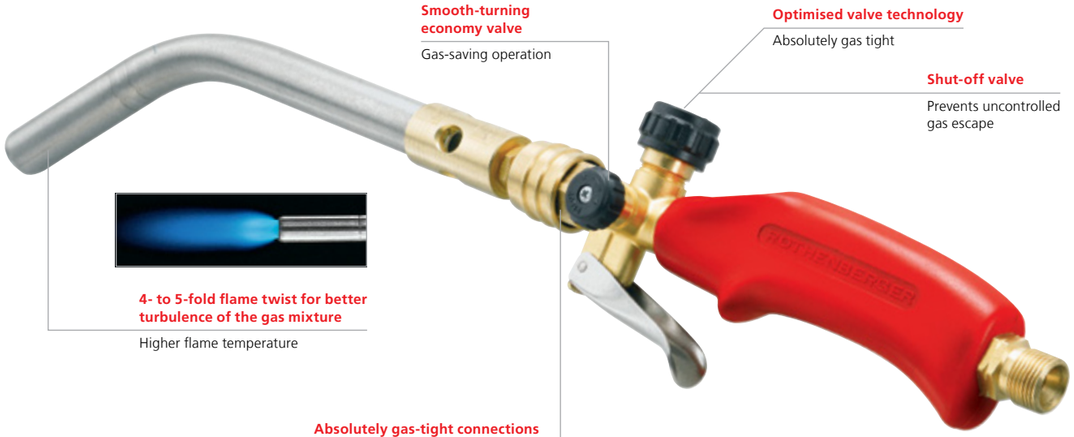




Fig. TURBOPROP torch with push-in nipple



Fig. similiar

Sets include: Safety handle with push-in coupling (No. 211121116), brazing torch with push-in nipple Ø 12 mm (No. 31032)/Ø 15 mm (No. 221031500)/Ø 18 mm (No. 221031800), 2.5 m propane hose with 3/8" LH coupling (No. 32201), safety igniter (No. 32077), replacement flints (No. 32088), open-ended spanner (No. 32073), steel case (No. 31005)

Model	kg	No.
TURBOPROP set without propane regulator	2.8	**31090**
TURBOPROP set with propane regulator	3.1	**31094**
as in set (No. 31090) but with regulator (No. 32081E) (W 21.8 LH – G 3/8 LH)		

Ø mm	mm	g/h 2 bar	kWh – kcal – BTU	kg	No.
12 mm	175	110	1.41 – 1,210 – 4,815	90	**31032**
15 mm	195	180	2.30 – 1,980 – 7,855	110	**221031500**
18 mm	230	240	3.07 – 2,640 – 10,485	160	**221031800**

ALLGAS 2000 set

Mobile soldering and welding torch

Ideal mobile soldering and welding torch for plumbers, HVAC fitters, refrigeration technicians, automotive workshops and tinsmiths

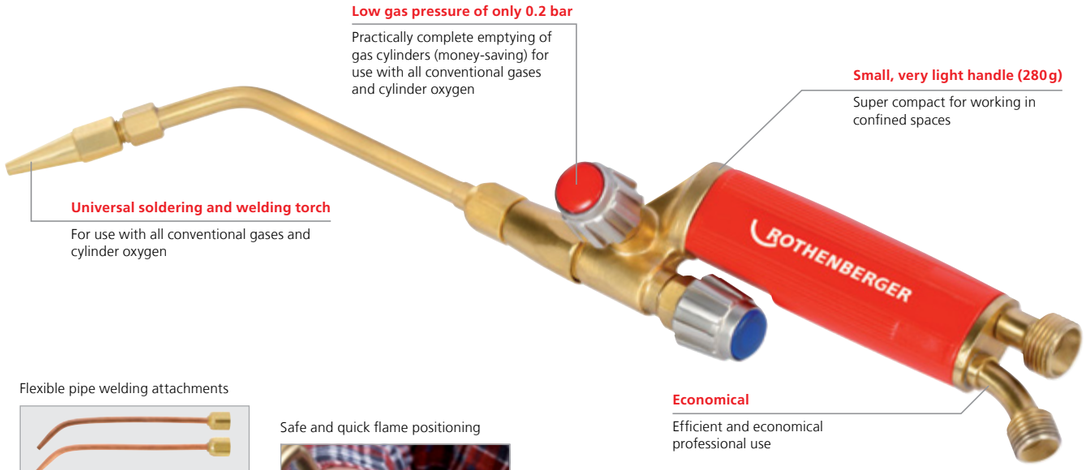
Fine · Max

APPLICATION AREA

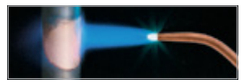
Soldering range:	up to 2.5 mm material thickness
Welding range:	0.2–5 mm
Suitable for use with:	Oxy-Acetylene Propane and oxygen CNG and oxygen Town gas and oxygen

KEY FEATURES

- For use with all conventional gases and cylinder oxygen
- Practically complete emptying of gas cylinders (money-saving)
- Super compact for working in confined spaces
- Efficient and economical professional use



Flexible pipe welding attachments



Dispersion burner for warming up



Safe and quick flame positioning





Fig. similiar

17-part set (No 35300) includes: Handle (No. 35303), mixing burner with union nut (No. 35304), 5 welding tips 0.2 mm (No. 35305)/1–2 mm (No. 35306)/2–3 mm (No. 35307)/3–4 mm (No. 35308)/4–5.0 mm (No. 35309), pipe welding tips, size 1 (No. 35313)/size 2 (No. 35314), coupling nut size 14 (No. 35315), dispersion burner (No. 35311), 2.5 m dual-hose package (No. 35221), open-ended spanner size 14 x 19 mm (No. 32073), welding tip holder/spanner (No. 35312), safety igniter (No. 32077), replacement flints (No. 32088), steel case (No. 35319)

Model	Coupling oxygen	Coupling fuel gas	g	No.
ALLGAS 2000 set (acetylene)			3,100	**35300**
Handle ALLGAS 2000	G 1/4" RH	G 3/8" LH	280	**35303**
Mixing burner with union nut			40	**35304**

Welding tips, Welding attachments

Size	Welding range mm	g	No.
Welding tip size 2	1.0–2.0	10	**35306**
Welding tip size 3	2.0–3.0	10	**35307**
Welding tip size 4	3.0–4.0	10	**35308**
Welding tip size 5	4.0–5.0	10	**35309**
Welding tip holder, can be used as a spanner		20	**35312**
Flexible welding tip size 1	2.0–3.0	40	**35313**
Flexible welding tip size 2	4.0–5.0	40	**35314**
Coupling/union nut, size 14		10	**35315**

ALLGAS 2000 PS 0.5/2 compact

Portable brazing equipment with carrying frame

For brazing iron, steel, sheet steel, pipes and non-ferrous metals

KEY FEATURES

- Secure transport in closed supporting frame
- Portable, light brazing equipment
- Ideal for mobile building-site and repair use
- Small propane cylinders can be refilled

TECHNICAL DATA

Gas:	Propane and oxygen
Flame temperature:	2,850 °C
Working temperature:	1,150 °C

With safety devices to prevent flashbacks



The bottle colours shown are without obligation. Fig. similar

24-part set (No. 35655) includes: Handle ALLGAS 2000 (No. 35303), 2.5 m propane hose (No. 32201), 2.5 m oxygen hose (No. 35210), propane regulator adjustable 0–6 bar (No. 242206000), oxygen pressure reducer 10 bar (No. 35634), mixing burners with union nut (No. 35304), welding tips 0.2–1 mm (No. 35305)/1–2 mm (No. 35306)/2–3 mm (No. 35307)/3–4 mm (No. 35308)/4–5 mm (No. 35309), flexible welding tip size 1 (No. 35313)/size 2 (No. 35314), dispersion burners (No. 35311), welding tip holder/spanner (No. 35312), multi-size spanner (No. 35738), safety igniter (No. 32077), replacement flints (No. 32088), nylon safety goggles (No. 540620), small propane cylinder 0.425 kg, empty (No. 33079), steel oxygen cylinder 2.0 l, full (No. 35635), oxygen safety device (No. 1000000633), fuel gas safety device (No. 1000000631), carrying frame (No. 35629)

Model	kg	No.
ALLGAS 2000 PS 0.5/2 set	21.4	35655

ALLGAS Mobile Pro

Mobile brazing equipment with safety devices

For brazing of iron, steel, sheet steel, pipes and non-ferrous metals

KEY FEATURES

- Mobile brazing set with a total weight lower than 6 kg incl. cartridges
- High quality saftety devices for both gas hoses to prevent flashbacks
- MAPP* gas pressure regulator with an adjustable range of 0–2 bar for a constant, low consumption and an efficient flame adjustment

TECHNICAL DATA

Gas:	MAPP* gas with oxygen
Flame temperature:	over 3,100 °C
Working temperature:	1,300 °C

Accessories included in the set



The bottle colours shown are without obligation. Fig. similar

Model	kg	No.
ALLGAS Mobile Pro 1"-US, w/o cartridges	3.86	1000000529
ALLGAS Mobile Pro 1"-US, incl. cartridges	5.95	1000000743
ALLGAS Mobile Pro 7/16"-EU, w/o cartridges	3.86	1000000642
ALLGAS Mobile Pro 7/16"-EU, incl. cartridges	5.70	1000000558

* MAPP is a registered trademark of the MESSER Group GmbH, Bad Soden

ALLGAS 2000 PS 0.5/2 basic

Portable fitter's brazing equipment

For brazing iron, steel, sheet steel, pipes and non-ferrous metals



The bottle colours shown are without obligation. Fig. similar

KEY FEATURES

- Compact and handy construction for mobile building-site and repair use
- Job compatible combination, assembled and ready to use

Space saving storage in service vehicles!



18-part set (No. 35651) includes: Handle ALLGAS 2000 (No. 35303), 2.5 m propane hose (No. 32201), 2.5 m oxygen hose (No. 35210), propane regulator adjustable 0–6 bar (No. 242206000), oxygen pressure reducer 10 bar (No. 35634), mixing burners with union nut (No. 35304), welding tips 0.2–1 mm (No. 35305)/1–2 mm (No. 35306)/2–3 mm (No. 35307)/3–4 mm (No. 35308)/4–5 mm (No. 35309), welding tip holder/spanner (No. 35312) multi-size spanner (No. 35738), safety igniter (No. 32077), replacement flints (No. 32088), steel oxygen cylinder 2.0 l, filled (No. 35635), propane cylinder 0.5 kg (empty) (No. 33079), ALLGAS frame (No. 35628)

Model	kg	No.
ALLGAS 2000 PS 0.5/2 basic	14.4	35651

ROXY 400 L

Standard gas-welding equipment for flame temperatures up to 3,100 °C

For brazing iron, steel, sheet steel, pipes and non-ferrous metals



The bottle colours shown are without obligation. Fig. similar

19-part set (No. 035780X) includes: Handle with fine regulating valve (No. 35580), Maxigas 400 (No. 035570-A), oxygen cylinder 2.0 l (No. 35635), fine regulating valve (No. 263003700), oxygen pressure reducer according to DIN 0-315/200 bar 0–16/10 bar (No. 35634), hose set (3 m without handle (No. 35785), oxygen blowback protection (No. 1000000633), gas blowback protection (No. 35691), mixing burners with union nut (No. 35587), high-performance tips 1.5 mm (No. 263005600)/2.0 mm (No. 263005400), micro-tips 0.3 mm (No. 35712)/0.5 mm (No. 35696)/0.7 mm (No. 35713), micro-tip adaptor (No. 35585), welding goggles A5 (No. 35621), safety igniter (No. 32077), multi-size spanner (No. 35738) carrying frame (No. 35727)

Model	kg	No.
ROXY 400 l, 3,100 °C, complete	10.80	035780X
ROXY 400 l without oxygen	6.0	35782
Welding-handle f. ROXY, M14x1	0.12	35580
ROXY dual hose set 3 m	0.95	35785
ROXY micro-burner adaptor	0.01	35585
Micro-tip, ROXY serie, 0.4 mm	0.01	35695
Micro-tip, ROXY serie, 0.5 mm	0.02	35696
Micro-tip, ROXY serie, 0.6 mm	0.02	35697
Micro-tip, ROXY serie, 0.7 mm	0.02	35713
High-performance tip 0.7 mm f. 263005500	0.06	263005800
High-performance tip 1.2 mm f. 263005500	0.04	263005700
High-performance tip 1.5 mm f. 263005500	0.04	263005600
High-performance tip 2.0 mm f. 263005500	0.04	263005400

ROVLIES cleaning pads

Metal-free, for fast, score-free cleaning of copper pipe soldering surfaces

KEY FEATURES

- Reduced corrosion damage
- No metal abrasion, can be used wet or dry
- Removes oxide layers, corrosion, surface dirt, oil and grease residues
- Solvent-resistant and flexible





Model	g	No.
ROVLIES (10 pcs.)	80	45268
ROVLIES counter display (36 pcs.)		045268D

Internal brushes for copper pipe

For fast cleaning of the soldering surface, rugged plastic handle



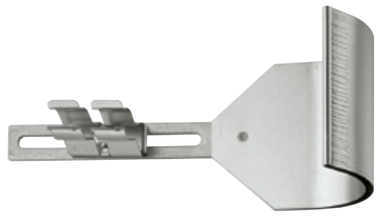
mm	g	No.
12	80	854181
15	100	854183
18	120	854185

mm	g	No.
22	140	854186
28	140	854187

Flame reflectors

- Made of high-quality stainless steel
- Protects surrounding materials
- Better heat utilisation, saves time and energy





Model	Width mm	Adaptor Ø mm	g	No.
65/15	65	8–15	100	31042
65/22	65	15–22	100	31043





Welding blanket

Flame and heat resistant up to 840 °C

KEY FEATURES

- Permanent heat resistance up to 700 °C by direct flame contact and molten slag
- Good formability, long service life, asbestos-free and poses no health hazard
- Bonded edges
- Thickness: 1.4 mm; Weight: 1,000 g/m²

Model	L x W x H	g	No.
Welding blanket	500 x 330 x 5 mm	300	31050



Hard solder paste LP 5

Flux for hand soldering at working temperatures above 600 °C, according to **EN 1045, Type FH 10, DVGW tested Reg.-No. DV-0101-AT2245**, for gas and water installations with copper pipes, recommended by DVGW in accordance with Worksheets GW 2 and GW 7, hard solders with silver content and usable with any basic materials of steel, copper and copper alloys, brass and gunmetal, working temperature range 600–800 °C, flux residues must be removed carefully.

Model	Content	g	No.
LP 5 in plastic bottle	160 g	180	40500



Hard solder powder HKM

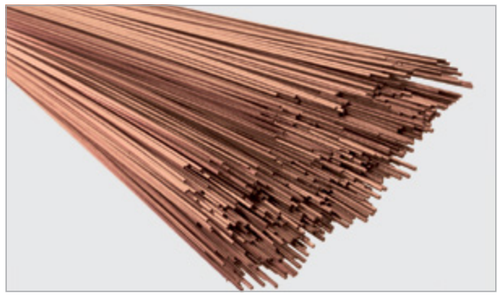
Flux for hard soldering at working temperatures above 800 °C, according **EN 1045-FH 21**, working temperature 800–1,100 °C, for copper and copper alloys, brass, gunmetal, nickel silver, bronze, steel and galvanised steel, grey iron and malleable cast iron, for welding copper and brass in dry conditions, can be mixed with clean water to form a paste, flux residues must be removed carefully. Free of boric acid.

Model	Content	g	No.
HKM in plastic bottle	50 g	65	35611

Accessories

Hard solders

For copper pipe installation



KEY FEATURES

- Non-foaming, heat-resistant up to 200 °C
- No flux required with copper/copper joints (except S34 and S45)
- Manufactured with new, environmentally compatible technology, corrosion neutral, scale-free, improved flow properties

ROLOT S 94 CuP 179

Quality hard solder guaranteed according to **EN ISO 17672**, due to low phosphorus content, the solder has a wide melting range, and gives soldered joints with increased strength. Standard solder for normally-stressed copper pipe installation, especially for capillary soldering with copper pipe installation without fittings.



TECHNICAL DATA

Alloy (weight %):	Cu 94/P 6
Melting range:	710 °C–890 °C
Working temperature:	760 °C
Joinable materials:	Copper, gunmetal, brass, bronze
Flux required with:	Gunmetal, brass, bronze with LP 5

Content	Squared section mm	Length mm	g	No.
1 kg carton	2 x 2	500	1,025	40094

ROLOT S 5 CuP 281

High-quality silver/phosphorus safety hard solder, guaranteed according to **EN ISO 17672**, for higher-stressed copper pipe systems, ideal for capillary and joint soldering in sanitary, heating and gas installations.



TECHNICAL DATA

Alloy (weight %):	Ag 5/Cu 89/P 6
Melting range:	645–815 °C
Working temperature:	710 °C
Joinable materials:	Copper, gunmetal, brass, bronze
Flux required with:	Gunmetal, brass, bronze with hard solder paste LP5

Content	Squared section mm	Length mm	g	No.
1 kg carton	2 x 2	500	1,025	40005

ROLOT S 15 CuP 284

Particularly high quality silver hard solder, guaranteed according to **EN ISO 17672**, especially for capillary-gap soldering subject to high thermal and mechanical alternating loads in HVAC systems, as well as demanding sanitary and gas installations.



TECHNICAL DATA

Alloy (weight %):	Ag 15/Cu 80/P 5
Melting range:	645–800 °C
Working temperature:	700 °C
Joinable materials:	Copper, gunmetal, brass, bronze
Flux required with:	Gunmetal, brass, bronze with hard solder paste LP5

Content	Squared section mm	Length mm	g	No.
1 kg carton	2 x 2	500	1,025	40015

Universal sets

ROCADDY 120 R32 (CL) Analog/Digital

Universal sets for evacuation and charging

KEY FEATURES

- Everything you need within reach
- Flexible use with the individual use of the tools
- Easy to transport

Flexible application with corded or battery-powered vacuum pump

TECHNICAL DATA

- Elektronische Digitalwaage ROSCALE 120 mit einer Wiegekapazität von 120 kg und einer Messgenauigkeit pro Messschritt von 5 g
- 2-stage high vacuum pump ROAIRVAC (corded/accumulator) with integrated vacuum gauge and solenoid check valve
- Digital installer aid for automatic calculation of superheat and subcooling. More than 80 refrigerants stored in the unit
- 2 analogue 4-way installer aids for the common refrigerants R22, R134a, R404A, R407C and the high-pressure refrigerants R410A and R32
- Pressure hose set of 3 PLUS series hoses with shut-off valve for safe working with refrigerants
- TUBE CUTTER 35 and MINICUT II PRO for cutting tubes of diameter 6 – 35 mm to length

Sturdy plastic rolling case

Simple and comfortable transport with ample room for accessories and small parts

2-stage high vacuum pump

For evacuation and removal of all moisture residue in refrigeration systems during installation per DIN 8975

Electronic digital scale up to 120 kg with high measurement precision

Precise weighing of refrigerants



2 × analogue manifolds (ROCADDY 120 analogue)

(ROCADDY CL)

Mini tube cutter and pipe cutter

For cutting Ø 6–35 mm pipes to length

ROCOOL 600

Automatic calculation of superheat and subcool. Optionally upgradable through attachment of a vacuum probe and a reading out function

Bottle adaptor for 1 kg and 2 kg refrigerant bottles for connection to the scale

Secure mounting of the bottle during charging

ROCADDY 120 R32 Analog / Digital (No. 1000002560/1000002561) includes: 2-stage vacuum pump ROAIRVAC R32 1.5 (No. 1000002399), 4-way manifold (No. 170502) / 4-way manifold (No. 1000001427) (Analogue), ROCOOL 600 (No. 1000000569) / clamping thermometer (No. 1000000540) (Digital), pressure hose set 5/16" SAE 1.500 mm (No. 1500000030), pressure hose set 1/4" SAE 1.500 mm (No. 1500000028), ROSCALE 120 (No. 173004), 3/8" SAE F – 1/4" SAE M (No. 89501), 2 x 5/16" SAE F – 1/4" SAE M (No. 01700RD), 5/16" SAE M – 1/4" SAE F (No.170016), bottle connection 1/4" (No. 173205), bottle connection 5/16" (No. 173204), mineral oil (0,4 l), Tube Cutter 35 (No. 70027), Minicut II Pro (No. 70402), transport case (No. 169051)

Model	Performance	kg	No.
R410A R22 R134a R407C R404A R32			
ROCADDY 120 R32			
Analog	42 l/min.	20	1000002560
Digital	42 l/min.	19	1000002561

ROCADDY 120 R32 CL Analog / Digital (No. 1000003622/1000003623) includes: 2-stage vacuum pump ROAIRVAC R32 2.0 CL* (No. 1000003229), 4-way manifold (No. 170502) / 4-way manifold (No. 1000001427) (Analogue), ROCOOL 600 (No. 1000000569) / clamping thermometer (No. 1000000540) (Digital), pressure hose set 5/16" SAE 1.500 mm (No. 1500000030), pressure hose set 1/4" SAE 1.500 mm (No. 1500000028), ROSCALE 120 (No. 173004), 3/8" SAE F – 1/4" SAE M (No. 89501), 2 x [5/16" SAE F – 1/4" SAE M (No. 01790RD), 5/16" SAE M – 1/4" SAE F (No. 170016)], bottle connection 1/4" (No. 173205), bottle connection 5/16" (No. 173204), bottle connection for R32 (No. 173206), mineral oil (0,4 l), Tube Cutter 35 (No. 70027), Minicut II Pro (No. 70402), 8.0 Ah Li-HD battery (No. 1000002549), charger (No. 1000001654), transport case (No. 169051)

Model	Performance	kg	No.
R410A R22 R134a R407C R404A R507 R32			
ROCADDY 120 R32			
CL* Analog	57 l/min.	21	1000003622
CL* Digital	57 l/min.	20	1000003623

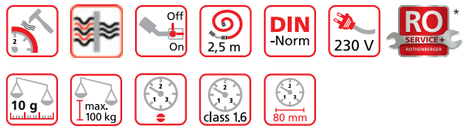
[1] More information at cordless-alliance-system.com

* CL = Cordless = battery powered vacuum pump

ROKLIMA MULTI 4F

Fully automatic commissioning and maintenance of air-conditioning units and heat pumps

The innovative unit enables safe and comfortable operation on refrigeration systems. With simple menu navigation, 4 functions (4F) are automatically controlled.



R410A | R22 | R134a | R407C | R404A

KEY FEATURES

- Pressure resistance up to 80 bar guarantees full use with heat pumps
- Everything you need within reach
- Simple menu guidance guarantees appropriate use
- Fully-automatic gives time for parallel work
- Safe transport

4F
- Evacuation
- Charging
- Leakage test
- Control of the recovery process

TECHNICAL DATA

Weight:	17 kg
Final vacuum:	1 x 10^{-2} mbar
Scale range:	up to 100 kg
Resolution:	10 g
Pressure hose length:	2,500 mm
Pump rating:	42 l/min



Interactive 16-digit display with 4 function buttons
All required parameters can be easily entered

Sturdy, compact metal casing
Protects all components such as vacuum pump and scale

3 different pressure gauges "Pulse-free", class 1.6, 80 mm
Universal use on air-conditioning units with all common refrigerants and operation in the high pressure range with R410A

Integrated high vacuum pump with 42 l/min suction Power
For evacuation of the system in accordance with **DIN 8975**

2 pressure hoses (2,500 mm) from the series "Plus" with ball valve
Safe and comfortable operation with refrigerants without the risk of refrigerant loss

Plastic capillary hose
Safe, leak-free filling due to shut-off valve

Pull-out precision digital scale up to 100 kg
Secure stand for large and small containers

Shock-resistant low pressure and high pressure gauges for various refrigerants



Secure storage of all accessories



Pressure hoses: 2.5 m long with shut-off valve



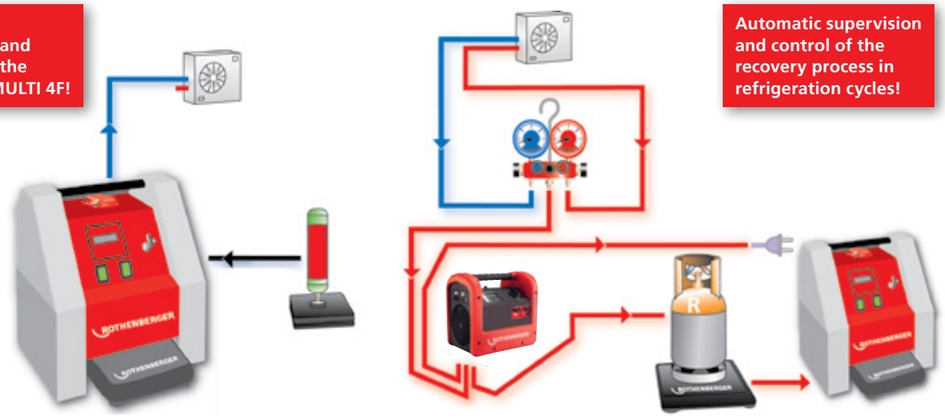
Bottle adaptor No. 173204/05 for scale and 1/4" reducing pieces



* Complete terms and conditions at rothenberger.com/roservice
RO SERVICE+ only valid in participating countries

Automatic evacuation and filling with the ROKLIMA MULTI 4F!

Automatic supervision and control of the recovery process in refrigeration cycles!



ROKLIMA MULTI 4F in use (evacuation and charging)



Set (No. 1000000138) includes: 2-stage vacuum pump, 2 low pressure gauges, 1 high pressure gauge R410A, 2 pressure hoses with ball valve à 2,500 mm, 2 bottle connection adaptors (1/4" SAE No. 173205, 5/16" SAE No. 173204), 2 reducing pieces 1/4" SAE F – 5/16" SAE M (No. 170016), precision digital scale up to 100 kg, automatic control, vacuum and pressure switch, mineral oil (No. 169200)

Model	kg	No.
ROKLIMA MULTI 4F	17.0	**1000000138**
Reducer pieces 1/4" SAE F–5/16" SAE M	0.1	**170016**

Secure storage of Accessories: pressure hoses bottle adaptor, plastic capillary hose



Precision scale up to 100 kg
Resolution: 10 g
Accuracy: ± 1 %



Ergonomic, compact



Light





9

Analogue manifolds

2- and 4-way manifolds



Pressure gauge Ø 80 mm, with pulse-dampening class 1.6

Easy-to-read, high precision display

Large hand valve with colour coding

Light, secure and precise opening and closing of the diaphragm valve, maintenance free

Valve sets



Pressure gauge with shock-proof rubber protector

Protects against damage

Valve body made of aluminium with gauge glass

Sturdy despite low weight

2-way manifold



Model	LP*/bar	HP*/bar	kg	No.
R22 **R134a** **R407C** **R404A**				
2-way, 1/4" SAE	-1 up to 17	0–34	0.7	**170501**
4-way, 1/4" SAE	-1 up to 17	0–34	0.9	**170502**
R410A **R32**				
2-way, 5/16" SAE	-1 up to 30	0–60	0.7	**1000001426**
4-way, 5/16" SAE	-1 up to 30	0–60	0.9	**1000001427**

Model	No.
Blue rubber protector for manifold	**170545**
Red rubber protector for manifold	**170546**
Valve sets for manifold	**170547**

Manifold sets

Manifold sets and pressure hoses

2-way manifold (for 170600 and 170607)
4-way manifold (for 170601, 170606, 170602 and 170608)

Durable and highly precise tool



No. 170602

Pressure hose with ball valve "Plus" (only for 170602 and 170608)

No loss of refrigerant

Sets include: Manifold, pressure gauge with Ø 80 mm, "Pulse-free", class 1.6, 3x 1,500 mm pressure hoses, plastic carrying case

Model	kg	No.
2-way "Standard"		
R22 **R134a** **R407C** **R404A**		
Manifold set 2-way "Standard"	2.7	**170600**
R410A **R32**		
Manifold set 2-way "Standard"	2.7	**170607**
4-way "Standard"		
R22 **R134a** **R407C** **R404A**		
Manifold set 4-way I "Standard"	2.8	**170601**
R410A **R32**		
Manifold set 4-way I "Standard"	2.8	**170606**
4-way "Plus"		
R22 **R134a** **R407C** **R404A**		
Manifold set 4-way II "Plus"	2.8	**170602**
R410A **R32**		
Manifold set 4-way II "Plus"	2.8	**170608**
Plastic carry case	1.4	**171505**

* LP = Low pressure manifold
HP = High pressure manifold

ROCOOL 600

For commissioning, maintenance work and documentation of refrigeration systems of all kinds

KEY FEATURES

- Modular system: The basic device can be fitted with the optional red box incl. the Data Viewer software for reading out or recording data on a PC. Additionally there is an optional external Pirani vacuum probe for precise vacuum readings
- More than 80 refrigerants incl. R32 and R744 (sub-critical) are stored in the device. New refrigerants can be added later using the update function
- Simultaneous calculation of superheat and subcool
- The documentation software Data Viewer generates an automatic report based on the data recorded. Ideal for handing out to the customer (client)
- An external Pirani vacuum probe allows reading of the vacuum where the most precise measurement is possible: directly at the refrigeration system

TECHNICAL DATA

Pressure display:	bar, psi, Kpa, MPa
Temperature display:	°C, °F
Vacuum display:	Micron, mbar, mmHg, Pa, mTorr
Power source:	9 V battery, 550 mAh
Screen size:	4.1/3" / 11 cm
Pressure measurement range:	-1 up to 60 bar
Precision (at 22 °C):	± 0.5 % fs
Temperature measurement range:	-50 °C to +200 °C
Working temperature:	-10 °C to +50 °C
Connections:	4x 1/4" SAE
Max. recording time:	12 h (device), 96h (red box)

Large screen

All important data at a single glance. Strong backlight for dark environment

Connection for the temperature sensor T1

For automatic measurement of superheat data

Connection for the external vacuum probe

For very precise measurement of the vacuum level directly at the refrigeration system

Pressure sensors "Made in Germany"

Precise measurement from -1 to 60 bar



Solid and non-tacky rubber coating

Prevents shock damages and allows a safe handling

Connection for the temperature sensor T2

For automatic measurement of subcool data

Green and red LEDs

An optical signal is displayed once an adequate vacuum level is reached or leakage in the system and also a warning of overpressure



Connection of the red box

To record data for up to 96 hours and independent read out of data at a PC

T-connection with Schrader valve 1/4" SAE

3-way function: Evacuation and filling without changing a hose

Y-connections 1/4" SAE

A connection and sealing plug in one. Simple transport of hoses when not in operation

Temperature sensor for a pipe diameter of up to Ø 32 mm



External vacuum probe for very precise measurement of the vacuum



Set (No. 1000000569) includes: ROCOOL 600, 1 temperature sensor
Set (No. 1000000570) includes: ROCOOL 600, 2 temperature sensors, carry case
Set (No. 1000000572) includes: ROCOOL 600, 2 temperature sensors, red box and data viewer software, carry case

Model	No.
Set with 1 temperature sensor (in the blister)	**1000000569**
Set with 2 temperature sensors (in the case)	**1000000570**
Set with 2 temperature sensors, red box, data viewer software (in the case)	**1000000572**

Set (No. 1000000539) includes: Red box, data viewer software, connection cable, external power supply

Model	No.
Red box, software, connection cable, external power supply	**1000000539**
Temperature sensor	**1000000540**
Vacuum probe	**1000000541**

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3-piece pressure hose sets

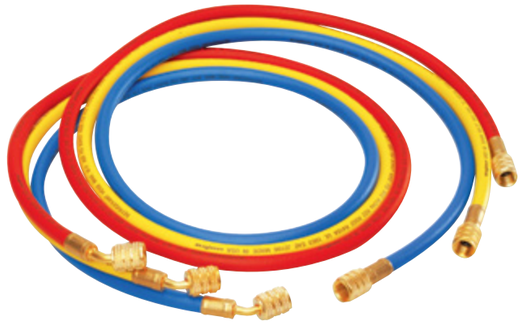
Available in "Standard" and "Plus"

Off / On · 1,5 m · Sicherheitsstandard nach SAE J2196 · ROTHENBERGER TECHNOLOGY Plus · ROTHENBERGER TECHNOLOGY R32

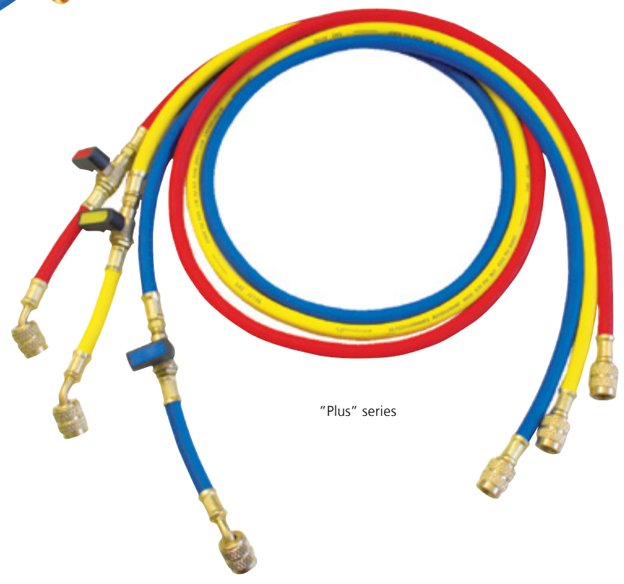
R22 | R134a | R407C | R404A | R410A | R32

KEY FEATURES

- No confusion and safe use with the colour coding (blue, red, yellow)
- Teflon seal with up to 10x longer service life compared to neoprene seal
- Working pressure 60 bar/burst pressure 300 bar
- This is an 8 % better pressure resistance as previously



"Standard" series



"Plus" series

Pressure hose from the series "Standard"

Model	Connection	mm	No,
Vacuum hose	3/8" SAE	1,500	1500000032
R22 R134a R407C R404A			
Set of 3 pressure hoses	1/4" SAE	1,500	1500000024
Pressure hose yellow	1/4" SAE	1,500	1500000025
R410A R32			
Set of 3 pressure hoses	5/16" SAE	1,500	1500000026
Pressure hose yellow	5/16" SAE	1,500	1500000027

Pressure hose from the series "Plus" with ball valve

Model	Connection	mm	No.
R22 R134a R407C R404A			
Set of 3 pressure hoses	1/4" SAE	1,500	1500000028
Pressure hose yellow	1/4" SAE	1,500	1500000029
R410A R32			
Set of 3 pressure hoses	5/16" SAE	1,500	1500000030
Pressure hose yellow	5/16" SAE	1,500	1500000031

Nitrogen set

Multiple uses for refrigeration systems

APPLICATION AREA

- Pressure and leak test with nitrogen
- Flushing of the installation
- Nitrogen admission during soldering to prevent scale formation

Ideal for split air-conditioning units and heat pumps!



950 cm³ nitrogen bottle included

Complete set

Connection for large bottles

Any size of bottle can be connected without a problem

Spring loaded pressure reducing valve

Simple and safe handling



Fine scaled 1.0 pressure gauge

Precise reading of the testing pressure

No. 259060

5/16" SAE adaptor for connecting to R410 units



Bottle adaptor for connecting 950 cm³ bottles



Set (No. 259060) includes: Pressure reducing valve, connection hose, bottle adaptor, pressure gauge, nitrogen bottle and plastic case

Model		No.
Nitrogen set with bottle (950 cm³)		259060
Nitrogen bottle, each 950 cm³	6	259008
Filling hose with pressure gauge		259010
Connection 5/16" SAE internal, 1/4" SAE external		01700RD

ROLEAK Pro

Electronic leak detection device for locating leaks in refrigeration systems (3 g/a)

KEY FEATURES

- Durable and highly sensitive sensor tip with a leak detection rate of 3 g/a within 3 seconds
- Suitable for R32
- Simple determination of the refrigerant concentration
- Adjustment of the sensor tips zero measurement point for simple detection of the leak
- Reference leak for functionality test included
- Easy accessibility of even hard to reach leaks

TECHNICAL DATA

Leak status:	LED display
Sensor length:	40 cm
Leak detection rate:	3 g/a within 3 seconds
Weight:	400 g
Working temperature:	0 °C up to 40 °C
Voltage:	6 V (4 AA batteries included)

R410A

R22 | R134a | R407C | R404A | R507A | R32



Model	No.
ROLEAK Pro in plastic case	1500002241

No. 1500002241

ROTEST

Leak detection on gas lines

DVGW-tested
Reg.-No. NG-5170CL0063

APPLICATION AREA

Ideal for detecting leaks in gas-filled lines, gas cylinders or containers. When a leak is present a blister forms.

KEY FEATURES

- Simple use – always ready to use
- Highly sensitive foaming spray for a quick and reliable locating of leaks

TECHNICAL DATA

- Detects gases (for example natural gas, inflammable gas, air)
- The leak detection spray is neutral against the most common inflammable gases and refrigerants. The only reaction is the building of foam



Highly sensitive foam spray: Quick and reliable location of leaks!



Content	g		No.
400 ml	470	12	65000

Packaging unit for specialist dealers

ROSCOPE mini

A constant companion – by having an extremely compact design, it can be stowed tidily into every tool case. Minor works, like the inspection of hollow spaces are not a challenge anymore. The combination of its robust construction with modern technology makes it a tool for every toolbox.

APPLICATION AREA

The ROSCOPE mini is perfect for an easy and quick inspection of minor works. Blockages in drainages, pipelines, shower and bath connections, gutters and hollow spaces can be easily inspected.

KEY FEATURES

- Intuitive handling with the first touch
- The Ø 8.5 mm camera head and the 120 cm camera cable are perfect for minor works and are maximizing the pace of work
- Electronical 180° rotation for the perfect perspective in every situation
- Waterproofed camera head
- Tool less mounting of accessories like the magnet or 90° mirror

TECHNICAL DATA

Dimensions:	152 x 90 x 40 mm
Display size:	2.5"
Cable length:	1.2 m
Cable-Ø:	5.5 mm
Camera head-Ø:	8.5 mm
Leveling:	180°
Storage:	30 Bilder



Quick inspection of hollow spaces before and after installations



Always ready to hand, due to handy belt clip



Set (No. 1000002268) includes: ROSCOPE mini basic unit, mirror and magnet accessories, 4x AA batteries, ROBOX B2350 (No. 1500002641)

Model	No.
ROSCOPE mini set	1000002268

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ROAIRVAC R32 2.0/5.0 CL

Two stage battery vacuum pump

KEY FEATURES

- Compatible with CAS battery system
- Solenoid check valve to protect the refrigeration system from oil contamination during power outage
- Protects the integrated components with the light and high-quality casing
- Gas ballast valve for reduction of water vapor in the oil container
- Special filter reduces oil mist on exhaust vent
- Gauge-glass enables easy oil-stand monitoring
- Fast filling of oil without spilling, no special funnel is necessary
- Easy access to the oil drain plug makes emptying quick
- Thermal switch protects the unit from the motor overheating
- Standard 1/4" SAE connection as well as 5/16" SAE and 3/8" SAE adaptor included in delivery

KEY FEATURES

- Battery LED indicator for easy management of remaining battery power
- Brushless motor for wear-free work and longer machine life
- Packed into the protective ROBUCKET



1/4" SAE standard connection with adaptors for 5/16" SAE and 3/8" SAE



Optimal positioned viewing glass and oil drains for simple draining of the oil



Practical: operating instructions always within view



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[1)] More information at cordless-alliance-system.com

[2)] Only applies to ROAIRVAC R32 5.0 CL

ROAIRVAC CL Series

Two-stage rotary vane pump for evacuation in accordance with DIN 8975

TYPE	ROAIRVAC R32 2.0 CL	ROAIRVAC R32 5.0 CL
No.	**1000003229**	**1000003231**
Pumprating	2.0 cfm / 57 l/min	5.0 cfm / 142 l/min
	3.4 m³/h	8.5 m³/h
Vacuum stages	2	2
Final vacuum	23 micron / 0,03 mbar	15 micron / 0,02 mbar
Motor rating	185 W / 3.600 r/min.	550 W / 1.800 r/min.
Voltage	18 V	18 V
Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz
Connection	1/4"	1/4"
with adaptor	5/16" SAE M / 3/8" SAE M	5/16" SAE M / 3/8" SAE M
Oil capacity	180 ml	350 ml
Weight	3.7 kg	7.5 kg

Future-proof product for the increased use of R32 refrigerants


No. 1000003229


No. 1000003231


No. 1000003230


No. 1000003233

ROAIRVAC CL Set beinhaltet: Vakuumpumpe mit Anschlüssen 1/4", 5/16" SAE und 3/8" SAE, Kunststoffflasche mit Mineralöl, RO BP18/8, 8.0 Ah 18 V Li-HD Akku, RO BC14/36 Ladegerät 230 V, EU, verpackt im ROBUCKET

Model	Performance	kg	No.
ROAIRVAC R32 2.0 CL without battery and charger	57 l/min.	3.7	1000003229
ROAIRVAC R32 2.0 CL mit battery, 8.0 Ah 18 V and charger and ROBUCKET	57 l/min.	6.1	1000003230
ROAIRVAC R32 5.0 CL without battery and charger	142 l/min.	7.5	1000003231
ROAIRVAC R32 5.0 CL mit battery, 8.0 Ah 18 V and charger and ROBUCKET	142 l/min.	10.5	1000003233
Mineral oil, 1 litre			169200

CAS battery packs and charger

Unlimited combinations: Now you can combine machines, battery packs and chargers of different manufacturer with each other without any problems. CAS uses the world's most powerful battery pack system in the industry – from Metabo. With more than 30 years of battery pack expertise, Metabo is pioneer in the battery pack technology and in the topic of "cordless construction site".

Model	No.
RO BP18/2, 2.0 Ah 18 V Li-Power battery	1000001652
RO BP18/4, 4.0 Ah 18 V Li-Power battery	1000001653
RO BP18/4, 4.0 Ah 18 V Li-HD battery	1000002548
RO BP18/8, 8.0 Ah 18 V Li-HD battery	1000002549
RO BC14/36 battery charger 230 V, EU	1000001654





ROAIRVAC R32

Two-stage vacuum pump

For evacuation in accordance with DIN 8975 with vacuum gauge and solenoid valve

KEY FEATURES

- One way valve for vacuum protection during power off
- Vacuum gauge with integrated drag indicator enables simple and quick control of the evacuation process
- Protects the integrated components with the light and high quality casing
- Gas ballast valve for reduction of water vapour in the oil container
- Special filter reduces oil mist on exhaust vent

KEY FEATURES

- Gauge-glass enables easy oil-stand monitoring
- Fast filling of oil without spilling, no special funnel is necessary
- Easy access to the oil drain plug makes emptying quick
- Thermal switch protects the unit from the motor overheating
- Standard 1/4" SAE connection, as well as 5/16" SAE and 3/8" SAE adaptor included in delivery
- Removable cable prevents cable damage



1/4" SAE standard connection with adaptors for 5/16" SAE and 3/8" SAE



Optimal positioned viewing glass and oil drains for simple draining of the oil



Practical: operating instructions always within view



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ROAIRVAC R32 Series

Two-stage rotary vane pump for evacuation in accordance with DIN 8975

TYPE	ROAIRVAC R32 1.5	ROAIRVAC R32 3.0	ROAIRVAC R32 6.0	ROAIRVAC R32 9.0
No.	**1000002399**	**1000002713**	**1000001231**	**1000002714**
Pumprating	1.5 cfm / 42 l/min.	3.0 cfm / 85 l/min.	6.0 cfm / 170 l/min.	9.0 cfm / 255 l/min.
	2.5 m³/h	5.1 m³/h	10.2 m³/h	15.3 m³/h
Vacuum stages	2	2	2	2
Final vacuum	15 micron / 0.02 mbar	15 micron / 0.02 mbar	15 micron / 0.02 mbar	15 micron / 0.02 mbar
Motor rating	190 W / 1,720 r/min.	250 W / 1,720 r/min.	550 W / 1,720 r/min.	750 W / 3,440 r/min.
Voltage	230 V	230 V	230 V	230 V
Frequency	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz	50 Hz / 60 Hz
Connection	1/4"	1/4"	1/4"	1/4"
with adaptor	5/16" SAE M / 3/8" SAE M	5/16" SAE M / 3/8" SAE M	5/16" SAE M / 3/8" SAE M	5/16" SAE M / 3/8" SAE M
Oil capacity	250 ml	330 ml	580 ml	590 ml
Weight	10.1 kg	11.9 kg	17.3 kg	18.4 kg
Manifold Ø	45 mm	50 mm	80 mm	80 mm

Future-proof product for the increased use of R32 refrigerants



ROAIRVAC R32 1.5 (42 l/min.) ROAIRVAC R32 3.0 (85 l/min.) ROAIRVAC R32 9.0 (255 l/min.)

Mineral oil is included in all pump deliveries



ROAIRVAC R32 6.0 (170 l/min.)



ROAIRVAC set includes: Vacuum pump with 1/4", 5/16" SAE and 3/8" SAE connections, plastic bottle with mineral oil

Model	Performance	kg	No.
ROAIRVAC R32 1.5	42 l/min.	10.1	**1000002399**
ROAIRVAC R32 3.0	85 l/min.	11.9	**1000002713**
ROAIRVAC R32 6.0	170 l/min.	17.5	**1000001231**
ROAIRVAC R32 9.0	255 l/min.	18.4	**1000002714**
Mineral oil, 1 litre			**169200**

ROAIRVAC-vacuum pump in use with the digital manifold ROCOOL 600




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ROREC

Refrigerant recovery device

Compact, portable device for recovery and recycling refrigerants of all kinds

class 1.6 · 63 mm · 230 V · RO SERVICE+*

KEY FEATURES

- 4-pole motor guarantees the durability of the machine
- Low noise and vibration emission thanks to the compact design
- Intuitive handling makes it simple and safe to use
- Maintenance-free operation through the oil-free compressor
- Emptying of the device in order to work with different refrigerants with the PURGE function
- Simple transport and use with the light and compact plastic casing

TECHNICAL DATA

Delivery rate:	gaseous: 0.26 kg/min. fluid: 1.85 kg/min. Push/Pull: 6.22 kg/min.
Power supply:	230 V / 50–60 Hz
Performance:	370 W
High pressure switch:	38.5 bar
Product dimensions:	490 x 244 x 353 mm
Weight:	17 kg

Ideal for mono & multi-split air-conditioning units and heat pumps!



Integrated high pressure switch
Protects the integrated components

PURGE function
Emptying of refrigerant residue in the unit (self-cleaning mode)

Simple use
Controlled dosage of the refrigerant supply

RESET Button
Reset of the pressure shut-off

Removable cable
Prevents cable damage

Oil-free compressor
Maintenance-free operation

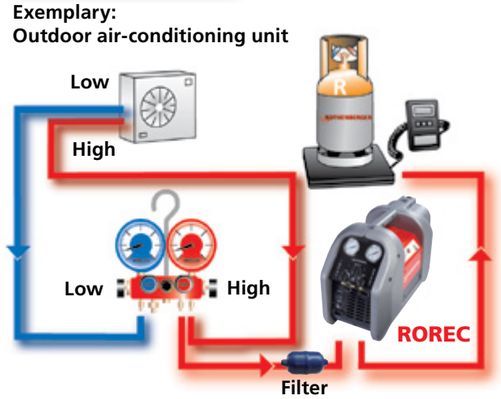
Thermal switch
Protects the unit from overheating

Light and compact plastic casing
Simple transport and use

4-pole motor
Increased torque and service life

Recovery of Refrigerant

Exemplary:
Outdoor air-conditioning unit



Simple and precise reading with the glycol filled pressure gauge



Practical storage compartment for accessories on the back



Model	kg	No.
ROREC	17.0	168605
Filter	0.12	168713

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RO SERVICE+ only valid in participating countries

ROREC PRO Digital

Refrigerant recovery device

Lightweight Recovery unit for the recovery of refrigerants of the classes A1, A2L and A2 (incl. R32), suitable for all unit sizes thanks to its high recovery rate

230 V · RO SERVICE+* · ROTHENBERGER TECHNOLOGY R32

KEY FEATURES

- Suitable for refrigerants of the classes A1, A2L and A2 (incl. R32)
- Compact design with a weight of less than 12 kg
- Digital display and one-knob control
- Maintenance free operation with the oil-free 2-piston compressor
- 4-pole motor guarantees the durability of the machine
- Automatic shut-off and automatic restart once the pressure increases again
- Emptying of refrigerant residues with the PURGE function

TECHNICAL DATA

Delivery rate:	gaseous: 0.5 kg/min.; 30 kg/h fluid: 3.5 kg/min.; 210 kg/h Push/Pull: 9.5 kg/min.; 570 kg/h
Power supply:	230 V / 50–60 Hz
Performance:	730 W
High pressure switch:	38.5 bar
Product dimensions:	380 x 250 x 350 mm
Weight:	12 kg

Digital display
Clearly structured display of the measured pressure values

Low pressure switch
Automatic shut-off and automatic restart once the pressure increases again



Oil-free 2-piston compressor
Very high recovery rate with maintenance free operation



Practical storage compartment
Storage of accessories in the back

Shoulder strap for transport over longer distances



Clearly structured digital display



Model	kg	No.
ROREC PRO Digital	12.0	1500002637
Filter	0.12	168713

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Refrigerant for air-conditioning units

Non-chlorinated refrigerant of the HFC group in practical 40 bar steel bottles (bursting pressure: 165 bar) TÜV seal No. 0036-043/03D and TPED accepted as per 99/36/CE

KEY FEATURES

- Light and practical for use on building-sites
- 1 and 2 litre steel bottles, rent-free and easy disposal
- Flat base for increased standing stability
- Ease of clean up after removing of the valve

Standardised SAE thread on all bottle valves

Universal application

Refillable bottles

Full flexibility for the user



Model		No.
R410A Refrigerant R410A in cardboard packaging		
1 l steel bottle 5/16" SAE, 800 g	6	170912
2 l steel bottle 5/16" SAE, 1.6 kg	4	170932
R32 Refrigerant R32 in cardboard packaging		
1 l steel bottle 1/2" left, 850 g	6	170960
2 l steel bottle 1/2" left, 1.8 kg	4	170961

Schrader valve tool

KEY FEATURES

- For exchanging the Schrader valve on air-conditioners under pressure, without having to recover the unit
- For safe and easy change of spring insert of the Schrader valve tool
- With safety thread for risk-free use with R410A



Model	No.
Schrader valve tool in plastic carrying case	87800

ROSANI CLEAN 15

For cleaning heat exchangers and disinfecting surfaces

KEY FEATURES

- Exchangable nozzles for quick and easy change without a tool
- Brass-free internal components and diaphragm pump for the use of e. g. hydrogen peroxide mixtures
- Ergonomic shape ensures no back problems
- Powerful battery for up to 225 litres/59 gallons on one charge
- Easy pressure adjustment prevents damage of sensitive heat exchanger fins



Model	No.
ROSANI CLEAN 15	1000003178
ROSANI CLEAN 15 without battery and charger	1000003179

Packaging unit for specialist dealers

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SANIFRESH

Deodorising cleaning spray

APPLICATION AREA

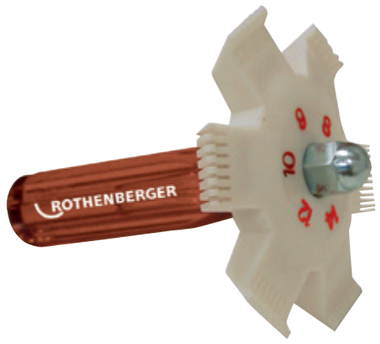
- Removes the threat of disease and allergies
- Practical and ecologically friendly solution for removing mites, dust, bacteria and spores
- Spray is applied directly to affected surface
- Economical spray can with spray nozzle and spray tube
- Removes unpleasant odours with pleasant mint smell

Model	Volume	No.
Sanifresh (12 pcs.)	400 ml	85800

Plate fin comb

KEY FEATURES

- For straightening the plate fins of heat-exchangers
- 6 different sizes in one tool



Model	Fins per inch	No.
Plate fin comb	8 – 9 – 10 – 12 – 14 – 15	224500



No. 173204, No. 173205



No. 170950, No. 1500003381



No. 01700RD

Bottle connection and adaptors

For refrigerant bottles

For use with new refrigerant bottles on existing equipment

M = external thread; F = inner thread

Model	No.
Adaptor, 1/4" connection	173205
Adaptor, 5/16" connection	173204
Adaptor, W21.8 x 1/4" SAE M connection with seal for 2 l sized bottles	170950
Adaptor, W21.8 left x 1/4" SAE M connection for combustible refrigerants like R32	1500003381
Adaptor, 1/2" left – 5/16" SAE M connection	173206
Adaptor, 1/4" SAE M – 3/8" SAE F connection	89501
Adaptor, 3/8" SAE M – 1/4" SAE F connection	89503
Adaptor, 1/4" SAE F – 5/16" SAE M connection	170016
Adaptor, 1/4" SAE M – 5/16 SAE F connection with valve trigger	01700RD

ROSCALE 120

Electronic refrigerant scale

Precise, easy to handle refrigerant scale for filling and evacuation processes with a maximal weight capacity of 120 kg

KEY FEATURES

- Resolution of 5 g enables very precise filling
- Weight capacity sufficient for all common refrigerant bottles
- Cable connection enables comfortable use in every situation
- Bottle adaptor for connecting small refrigerant bottles (1 l and 2 l bottles)
- Refrigerant bottles of all sizes have enough space
- Large LCD display for comfortable reading of the result
- Simple use

TECHNICAL DATA

Weight capacity:	120 kg or 264 lbs
Accuracy:	+/- 0.5 %
Resolution:	5 g / 0.2 oz.
Working temperature:	-10 up to +49 °C / 14 up to +120 °F
Connection:	1/4" SAE for 1–2 l bottles
Battery:	9 V
Platform size:	230 x 230 x 53 mm
Weight:	3.28 kg



ROSCALE 120 in carrying case

Set (No. R17300416) includes: ROSCALE 120, 9 V battery, carrying case

Model	kg	No.
ROSCALE 120	3.28	R17300416

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POWER SUPPLY

- AC 230 V
- AC 115 V
- AC 110 V
- Three-phase current 400 V
- Battery-powered
- Cable length 5 m
- Battery + AC operation possible
- Battery operation
- Battery charger
- Cordless Alliance System**

WORKING PROCESS

- Can be used overhead
- Can be used in confined spaces
- Suitable for tight spaces
- Basic soft soldering up to 450 °C
- Hot brazing 450–1100 °C
- Max autogen welding 1100 °C
- Fast cut
- No deformation from use
- Dry drilling
- Wet drilling
- Up to 50 % time-saving
- Portable operation
- 360° rotatable
- Fine adjustment of the flame

PRODUCT FEATURES

- Ergonomic design
- Meets DIN standards
- VDE approved
- Propane control
- Oxygen control
- Acetylene control
- Shock absorption
- On/off switch
- LED display
- Sturdy casing
- Extension of hose possible
- Piezo ignition
- Economy valve
- Pressure hose ball valve
- Inspection window
- Pressure hose length
- Emergency stop switch
- Lock button
- Bayonet coupling
- Push lock
- Thread lock
- Pressure gauge display adjustable
- Pressure gauge class 1–6
- Pressure gauge size
- Filling supports
- Counter display
- Balance point in handle
- Cable length
- Measuring accuracy up to g
- Scale range max. kg
- Transport case
- Heed safety warning
- Heed industrial safety
- Touchscreen
- With USB connection
- With video function
- With photo function
- Memory card
- WiFi
- ROCASE Case System
- DURA LAZR TEC Laser hardening Process
- 5-Year-Exchange guarantee*

* Detailed guarantee terms can be found at rothenberger.com/de-de/5-jahres-umtauschgarantie

** More information at cordless-alliance-system.com

ROTHENBERGER ENCLOSED POWER TRANSMISION

The **EPT-Technology (Enclosed Power Transmission)** of 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.

ROTHENBERGER TITANNITRID COATING

The golden **TiN Coating (Titannitrid-coating)** of the expander head offers the following technical benefits:

High durability 2,300 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

ROTHENBERGER CONSTANT FORCE TECHNOLOGY

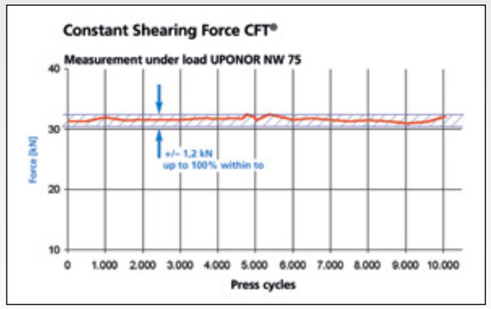
The **CFT (Constant Force Technology)** guarantees a constant axial pressing force over the entire service interval.
A very important requirement for the production of sealed press connections CFT guarantees:

ROMAX Compact TT
19–21 kN for 40,000 press cycles

ROMAX AC ECO
32–34 kN for 10,000 press cycles

ROMAX 4000
32–34 kN for 40,000 press cycles

ROMAX 3000 AC
32–34 kN for 20,000 press cycles



ROTHENBERGER DURAMAG TECHNOLOGY

The **DURAMAG Technology (high tec magnesium body)** offers the following benefits:

- **Improved performance**
- **Higher stability with considerably lower weight**

DURA = Durable MAG = Magnesium

Refrigerant data from CFC-alternative refrigerants

Refrigerant	Composition	ODP	GWP	Temperature glide
R22 (HFC-CFC refrigerant)	CHCLF2	0.05	1,810	–
R134a (HFC chlorine-free refrigerant)	CF3CH2F	0	1,430	–
R32 (HFC chlorine-free refrigerant)	CH2F2	0	675	–
R404A (HFC chlorine-free blends)	52 % R143a, 44 % R125, 4 % R134a	0	3,922	–
R507 (HFC chlorine-free blends)	50 % R143a, 50 % R125	0	3,985	–
R407C (HFC chlorine-free blends)	23 % R32, 25 % R125, 52 % R134a	0	1,774	7.5 K
R410A (HFC chlorine-free blends)	50 % R32, 50 % R125	0	2,088	0.2 K

ODP = Ozone Depletion Potential (degree in which the ozone layer is destroyed)
GWP = Global Warming Potential (degree in which it contributes to the greenhouse effect)

Instructions for safe and proper use of the refrigerants

Refrigerant

- Wear protective gloves and safety goggles
- Do not let refrigerant come in contact with skin
- Do not inhale high concentrations of vapours (Lack of oxygen causes a narcotic effect and is a danger to life)
- Do not smoke around refrigerant
- Working place/room must be thoroughly aired, if necessary extracted

Refrigerant bottles

- Secure against accidents, do not throw
- Do not expose to direct sunlight and do not place near radiators or other heat sources
- Do not use open flame
- Do not disassemble or remove valves
- Damaged bottles need to be properly returned
- Close empty containers

Air-conditioners

- Air-conditioner leaks need to be repaired immediately
- Do not allow refrigerant to leak while filling or doing maintenance work
- In high concentrations (for example pipe burst), leave the room and do not enter again until it has been properly ventilated
- Only do brazing work together with protective nitrogen gas and only in well ventilated areas

Flare connections

Normal flare size in accordance with JIS B8607:2008
Flare outer diameter in relationship to the pipe diameter

Pipe outer diameter mm/inch	Metric	Wall thickness mm/inch	Flare outer diameter with R22-, R134a-, R404-, R407C air-conditioners	Flare outer diameter with R410A air-conditioners
6 mm	–	1 mm	8.5 mm	9.1 mm
8 mm	–	1 mm	11.1 mm	11.1 mm
10 mm	–	1 mm	13.6 mm	13.2 mm
12 mm	–	1 mm	15.3 mm	16.5 mm
16 mm	–	1 mm	19.5 mm	19.2 mm
18 mm	–	1 mm	22 mm	2.7 mm
1/4″	6.35 mm	0.35″	9 mm	9.1 mm
5/16″	7.94 mm	0.35″	11 mm	11.1 mm
3/8″	9.52 mm	0.35″	13 mm	13.2 mm
1/2″	12.70 mm	0.35″	16.2 mm	16.6 mm
5/8″	15.88 mm	0.35″	19.4 mm	19.7 mm
3/4″	19.05 mm	0.35″	23.3 mm	24.0 mm

Conversion table pressure

mbar	Micron	TORR	mm HG Vacuum
10	7,516	7.5	752
5	3,759	3.6	756
2	1,503	1.5	758
1	752	0.75	759
0.66	500	0.5	–
0.5	376	0.36	–
0.3	225	0.23	–
0.2	150	0.15	–
0.1	75	0.08	–
0.09	68	–	–
0.07	53	–	–
0.06	45	–	–
0.05	38	–	–
0.04	30	–	–
0.03	22	–	–
0.02	15	–	–
0.01	8	–	–

Conversion table temperature

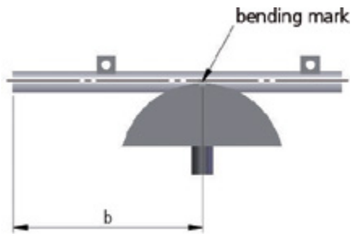
Conversion from °C in °F: °C x 1.8 + 32 = °F
Conversion from °F in °C: (°F-32) : 1.8 = °C

°C	°F	°C	°F	°F	°C	°F	°C
100	212	30	86	212	100	70	21
95	203	25	77	200	93	60	16
90	194	20	68	190	88	50	10
85	185	15	59	180	82	40	4
80	176	10	50	170	77	30	-1
75	167	4	39	160	71	20	-7
70	158	0	32	150	66	10	-12
65	149	-10	14	140	60	0	-18
60	140	-20	-4	130	54	-10	-23
55	131	-30	-22	120	49	-20	-29
50	122	-40	-40	110	43	-30	-34
45	113	-50	-58	100	38	-40	-40
40	104	-60	-76	90	32	-50	-46
35	95	-273	-460	80	27	-60	-51
–	–	–	–	–	–	-112	-80
–	–	–	–	–	–	-460	-273

Common threads

UNF-Thread	SAE-Thread	Outer diameter (max. mm)	Internal diameter (min. mm)	Lodes per inch	Increment (mm)
7/16" – 20	1/4"	11.079	9.738	20	1.270
1/2" – 20	516"	12.667	11.328	20	1.270
5/8" – 18	3/8"	15.839	14.348	18	1.411
3/4" – 16	1/2"	19.012	17.330	16	1.588
7/8" – 14	–	22.184	20.262	14	1.814
7/8" – 14	5/8"	22.184	20.262	14	1.814
1" – 14	3/4"	25.357	23.437	14	1.814
11/16" – 14	–	26.947	25.024	14	1.814
11/8" – 12	–	28.529	26.284	12	2.117
11/4" – 12	7/8"	31.704	29.459	12	2.117
13/8" – 12	–	34.877	32.634	12	2.117
11/2" – 12	1	38.052	35.809	12	2.117

Push-bending



45°-ARC



$L = L_1 + L_2$
$b = L_1 - L_R$

90°-ARC



$L = L_1 + L_2 - L_M$
$b = L_1 - L_R$

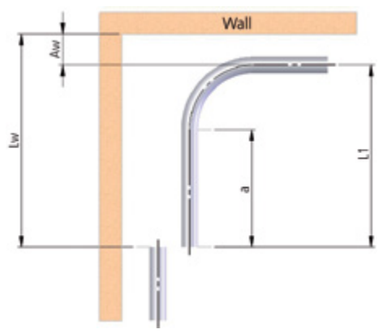
Calculation examples TUBE BENDER MAXI

Specifications:
Installation in corner areas
L_W = 1,200 mm
A_W = 30 mm
Pipe-Ø 12 mm, 90°-Arc

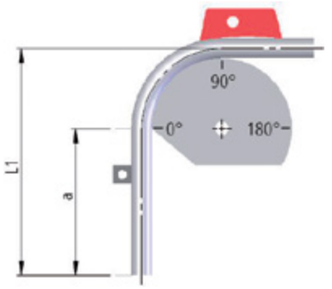
Sought after:
Leg length L_1
Applied size b

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 $b = L_1 - L_R = 1{,}170 - 7.5 = 1{,}162.5$ mm;
L_R ... Tabular value



Pull-bending



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



$L = L_1 + L_2 + L_M$
$a = L_1 - L_R$

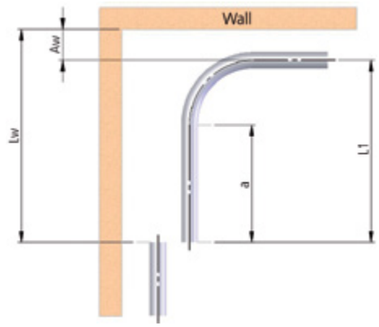
Calculation examples ROBEND 3000/4000/4000 E

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 $L_1 = L_W - A_W = 1{,}200 - 30 = 1{,}170$ mm
Applied size $a = L_1 - L_R = 1{,}170 - 42 = 1{,}128$ mm;
L_R ... Tabular value



Symbols
L_1, L_2 = Leg length; a/b = 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*

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

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	114
28	–	112.0	44	–	112	64	112	148
30	wated	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 listed are standards and are dependant on the material and the wall thickness.
Bending specific sizes based on the bending radius – 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	Minimum length L_M mm
12	35.0	0.8	1.0	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		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
14x2.0	42.5	0.9	12.5	9.0	42.5	–	–
16x2.0	49.0	1.1	14.5	10.5	49.0	–	–
18x2.0	49.0	1.7	22.0	16.0	49.0	–	–
25x2.5	74.0	2.0	26.0	19.0	74.0	–	–
32x3.0	128.0	2.8	26.0	27.5	74.0	–	–

TUBE BENDER MAXI CT		at 45°		at 90°		at 180°	
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
10x0.6	42.5	0.8	12.5	9.0	42.5	–	–
12x0.6	49.0	1.1	14.5	10.5	49.0	–	–
15x0.7	74.0	1.7	22.0	16.0	74.0	–	–
18x0.7	87.0	1.9	25.5	18.5	87.0	–	–

* 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

Notes

Notes



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