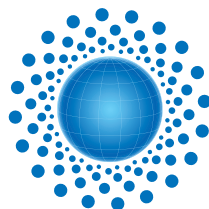


PRECISION CYLINDRICAL & NEEDLE ROLLERS



RGPBALLS
A WORLD OF SPECIAL BALLS

WELCOME



COMPANY PROFILE

Founded in 2015, RGPBALLS S.r.l. carries on market leadership from R.G.P. INTERNATIONAL S.r.l. in the production of the main components for linear movement: precision balls, rollers and rollers, bearing balls.

The company is focused on the availability of the widest range of materials, diameters and degrees of precision throughout Europe, simultaneously available in a single supply site. Main goals are the achievement of high quality standards at competitive prices, and customer assistance (starting with the choice of the correct item for each use, up to the supply of the necessary certifications for each application).

The headquarter occupies an area of approximately 10,000 m² and includes offices, quality control laboratories (metallographic and metrological), selection department and warehouse. It is located in Cinisello Balsamo, in the north of Milan, and is easily accessible thanks to the nearby motorway junctions.

RGPBALLS employs 70 people in the Cinisello Balsamo headquarter: 15 people deal with the commercial / administrative part (the range of languages spoken includes English, French, German, Spanish, Russian, Chinese, Turkish and Romanian), 10 are dedicated to quality control, and the rest of the staff is employed in the selection, logistics and warehouse departments.

The Company is certified EN ISO 9001: 2015, EN ISO 14001: 2015 and ISO 45001: 2018.

The metrological laboratory is equipped with high-tech instruments for checking the technical characteristics of the products. The related raw material documentation and certificate 3.1 are available for each checked batch. In 2017 RGPBALLS introduced the metallographic laboratory, which allows microstructural checks and analyzes of the steels used to make balls and rollers.

Our warehouse regularly stocks more than 4,000 tons of products in order to quickly meet the needs of customers all over the world.

The goal for the future is to improve the research for the highest quality and precision of the products; RGPBALLS is ready to take on the challenges posed by the market and the competition, confirming itself as the sector leader.

2015
Foundation

10.000
m² Headquarter

70
employees

4.000
tons of products

More than
3.000
customers

CERTIFICATIONS



ROLLERS, NEEDLES & PINS

RGPBALLS manufactures rollers, needles and pins in compliance with UNI / DIN standards, and according to customers drawings.

Available in a wide range of sizes and degrees of precision, the rollers are selected according to standard tolerance classes.

There is a wide range of application fields, which vary from the automotive to the bearing and linear guide industry, from aviation to wind power, vibrofinishing processes, and more.

Our technical staff is available to provide further details.

Our product range:

- **NRA rollers**
- **NRB rollers**
- **ZB rollers**
- **TR rollers**
- **Special needles and rollers based on specific technical drawings**
- **Pins according to UNI / DIN standards**
- **Tumbling / vibratory finishing / polishing pins**

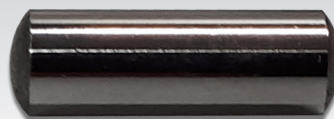
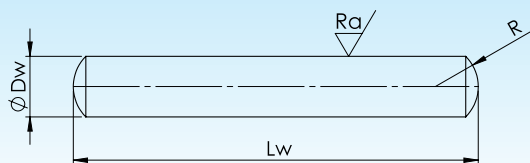
Materials:

- **AISI 52100/100Cr6/W 1.3505**
- **AISI 304/W 1.4301**
- **AISI 316/W 1.4401**
- **AISI 420C/W 1.4034**
- **AISI 440C/W 1.4125**
- **Silicon Nitride Si3N4**
- **Aluminum Oxide Al2O3**
- **Tungsten carbide**
- **Other special materials on demand**

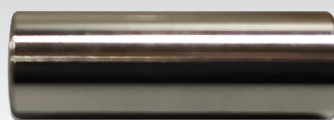
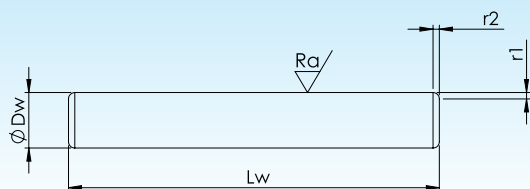


CYLINDRICAL ROLLERS & NEEDLES

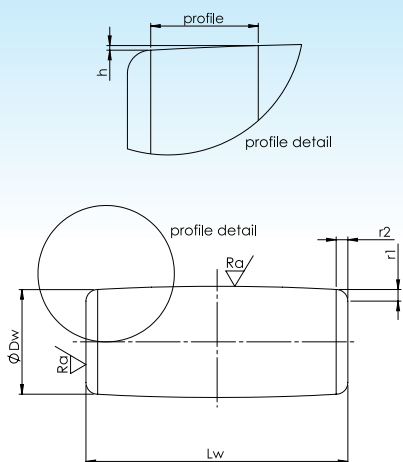
"NRA" TYPE - ROUND ENDS



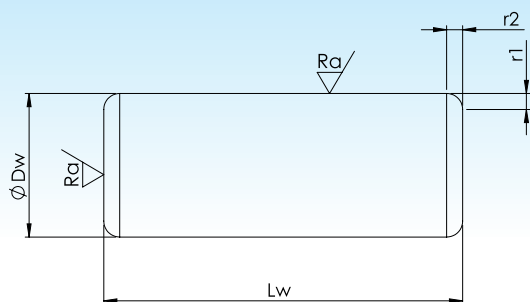
"NRB" TYPE - FLAT ENDS



"ZB" TYPE - LOGARITHMIC PROFILE



"TR" TYPE - GROUND ENDS



TECHNICAL FEATURES

	"NRA" TYPE - ROUND ENDS	"NRB" TYPE - FLAT ENDS	"ZB" TYPE - LOGARITHMIC PROFILE	ground ends, bright surface
Minimum diameter	1 mm	1 mm	3 mm	3 mm
Maximum diameter	6 mm	6 mm	80 mm	80 mm
Diameter tolerance*	+0/-10 µm	+0/-10 µm	+0/-10 µm	+0/-10 µm
Minimum length	5,8 mm	5,8 mm	4 mm	4 mm
Maximum length	59,8 mm	59,8 mm	120 mm	120 mm

*available after evaluation where required tolerances are different from 0 / -10 µm

LENGTH TOLERANCE	0 ÷ 3 mm +0/-140 µm	0 ÷ 3 mm +0/-140 µm	-	-
	3 ÷ 6 mm +0/-180 µm	3 ÷ 6 mm +0/-180 µm	3 ÷ 15 mm +0/-30 µm	3 ÷ 15 mm +0/-30 µm
	6 ÷ 10 mm +0/-220 µm	6 ÷ 10 mm +0/-220 µm	15 ÷ 50 mm +0/-50 µm	15 ÷ 50 mm +0/-50 µm
	10 ÷ 18 mm +0/-270 µm	10 ÷ 18 mm +0/-270 µm	> 50 mm +0/-80 µm	> 50 mm +0/-80 µm
	18 ÷ 30 mm +0/-330 µm	18 ÷ 30 mm +0/-330 µm	-	-
	30 ÷ 50 mm +0/-390 µm	30 ÷ 50 mm +0/-390 µm	-	-
	> 50 mm +0/-460 µm	> 50 mm +0/-460 µm	-	-

PRECISION GRADES AND TOLERANCES

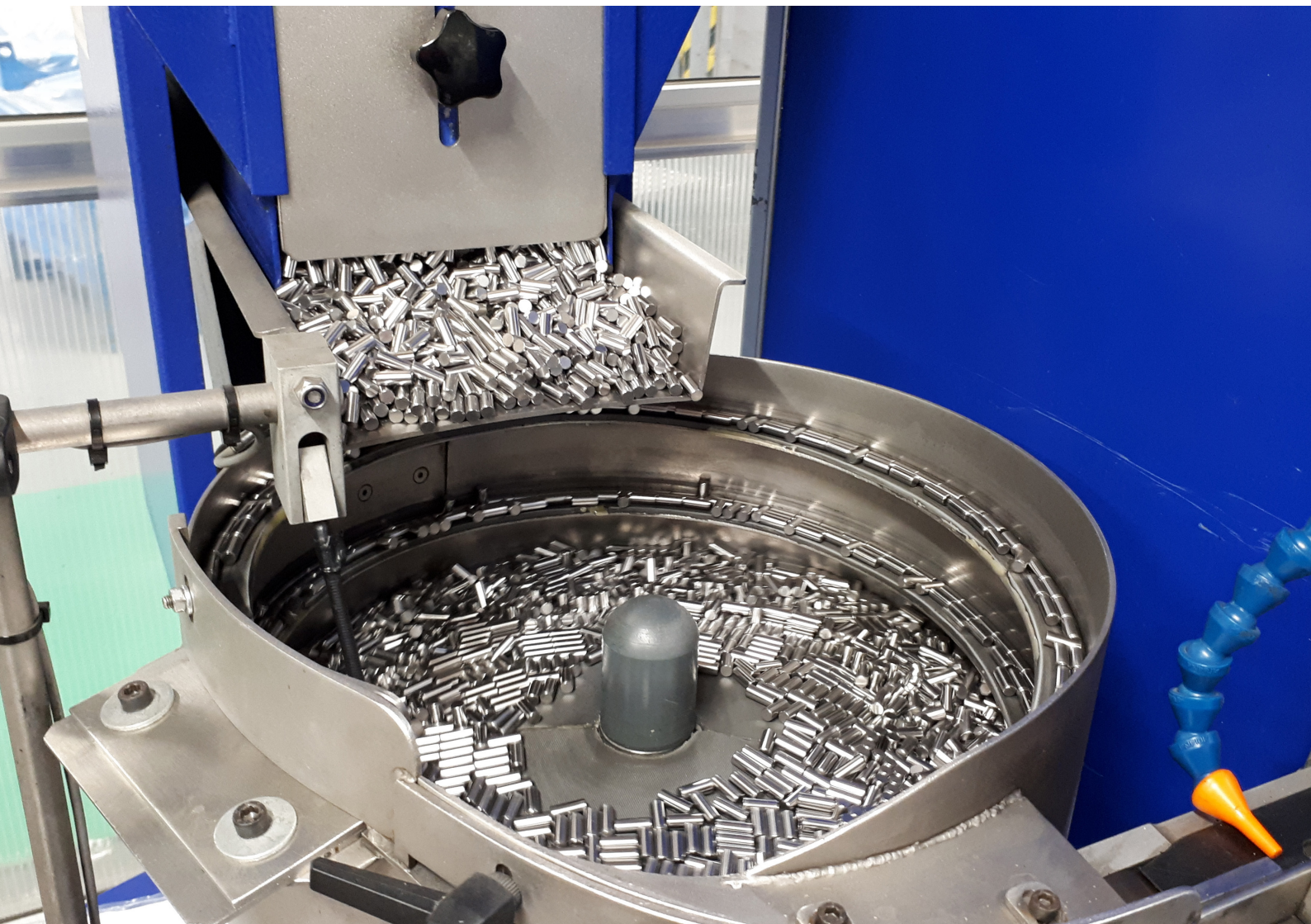
GRADE	ROUNDNESS	ROUGHNESS	SORTING GAUGE GROUPS
G 1 (solo ZB - TR)	< 0,5 µm	< 0,10 µm	1,5 µm
G 2	< 1 µm	< 0,16 µm	2 µm
G 3	< 1,5 µm	< 0,30 µm	3 µm
G 5	< 2,5 µm	< 0,40 µm	5 µm

MATERIALS

TYPE	CHEMICAL COMPOSITION								Hardness
	%C	%Si	%Mn	%P	%S	%Cr	%Ni	%Mo	
AISI 52100 - UNI 100Cr6 - W 1.3505	0,95-1,10	0,35 max	0,20-0,50	0,025 max	0,025 max	1,30-1,60	-	-	60 - 66 HRC
AISI 304 - WN 1.4301	0,080 max	0,75 max	2,00 max	0,045 max	0,030 max	18,00-20,00	8,00-10,50	-	20 - 39 HRC
AISI 316 - WN 1.4401	0,080 max	1,00 max	2,00 max	0,045 max	0,030 max	16,00-18,00	10,00-14,00	2,00-3,00	20 - 39 HRC
AISI 420C - WN 1.4034	0,43-0,50	1,00 max	1,00 max	0,040 max	0,030 max	12,50-14,50	-	-	52 - 60 HRC
AISI 440C - WN 1.4034	0,95-1,20	1,00 max	1,00 max	0,040 max	0,030 max	16,00-18,00	-	0,75 max	57 - 65 HRC

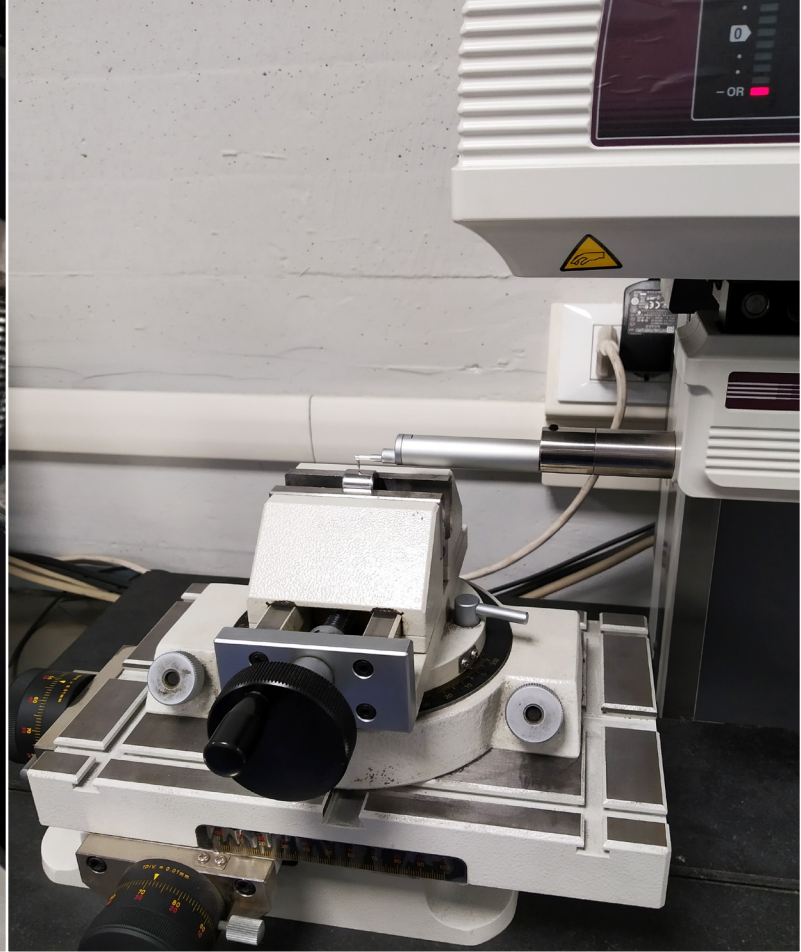
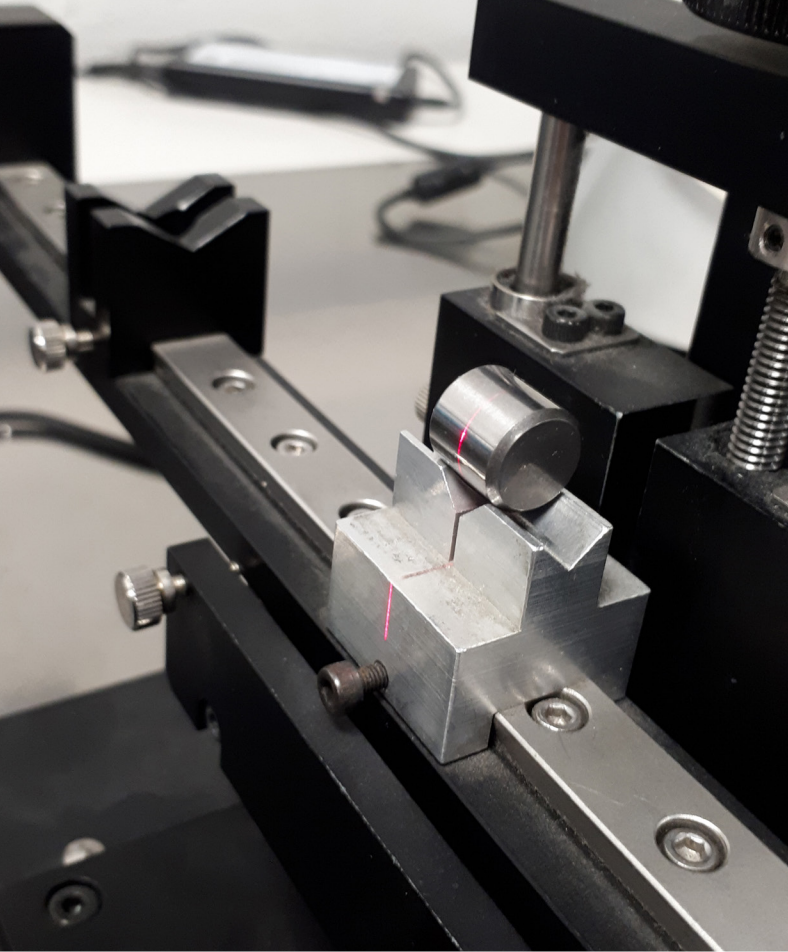
ON DEMAND (EXAMPLES)

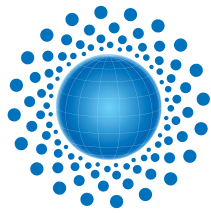
TYPE	CHEMICAL COMPOSITION				Hardness
	%WC	%Co	%Al ₂ O ₃	%Si ₃ N ₄	
Tungsten Carbide K20 with Cobalt binder	93,00-95,00	5,00-7,00	-	-	90,0 - 91,5 HRC
Aluminum Oxide	-	-	99,00-99,99	-	1250 - 1700 HRC
Silicon Nitride	-	-	-	90,00-95,00	1400 - 1600 HRC



NET WEIGHTS TABLE (CHROME STEEL ROLLERS)

Ø x L.	NET WEIGHT 1000 PZ./KG	Ø x L.	NET WEIGHT 1000 PZ./KG	Ø x L.	NET WEIGHT 1000 PZ./KG	Ø x L.	NET WEIGHT 1000 PZ./KG
1 x 5,8	0,036	3 x 5	0,27	4 x 19,8	1,95	7 x 7	2,08
1 x 6,8	0,042	3 x 9,8	0,54	4 x 21,8	2,15	7 x 10	2,98
1 x 7,8	0,048	3 x 11,8	0,65	4 x 23,8	2,38	8 x 8	3,10
1 x 9,8	0,060	3 x 13,8	0,76	4 x 25,8	2,55	8 x 12	4,69
1,5 x 5,8	0,080	3 x 15,8	0,87	4 x 27,8	2,74	9 x 9	4,42
1,5 x 6,8	0,094	3 x 17,8	0,99	4 x 29,8	2,95	10 x 10	6,07
1,5 x 7,8	0,108	3 x 19,8	1,10	4 x 34,8	3,40	11 x 11	8,08
1,5 x 9,8	0,136	3 x 21,8	1,21	4 x 39,8	3,90	11 x 15	11,03
1,5 x 11,8	0,164	3 x 23,8	1,32	5 x 5	0,76	12 x 12	10,50
1,5 x 13,8	0,191	3 x 25,8	1,43	5 x 8	1,21	12 x 18	15,57
2 x 6,8	0,164	3 x 27,8	1,54	5 x 15,8	2,43	14 x 14	16,67
2 x 7,8	0,191	3 x 29,8	1,65	5 x 19,8	3,05	14 x 20	23,85
2 x 9,8	0,24	3,5 x 11,8	0,91	5 x 21,8	3,36	15 x 15	20,51
2 x 11,8	0,29	3,5 x 13,8	1,04	5 x 23,8	3,67	16 x 16	25,04
2 x 13,8	0,34	3,5 x 15,8	1,19	5 x 25,8	3,98	17 x 17	29,90
2 x 15,8	0,39	3,5 x 17,8	1,34	5 x 27,8	4,29	18 x 18	35,46
2 x 17,8	0,44	3,5 x 19,8	1,51	5 x 29,8	4,60	19 x 19	41,71
2 x 19,8	0,49	3,5 x 21,8	1,64	5 x 34,8	5,40	20 x 20	48,67
2 x 21,8	0,54	3,5 x 23,8	1,85	5 x 39,8	6,15	20 x 30	73,00
2,5 x 7,8	0,30	3,5 x 25,8	1,95	5 x 49,8	7,50	21 x 30	81,06
2,5 x 9,8	0,38	3,5 x 27,8	2,10	5,5 x 8	1,47	22 x 22	64,77
2,5 x 11,8	0,45	3,5 x 29,8	2,25	6 x 6	1,31	24 x 36	127,24
2,5 x 13,8	0,53	3,5 x 34,8	2,65	6 x 8	1,71	25 x 25	95,10
2,5 x 15,8	0,61	4 x 6	0,58	6 x 17,8	3,95	25 x 36	136,95
2,5 x 17,8	0,69	4 x 8	0,78	6 x 21,8	4,83	26 x 26	107,00
2,5 x 19,8	0,76	4 x 11,8	1,16	6 x 23,8	5,28	28 x 28	134,33
2,5 x 21,8	0,84	4 x 13,8	1,36	6 x 25,8	5,71	30 x 30	164,36
2,5 x 23,8	0,92	4 x 15,8	1,55	6 x 39,8	8,83	30 x 48	262,97
2,8 x 7,8	0,30	4 x 17,8	1,75				





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RGPBALLS S.r.l.

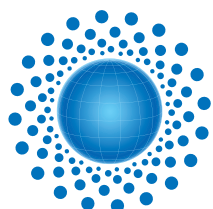
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