Tube squaring machines RPG ONE, RPG 1.5 (electric/ battery)

Tube squaring machines (electric/battery)

The RPG S series stands for ease of use and particularly economical machining. Right-angled facing (I-joint) of thin-walled stainless steel pipes and micro fittings, as well as unalloyed and low-alloy steels, aluminum, and titanium, is the domain of the RPG series. The machines fit perfectly in the hand and are hard to beat in terms of size and weight. Users can select the appropriate clamping shells from the range of accessories for every diameter.



For burr-free and right-angled planning and beveling of thin-walled stainless steel pipes and micro fittings. The required high-quality pipe end preparation, also for orbital welding!

- **Creates a pipe plan surface with very high surface quality** ✓
- **Burr-free and right-angled** ✓
- **Beveling possible with special holder (RPG 1.5 only)** ✓
- **Quick-change system for tools, clamping shells, and pipes** ✓
- **Machining of thin-walled stainless steel pipes (V4A) and micro fittings** ✓
- **Indexable insert with 2 cutting edges and high-performance coating** ✓
- **Electric versions with speed-controlled electric motor with speed control** ✓
- **Battery versions with powerful and environmentally friendly lithium-ion technology** ✓
- **Portable and lightweight machine for mobile and safe use** ✓

Pipe and plant manufacturers in the high-purity gas, electronics, pharmaceutical, food, beverage, solar, and chemical industries benefit from the mobile, high-quality, and burr-free pipe end preparation offered by our RPG series.

Tools, clamping shells, and pipes can be easily exchanged without additional tools thanks to the quick-change system.
All multifunctional tools (MFW) have two cutting edges and a high-performance coating to protect against wear. This allows pipes made of unalloyed, low-alloyed and high-alloyed steels as well as aluminum to be processed particularly quickly and economically with high precision.

When expanding or repairing an existing system, we offer the battery-powered version as the optimal, mains-independent solution for confined spaces. The battery drive has been tailored to the customer's needs. The machine and accessories are delivered in a handy transport case – the battery versions include a 230-volt charger for the European market or a 110-volt charger for the US market.

Further advantages:

- Feed with millimeter scale division for optimal results
- No additional tools required for processing
- Modular design, ensuring compatibility within the RPG series

Electric versions:

- Rotatable and removable drive
- Speed-controlled electric motor with speed constant control
- Vario-Tacho-Constamatic (VTC) full-wave electronics
- Restart protection prevents the machine from starting up unintentionally after reconnection to the mains or when power is restored after a power failure
- Adjustment wheel for preselecting the speed
- Robust marathon motor
- Overload protection
- Shut-off carbon brushes
- Carbon wear indicator

Battery versions:

- Short overall length
- Lithium-ion technology
- High-performance brushless motor
- No memory effect
- Single cell monitoring in the battery pack
- Electronic overload protection with integrated temperature monitoring
- Robust battery packs with capacity indicator
- Low self-discharge
- Environmentally friendly
- AIR COOLED technology for short charging times and a long service life

AREA OF APPLICATION		RPG ONE	RPG ONE BATTERY	RPG 1.5	RPG 1.5 BATTERY
Code	[230 V]	790036031	790036021	790037001	790037011
	[115 V]	–	790036022	–	790037012
	[120 V]	790036032	–	790037002	–
	[110 V]	790036033	–	790037003	–
Pipe OD min.-max.	[mm]	3.0* - 25.4	3.0* - 25.4	3.0* - 38.1	3.0* - 38.1
	[inch]	0.118* - 1.0	0.118* - 1.0	0.118* - 1.5	0.118* - 1.5
Wall thickness max.	[mm]	2.0	2.0	3.0	3.0
	[inch]	0.079	0.079	0.118	0.118
Materials		High-alloyed steels (stainless steel material no. 1.40... - 1.45... according to DIN 17455 and DIN 17456), unalloyed and low-alloy steels, aluminum.			

TECHNICAL SPECIFICATION		RPG ONE	RPG ONE BATTERY	RPG 1.5	RPG 1.5 BATTERY
Dimensions (LxWxH)	[mm]	390 x 70 x 200	252 x 77 x 255	400 x 160 x 350	266 x 87 x 255
	[inch]	15.4 x 2.8 x 7.9	9.9 x 3.0 x 10	15.8 x 6.3 x 13.8	10.5 x 3.4 x 10
Tool speed	[rpm]	145 - 380	0 - 500	145 - 380	0 - 500
Power	[W]	1100	–	1100	–
Voltage Replaceable battery	[V]	–	18	–	18
Capacity	[Ah]	–	4.0	–	4.0
Sound pressure level at the workplace (EN 23741)	[dB (A)]	approx. 78	approx. 78	approx. 78	approx. 78
Vibration level (EN 50144)	[m/s2]	< 2.5	< 2.5	< 2.5	< 2.5

The technical specification is non-binding. It does not constitute a guarantee of properties. Subject to change without notice.

SCOPE OF DELIVERY		RPG ONE	RPG ONE BATTERY	RPG 1.5	RPG 1.5 BATTERY
Tube squaring machine	PCS	1	1	1	1
Transport case	PCS	1	1	1	1
Replacement batteries	PCS	–	2	–	2
Charger	PCS	–	1	–	1
Overload protection (square nut)	PCS	–	–	–	–
Tool Holder WH (Code 790 ...)	PCS	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)	1 (... 037 152)
Tool Key	PCS	1	1	1	1
General safety instructions for tube squaring machines	PCS	1	1	1	1
Operating instructions & Spare parts list Download link PDF: https://www.orbitalum.com/de/download.html	PCS	1	1	1	1

Base plate for cordless machines available on request (code 790 037 169).
The technical specification is non-binding. It does not constitute a guarantee of properties. Subject to change without notice.
** Application range with standard tool holder (code 790 037 152) possible from 6.0 mm/0.236". With special tool holder (code 790 037 161) from 3.0 mm/0.118".*

Tube squaring machines RPG ONE, RPG 1.5 (electric/battery-powered)

Stainless steel clamping shells must be ordered separately.

ITEM	CODE	KG	SHIPPING WEIGHT KG
RPG ONE 230 V, 50/60 Hz EU	790036031	4,14	9,6
RPG ONE 120 V, 50/60 Hz US	790036032	4,14	9,6
RPG ONE 110 V, 50/60 Hz EU	790036033	4,14	9,6
RPG ONE battery (18 V) 230 V, 50/60 Hz EU	790036021	2,88	8,2
RPG ONE battery (18 V) 115 V 50/60 Hz US	790036022	2,88	8,2
RPG 1.5, 230 V, 50/60 Hz EU	790037001	4,7	9,5
RPG 1.5, 120 V, 50/60 Hz US	790037002	4,7	9,5
RPG 1.5, 110 V, 50/60 Hz EU	790037003	4,7	9,5
RPG 1.5 battery (18 V), 230 V, 50/60 Hz EU	790037011	3,44	10,1
RPG 1.5 battery (18 V), 115 V, 50/60 Hz US	790037012	3,44	10,1



Illustration: RPG ONE electric



Illustration: RPG ONE battery



Illustration: RPG 1.5 electric



Illustration: RPG 1.5 battery

Accessories

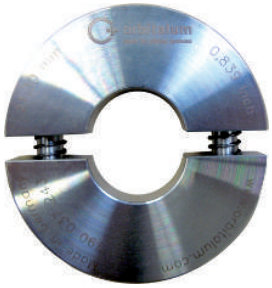


Illustration: Stainless Steel Clamping Shell for Pipes

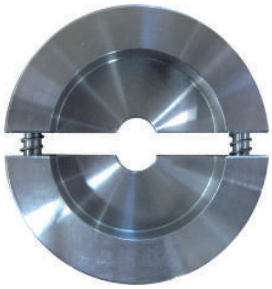


Illustration: Stainless steel clamping shell for micro-fittings

Stainless steel clamping shells

Extremely durable. Guarantee precise clamping of pipes and micro fittings and quick clamping shell replacement without tools thanks to the unique design with a positively driven clamping shell mechanism.

► Please check the outer diameter of the pipes before ordering the clamping shells.

MACHINE TYPE:	CLAMPING LENGTH FOR PIPES:	CLAMPING LENGTH FOR MICRO FITTINGS:
RPG ONE	10.0 mm (0.394")	4.0 mm (0.157")
RPG 1.5	15.0 mm (0.591")	4.0 mm (0.157")

		RPG ONE (BATTERY)				RPG 1.5 (BATTERY)			
PIPE OD		PIPES		MICRO-FITTINGS		PIPES		MICRO-FITTINGS	
[MM]	[INCH]	CODE 790…	KG	CODE 790…	KG	CODE 790…	KG	CODE 790…	KG
3.00	0.118	036232	0.118	–	–	037220	0.300	037300	0.225
3.18	0.125	036201	0.119	–	–	037221	0.308	037301	0.227
4.00	0.157	–	–	–	–	037222	0.310	037302	0.226
4.78	0.188	–	–	–	–	037223	0.310	037303	0.234
5.00	0.197	–	–	–	–	037224	0.308	037304	0.228
6.00	0.236	036213	0.117	036304	0.066	037225	0.310	037305	0.220
6.35	0.250	036202	0.118	036301	0.066	037226	0.306	037306	0.460
7.00	0.276	036214	0.118	–	–	037257	0.306	037333	–
8.00	0.315	036215	0.118	036307	0.065	037227	0.299	037307	0.223
9.00	0.354	–	–	–	–	037254	0.280	–	–
9.53	0.375	036203	0.115	036302	0.064	037228	0.297	037308	0.300
10.00	0.394	036204	0.115	036305	0.065	037229	0.298	037309	0.222
10.10	0.398	036222	0.114	–	–	–	–	–	–
11.00	0.433	036226	0.112	–	–	037293	0.252	–	–
11.11	0.437	–	–	–	–	037255	0.295	–	–
12.00	0.472	036205	0.112	036306	0.064	037230	0.293	037310	0.220
12.10	0.476	036223	0.111	–	–	–	–	–	–
12.50	0.492	–	–	–	–	–	–	037317	0.220
12.70	0.500	036206	0.111	036303	0.062	037231	0.292	037311	0.220
13.00	0.512	–	–	–	–	037232	0.295	–	–
13.20	0.520	–	–	–	–	037263	0.290	–	–
13.50	0.531	036227	0.110	–	–	037233	0.290	–	–
14.00	0.551	036228	0.108	–	–	037234	0.288	–	–
14.10	0.555	036224	0.107	–	–	–	–	–	–
14.30	0.563	–	–	–	–	037253	0.289	–	–
14.70	0.579	–	–	–	–	037290	0.287	–	–
15.00	0.591	036216	0.107	–	–	037235	0.287	–	–
15.30	0.602	–	–	–	–	037259	0.287	–	–
15.60	0.614	036225	0.105	–	–	–	–	–	–
15.70	0.618	–	–	–	–	037291	0.284	–	–
15.88	0.625	036211	0.105	–	–	037236	0.285	–	–
16.00	0.630	036212	0.104	–	–	037237	0.285	–	–

		RPG ONE (BATTERY)				RPG 1.5 (BATTERY)			
PIPE OD		PIPES		MICRO-FITTINGS		PIPES		MICRO-FITTINGS	
[MM]	[INCH]	CODE 790…	KG	CODE 790…	KG	CODE 790…	KG	CODE 790…	KG
17.00	0.670	036221	0.103	–	–	037256	0.280	–	–
17.08	0.672	–	–	–	–	037260	0.281	–	–
17.20	0.677	036207	0.104	–	–	037238	0.300	037312	0.220
18.00	0.709	036217	0.102	–	–	037239	0.280	–	–
19.00	0.748	–	–	–	–	037240	0.275	037314	0.216
19.05	0.750	036208	0.100	–	–	037241	0.274	037315	0.215
20.00	0.787	036230	0.096	–	–	037242	0.272	–	–
21.00	0.827	–	–	–	–	037294	0.270	–	–
21.20	0.835	–	–	–	–	–	–	037313	0.213
21.30	0.839	036209	0.094	036 317	0.057	037243	0.270	037318	0.212
21.70	0.854	036220	0.093	–	–	037261	0.270	–	–
22.00	0.866	036218	0.093	–	–	037244	0.264	–	–
22.22	0.875	–	–	–	–	037292	0.270	–	–
23.00	0.906	036219	0.085	–	–	037245	0.255	–	–
24.00	0.945	–	–	–	–	037246	0.256	–	–
25.00	0.984	036231	0.081	–	–	037247	0.252	–	–
25.40	1,000	036210	0.083	–	–	037248	0.240	–	–
26.90	1,059	–	–	–	–	037249	0.260	–	–
27.00	1,063	–	–	–	–	037,264	0.260	–	–
27.20	1,071	–	–	–	–	037262	0.260	–	–
28.00	1,102	–	–	–	–	037250	0.240	–	–
29.00	1,142	–	–	–	–	037251	0.232	–	–
30.00	1,181	–	–	–	–	037252	0.228	–	–
31.75	1,250	–	–	–	–	037850	0.229	–	–
31.80	1,252	–	–	–	–	037280	0.230	–	–
32.00	1,260	–	–	–	–	037258	0.226	–	–
33.40	1,315	–	–	–	–	037281	0.220	–	–
33.70	1,327	–	–	–	–	037282	0.218	–	–
34.00	1,339	–	–	–	–	037283	0.215	–	–
35.00	1,377	–	–	–	–	037284	0.210	–	–
36.00	1,417	–	–	–	–	037,285	0.204	–	–
38.00	1,496	–	–	–	–	037286	0.199	–	–
38.10	1,500	–	–	–	–	037287	0.194	–	–



Illustration: Tool holder WH

Tool holder WH

For max. wall thickness 3 mm.

TOOL HOLDER	PLAN-ING	BEVELS	BEVELING ANGLE [°]	RPG ONE (BATTERY)	PIPE OD RPG 1.5 (BATTERY)	
WH12-I/Standard*	x	–	–	6.0 - 25.4	6.0 - 38.1	[mm]
Code 790 037152				0.236 - 1.0	0.236 - 1.5	[inch]
WH12-I	x	–	–	3.0 - 6.0	3.0 - 6.0	[mm]
Code 790037161				0.118 - 0.236	0.118 - 0.236	[inch]
WH12-I/micro-fittings**	x	–	–	–	3.0 - 21.2	[mm]
Code 790037156				–	0.118 - 0.84	[inch]
WH3-V-30***	–	x	30°	–	max. 35.0	[mm]
Code 790037158				–	max. 1,378	[inch]
WH3-V-35***	–	x	35°	–	max. 33.7	[mm]
Code 790037159				–	max. 1,327	[inch]
WH3-V-45***	-	x	45°	–	max. 33.7	[mm]
Code 790037157				–	max. 1,327	[inch]

ITEM	CODE	KG
Tool holder WH12-I*	790037152	0,04
Tool holder WH12-I, special	790037161	0,026
Tool holder WH12-I, MICRO**	790037156	0,1
Tool holder WH3-V-30***	790037158	0,024
Tool holder WH3-V-35***	790037159	0,024
Tool holder WH3-V-45***	790037157	0,022

** Included in the standard scope of delivery.*
*** Only to be used with stainless steel clamping shells for micro-fittings.*
**** Not compatible with the RPG ONE.*

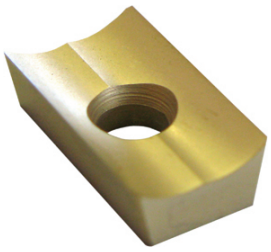


Illustration: MFW multifunctional tool

Multifunctional tool MFW

With 2 cutting edges and process-specific tool wear protection coating.

Can be used for all machines in the RPG series.

ITEM	QUANTITY	CODE	KG
Multifunctional tool MFW-P-2	10	790038315	0,045
TORX M4x10 clamping screw	1	790086220	0,002



Illustration: Angle Drive

Angle drive for RPG ONE and RPG 1.5 (battery)

The angle drive is optionally available and can be retrofitted to the following RPG machines:

RPG ONE; RPG ONE Cordless; RPG 1.5; RPG 1.5 Cordless

The overall length is reduced to 200 mm (7.874") with the angle drive.

The technical specifications remain unchanged.

ITEM	CODE	KG
Angle drive for RPG ONE and RPG 1.5 (battery)	790037400	0,475