

RPG 3.0 (battery), RPG 4.5 (S), RPG 8.6

Tube squaring machines

In manual welding technology a high quality pipe end processing is desirable for economical reasons. In automated welding, also called "orbital welding", the high quality of pipe end processing is required for technical reasons. For this weld seam preparation Orbitalum has developed the tube squaring machines RPG 3.0 (battery), RPG 4.5, RPG 4.5 S and RPG 8.6. The optimum solution for the required, high quality pipe end preparation for orbital welding.



Generates a tube squaring surface with very high surface finish	✓
Burr-free and right-angled	✓
Beveling possible with special holder (not with RPG 4.5 S)	✓
Quick change system for tools, clamping collars and pipes	✓
Machining of thin-walled stainless steel pipes (V4A)	✓
Base plate with 2 cutting edges and high-performance coating	✓
Speed-controlled electric motor	✓
Feed with millimeter graduation for an optimum result	✓
Portable and light machine for mobile and safe use	✓

With the RPG 3.0 (battery) the user can process pipes with an outer diameter of 6.0 mm – 77.0 mm with high precision. The RPG 4.5 can process pipe ends rapidly, burr-free and absolutely right-angled up to 114.4 mm (4.5") and the RPG 8.6 up to 219.1 mm (8.6").

Low operating costs are a huge advantage when processing pipes. The symmetrical, exchangeable special steel and aluminum clamping collars (not for RPG 4.5 S) can be easily and rapidly exchanged in a short amount of time and without tools. A dimension exchange does not require much more time. Thanks to the ergonomic machine design the user can work in a convenient and time-saving manner.

The multifunctional tools (MFW) have 2 cutting edges and a high-performance coat-

ing against wear. This way pipes made of unalloyed, low-alloyed and high-alloyed steels and aluminum can be processed rapidly and economically with high precision. The system enables clean and safe working.

The RPG 3.0, RPG 4.5 (S) and RPG 8.6 is equipped with a high-quality powerful drive in 230 volt and 110 volt versions.

The RPG 3.0 is also available as battery versions (230 V or 115 V), with powerful and environmentally-friendly lithium-ion technology. Machine and accessories are supplied in a robust hard-sided transport case.

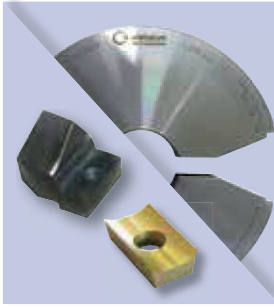
ADDITIONAL SPECIFICATIONS OF THE RPG 4.5 S:

The tube squaring machine **RPG 4.5 S** is characterized by its universal vice-clamping system: With this special economical alternative to other conventional dimension-specific clamping collars, pipes can be clamped and processed in the easiest way possible.

- Integrated clamping jaws made of annealed cast aluminum for different pipe diameters
- High cost effectiveness, since no dimension-specific clamping collars required
- Multipoint clamping of the pipe



Delivery in hard-sided transport case



Including tool holder WH and multi-functional tool MFW. Large selection of clamping collars is available – separately.



Burr-free and right-angled



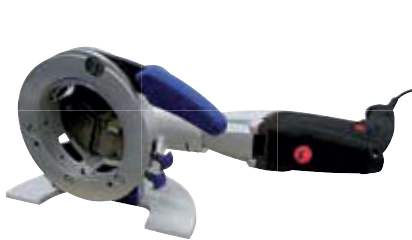
Quick change system for tools, clamping collars and pipes



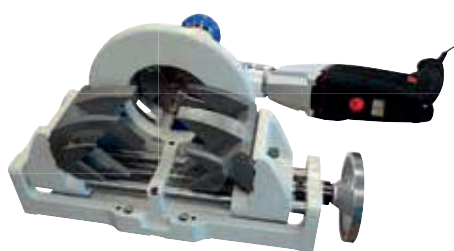
Application: Pipe and plant manufacturers for high-purity gas, electronics, pharmaceuticals, food processing, beverages, solar as well as chemical industries

APPLICATION AREA		RPG 3.0	RPG3.0 AKKU	RPG 4.5	RPG 4.5 S	RPG 8.6
Code	[230 V]	790 031 001	790 031 011	790 038 001	790 038 011	790 039 001
	[110 V]	790 031 003	-	790 038 003	-	790 039 003
	[110 V]	790 031 002	-	790 038 002	790 038 012	790 039 002
	[115 V]	-	790 031 012	-	-	-
Pipe OD	[mm]	6.0 - 77.0	6.0 - 77.0	12.7 - 114.3	12.7 - 114.3	50.8 - 219.1
	[inch]	0.24 - 3.0	0.24 - 3.0	0.5 - 4.5	0.5 - 4.5	2 - 8.6
Wall thickness max.	[mm]	3.0	3.0	3.0	3.0	3.6
	[inch]	0.118	0.118	0.118	0.118	0.142
Materials		High-alloyed steels (special steel material no. 1.40... - 1.45... according to DIN 17 455 and DIN 17 456), unalloyed and low-alloyed steels, aluminum. Others on request.				
TECHNICAL SPECIFICATIONS		RPG 3.0	RPG3.0 AKKU	RPG 4.5	RPG 4.5 S	RPG 8.6
Dimensions (with drive)	[mm]	460 x 245 x 185	325 x 245 x 185	460 x 260 x 230	610 x 380 x 270	500 x 350 x 350
	[inch]	18.1 x 9.6 x 7.3	12.8 x 9.6 x 7.3	18.1 x 10.2 x 9.1	24 x 15 x 10.6	19.7 x 13.8 x 13.8
Power	[W]	1100	-	1100	1100	1100
Protection class	[Class]	II	II (charger)	II	II	II
Speed (max. idle speed)	[min ⁻¹]	8 - 52	0-30 (1st gear)	8 - 52	8 - 52	7 - 18
Vibration level (EN 60745)	[m/s ²]	< 2,5	< 2,5	< 2,5	< 2,5	< 2,5
Sound pressure level at the workplace (EN 23741)	[dB (A)]	During idling approx. 83	During idling approx. 83	During idling approx. 83	During idling approx. 83	During idling approx. 83
SCOPE OF DELIVERY		RPG3.0	RPG3.0 AKKU	RPG 4.5	RPG 4.5 S	RPG 8.6
Tube squaring machine	PCS	1	1	1	1	1
Hard-sided transport case	PCS	1	1	1	1	1
Tool holder WH (Code 790 038 320)	PCS	1	1	1	1	1
Overload fuse (square nut)	PCS	1	1	1	1	1
Tool key	set	1	1	1	1	1
Operating instructions and spare part list	set	1	1	1	1	1

Technical specifications are non-binding. They do not constitute any assurance of properties. We reserve the right to make changes.



RPG 4.5



RPG 4.5 S



RPG 8.6



RPG 3.0



RPG 3.0 battery

Tube squaring machines

RPG 3.0 (battery), RPG 4.5, RPG 4.5 S, RPG 8.6

Clamping collars have to be ordered separately.

ITEM	VERSION	CODE	MACHINE WEIGHT KG	SHIPPING WEIGHT KG
RPG 3.0	230 V, 50/60 Hz EU	790 031 001	7.800	16.300
RPG 3.0	110 V, 50/60 Hz EU	790 031 003	7.800	16.300
RPG 3.0	110 V, 50/60 Hz US	790 031 002	7.800	16.300
RPG 3.0 battery	(18 V), 230 V, 50/60 Hz EU	790 031 011	7.100	16.800
RPG 3.0 battery	(18 V), 115 V, 50/60 Hz US	790 031 012	7.100	16.800
RPG 4.5	230 V, 50/60 Hz EU	790 038 001	10.500	19.400
RPG 4.5	110 V, 50/60 Hz EU	790 038 003	10.500	19.400
RPG 4.5	110 V, 50/60 Hz US	790 038 002	10.500	19.400
RPG 4.5 S	230 V, 50/60 Hz EU	790 038 011	23.000	34.000
RPG 4.5 S	110 V, 50/60 Hz US	790 038 012	23.000	34.000
RPG 8.6	230 V, 50/60 Hz EU	790 039 001	20.500	32.000
RPG 8.6	110 V, 50/60 Hz EU	790 039 003	20.500	32.000
RPG 8.6	110 V, 50/60 Hz US	790 039 002	20.500	32.000



RPG 4.5



RPG 4.5 S



RPG 8.6

TUBE SQUARING TECHNOLOGY

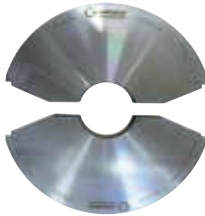
Clamping collars

Extremely resistant. The clamping collar with click mechanism guarantees precise clamping of pipes and rapid clamping collar change without tools. Further clamping collar dimensions are available.

Please check the outer diameter of the pipes before ordering the clamping collars.



Special-steel clamping collar for RPG 3.0 (battery)



Special-steel clamping collar for RPG 4.5



Aluminum clamping collar for RPG 8.6

Machine model:	Clamping lengths:
RPG 3.0	19.9 mm (0,783")
RPG 4.5	24.9 mm (0,980")
RPG 8.6	39.9 mm (1,571")

CAN BE USED WITH:		RPG 3.0 (BATTERY)		RPG 4.5		RPG 8.6	
PIPE OD		STAINLESS STEEL		STAINLESS STEEL		ALUMINUM	
[MM]	[INCH]	CODE	KG	CODE	KG	CODE	KG
6.35	0.25	790 031 239	-	-	-	-	-
10.00	0.394	790 031 243	1,300	-	-	-	-
12.00	0.472	790 031 244	1,300	790 038 454	2,170	-	-
12.70	0.500	790 031 232	1,245	790 038 438	2,177	-	-
13.00	0.512	790 031 259	1,300	790 038 439	2,176	-	-
13.50	0.531	790 031 267	1,300	790 038 440	2,175	-	-
14.00	0.551	790 031 272	-	790 038 441	2,174	-	-
16.00	0.630	790 031 273	-	790 038 442	2,168	-	-
17.20	0.677	790 031 260	1,300	790 038 443	2,164	-	-
18.00	0.709	790 031 274	-	790 038 444	2,161	-	-
19.00	0.748	790 031 264	1,200	790 038 445	2,150	-	-
19.05	0.750	790 031 233	1,225	790 038 446	2,157	-	-
20.00	0.787	790 031 275	-	790 038 447	2,153	-	-
21.30	0.839	790 031 245	1,200	790 038 448	2,100	-	-
22.00	0.866	790 031 268	1,300	790 038 449	2,144	-	-
22.22	0.875	-	-	790 038 050	2,195	-	-
23.00	0.906	790 031 265	-	790 038 450	2,140	-	-
24.00	0.945	-	-	790 038 451	2,133	-	-
25.00	0.984	790 031 231	-	790 038 452	2,127	-	-
25.25	0.994	-	-	790 038 049	2,180	-	-
25.40	1.000	790 031 234	1,195	790 038 051	2,180	-	-
26.90	1.059	790 031 246	1,200	790 038 400	2,090	-	-
27.20	1.071	-	-	790 038 468	2,165	-	-
28.00	1.102	790 031 263	-	790 038 401	2,110	-	-
29.00	1.142	790 031 261	1200	790 038 402	2,105	-	-
30.00	1.181	-	-	790 038 403	2,095	-	-
31.75	1.250	790 031 241	1,200	790 038 052	1,865	-	-
31.80	1.252	-	-	790 038 404	2,080	-	-
32.00	1.260	-	-	790 038 455	2,080	-	-
33.00	1.299	-	-	790 038 465	2,120	-	-
33.40	1.315	790 031 254	1,130	790 038 405	2,040	-	-
33.70	1.327	790 031 247	1,200	790 038 406	2,060	-	-
34.00	1.339	790 031 269	1,300	790 038 407	2,115	-	-
35.00	1.377	790 031 266	-	790 038 408	2,050	-	-
36.00	1.417	-	-	790 038 409	2,044	-	-
38.00	1.496	790 031 250	1,200	790 038 410	2,025	-	-
38.10	1.500	790 031 225	1,200	790 038 053	2,020	-	-
40.00	1.575	790 031 270	1,300	790 038 411	2,000	-	-
41.00	1.614	790 031 220	1,160	790 038 412	1,990	-	-
42.00	1.654	-	-	790 038 413	1,976	-	-
42.16	1.660	790 031 255	-	790 038 414	1,950	-	-
42.40	1.669	790 031 221	1,100	790 038 415	1,965	-	-
42.70	1.681	-	-	790 038 416	1,950	-	-
44.45	1.750	-	-	790 038 417	1,955	-	-
44.50	1.752	790 031 229	1,045	790 038 418	1,955	-	-
45.00	1.772	-	-	790 038 419	1,948	-	-
48.00	1.890	790 031 262	-	790 038 464	1,960	-	-
48.26	1.900	790 031 256	-	790 038 420	1,880	-	-
48.30	1.902	790 031 222	1,100	790 038 421	1,905	-	-
48.60	1.913	-	-	790 038 422	1,875	-	-
50.00	1.969	790 031 251	1,050	790 038 456	1,880	-	-

TUBE SQUARING TECHNOLOGY

CAN BE USED WITH:		RPG 3.0 (BATTERY)		RPG 4.5		RPG 8.6	
PIPE OD		STAINLESS STEEL		STAINLESS STEEL		ALUMINUM	
[MM]	[INCH]	CODE	KG	CODE	KG	CODE	KG
50.80	2.000	790 031 223	0,975	790 038 054	1,895	790 039 260	4,500
51.00	2.008	790 031 248	1,200	790 038 423	1,870	-	-
52.00	2.047	-	-	790 038 424	1,850	-	-
53.00	2.087	790 031 224	1,0	790 038 425	1,835	-	-
54.00	2.126	790 031 258	1,200	790 038 426	1,827	-	-
55.00	2.165	790 031 228	0,910	-	-	-	-
57.00	2.244	790 031 230	0,895	790 038 457	1,780	790 039 265	4,000
60.00	2.362	-	-	790 038 469	1,780	-	-
60.30	2.374	790 031 227	0,850	790 038 427	1,700	-	-
60.45	2.380	-	-	790 038 428	1,726	-	-
60.50	2.382	-	-	790 038 429	1,695	-	-
63.00	2.480	-	-	790 038 461	1,725	-	-
63.50	2.500	790 031 226	0,805	790 038 055	1,670	-	-
65.00	2.559	-	-	790 038 463	1,700	-	-
70.00	2.756	790 031 237	0,700	790 038 430	1,545	-	-
73.03	2.875	790 031 257	0,645	790 038 453	1,460	-	-
73.15	2.880	-	-	790 038 431	1,482	-	-
75.00	2.953	-	-	790 038 462	1,490	-	-
76.10	2.996	790 031 238	0,590	790 038 432	1,420	-	-
76.20	3.000	790 031 236	0,600	790 038 056	1,420	790 039 261	4,200
76.30	3.004	-	-	790 038 433	1,390	-	-
80.00	3.150	-	-	790 038 466	1,390	790 039 308	-
85.00	3.346	-	-	790 038 434	1,220	-	-
85.90	3.382	-	-	790 038 435	1,124	-	-
88.90	3.500	-	-	790 038 057	1,130	790 039 264	4,000
89.10	3.508	-	-	790 038 436	1,100	-	-
90.00	3.543	-	-	790 038 467	1,150	-	-
101.60	4.000	-	-	790 038 058	0,800	790 039 252	3,800
104.00	4.094	-	-	790 038 437	0,740	790 039 309	2,500
108.00	4.252	-	-	790 038 458	0,620	790 039 266	3,750
114.30	4.500	-	-	790 038 059	0,435	790 039 256	3,500
127.05	5.002	-	-	-	-	790 039 262	3,420
133.00	5.236	-	-	-	-	790 039 267	2,980
139.70	5.500	-	-	-	-	790 039 259	3,100
141.30	5.563	-	-	-	-	790 039 257	2,900
152.40	6.000	-	-	-	-	790 039 253	2,700
159.00	6.260	-	-	-	-	790 039 268	2,500
168.30	6.625	-	-	-	-	790 039 254	2,300
193.70	7.626	-	-	-	-	790 039 269	3,500
197.00	7.756	-	-	-	-	790 039 263	1,530
203.20	8.000	-	-	-	-	790 039 258	1,350
219.10	8.625	-	-	-	-	790 039 255	0,600

TUBE SQUARING TECHNOLOGY



Tool holder WH

Tool holder WH

Incl. Torx fastening screw M4x10 (790 086 220).

Beveling with the RPG 4.5 S is not recommended.

Application area Tool holder	Machine method		Beveling angle [°]
	Squaring	Beveling	
Tool holder WH12-I	x	-	-
Tool holder WH12-V-30°	-	x	30
Tool holder WH12-V-35°	-	x	35
Tool holder WH12-V-45°	-	x	45
Tool holder WH12-U-20°	-	x	20

ITEM	CODE	KG
Tool holder WH12-I	790 038 320	0.025
Tool holder WH12-V-30°	790 038 329	0.034
Tool holder WH12-V-35°	790 038 282	0.054
Tool holder WH12-V-45°	790 038 280	0.044
Tool holder WH12-U-20°	790 038 326	0.031



Multifunctional tool MFW

Multifunctional tool MFW

With 2 cutting edges and process-specific tool wear protective coating.
Can be used with all the machines of the RPG series.

ITEM	QUAN- TITY	CODE	KG
Multifunctional tool MFW-P-2	10	790 038 315	0.045
Torx screw	1	790 086 220	0.002