

Hot Rolled Seamless Tubes for Mechanical and Structural Applications







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Álava

Madrid

Tarragona

Proveedora de Tubos Occidental

PROTUBSA is one of wholly-owned subsidiaries of Bianco Group. Established in 1994 as distributor of steel pipes and auxiliary products was, at the beginning, located in Caldes de Montbui (Barcelona). From the beginning of its history, PROTUBSA adopted the principles of the Group; commercial ethic, work ethic, technological innovation and a flexible response to the changing demands of the times.

Thanks to professionalism and experience of our people we are able to offer a high quality service to our clients and suppliers.

Thanks to its reliability and performance, PROTUBSA has had an immediate growth in the Iberian Peninsula market in fact, already in 1999 PROTUBSA opened its second branch in Legutiano Alava with a covered area over 10.000 square meters. In the 2000s the whole group continued its expansion by opening new companies and warehouses.

PROTUBSA, following the progress of the Group in 2002 moved into a new and larger warehouse and offices able to meet the ever increasing demand of its customers. The new location, in the province of Tarragona consists of over 11.000 square/ meters.

At the end of the first decade of 2000 in the Madrid area, another site was added, including offices and a warehouse of about 5000 square meters. Thanks to the space of our warehouses and to a stock of over 12,000 tons, we can easily fulfill both day-to-day ex stock orders and large-scale projects. With over 15 years of experience in stockholding, logistic, inhouse processing and sector specific requirements, PROTUBSA has a loyal and growing customer base. As part of the BIANCO GROUP, allow us to have direct access to over 160.000 tons of group stock besides the benefit of GROUP purchasing that ensure to acquire the highest quality materials at competitive rates, which allows us to pass to our customers.



Technical features

CHEMICAL COMPOSITION FOR NON-ALLOY QUALITY TUBES

Hot Finished Seamless tube to EN10297-1

	Chemical Elements (% on mass) Typical ranges for information purposes only												
STEEL GRADE	С		S			In	Р	S					
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.					
E235		0,17		0,35		1,20	0,030	0,035					
E275		0,21		0,35		1,40	0,030	0,035					
E315		0,21		0,30		1,50	0,030	0,035					
* S355J2H / E355 (1)		0,22		0,55		1,60	0,030	0,035					
* E470 (2)	0,16	0,22	0,10	0,50	1,30	1,70	0,030	0,035					

(1) Tubes are available with double marking EN10210 S355J2H / EN 10297 E355

(2) Al $\ge 0.010\%$; N $\le 0.010\%$; Nb $\le 0.07\%$; 0.08% $\le V \le 0.15\%$.

MECHANICAL PROPERTIES FOR NON-ALLOY QUALITY TUBES

Hot Finished Seamless tube to EN10297-1

	- I'	Yi	eld Strengt	h (ReH) (N	/mm2 = Mp	a)	Tensile \$	Longitudinal			
STEEL GRADE	Delivery Condition					for nominal	W.T. in mm				Elongation %
		≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	> 80 ≤ 100	≤ 16	> 16 ≤ 40	$>40 \le 65$	> 65 ≤ 100	min.
E235	+AR	235	225	215	205	195	360	360	360	340	25
E275	+AR	275	265	255	245	235	410	410	410	380	22
E315	+AR	315	305	295	280	270	450	450	450	420	21
* S355J2H / E355 (1)	+AR	355	345	335	315	295	490	490	490	470	20
* E470 (2)	+AR	470	430				650	600			17

* Standard stock

Available from Group stocks

CHEMICAL COMPOSITION FOR NON-ALLOY QUALITY TUBES WITH SPECIFIED IMPACT PROPERTIES

	Chemical Elements (% on mass) Typical ranges for information purposes onnly										
STEEL GRADE	(С	Si		Mn		Р	S	Cr	N	lo
	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Max.	Max.	Min.	Max.
E275K2		0,2		0,40	0,50	1,40	0,030	0,030	0,30		0,10
* E355K2**		0,2		0,50	0,90	1,65	0,030	0,030	0,30		0,10
* E420J2 (1)	0,16	0,22	0,10	0,50	1,30	1,70	0,030	0,035	0,30		0,08
E460K2 (1)		0,2		0,60	1,00	1,70	0,030	0,030	0,30		0,10
* E490K2 (1)	0,16	0,22	0,10	0,50	1,30	1,70	0,030	0,035	0,30		0,08
E730K2		0,2		0,50	1,40	1,70	0,025	0,025	0,30	0,30	0,45
	1	Ni	4	J	Cu		N Nb		Ti	١	/
	Min.	Max.	Ma	ax.	Max.		Max.	Max.	Max.	Min.	Max.
E275K2		0,30	0,0	20	0,	35	0,015	0,05	0,03		0,05
* E355K2**		0,50	0,0	20	0,	35	0,015	0,05	0,05		0,12
* E420J2 (1)		0,40	0,0	10	0,	30	0,020	0,07	0,05	0,08	0,15
E460K2 (1)		0,80	0,020		0,	0,70		0,05	0,05		0,20
* E490K2 (1)		0,40	0,0	0,010		0,30		0,07	0,05	0,08	0,15
E730K2	0,30	0,70	0,0	20	0,	20	0,020	0,05	0,05		0,12

(1) Nb + V $\leq 0.20\%$

MECHANICAL PROPERTIES FOR NON-ALLOY TUBES WITH SPECIFIED IMPACT PROPERTIES

STEEL	Delivery	Y	Yield Strength (ReH) (N/mm2 = Mpa) Tensile Strength (Rm) (N/mm2 = Mpa)									Longitudinal Impact	
GRADE	Condition				for	nominal W.T. in r	nm.				Elongation %	Value -	
		≤ 16	> 16 ≤ 40	$>40 \le 65$	> 65 ≤ 80	$> 80 \le 100$	≤ 16	$> 16 \le 40$	$> 40 \le 65$	>65 ≤100	min.	20°C (J.min.)	
E275K2	+N	275	265	255	245	235	410	410	410	380	22	40	
* E355K2	+N	355	345	335	315	295	490	490	470	470	20	4	
* E420J2	+N	420	400	390	370	360	600	560	530	500	19	27	
E460K2	+N	460	440	430	410	390	550	550	550	520	19	40	
* E590K2	+QT	590	540	480	455	420	700	650	570	520	16	40	
E730K2	+QT	730	670	620	580	540	790	750	700	680	15	40	

* Standard group stock



Dimensional range

W.T. mm.

100 100 <th>O.D. mm.</th> <th>6,3</th> <th>7,1</th> <th>8,0</th> <th>8,8</th> <th>10,0</th> <th>11,0</th> <th>12,5</th> <th>14,2</th> <th>16,0</th> <th>17,5</th> <th>20,0</th> <th>22,2</th> <th>25,0</th> <th>28,0</th>	O.D. mm.	6,3	7,1	8,0	8,8	10,0	11,0	12,5	14,2	16,0	17,5	20,0	22,2	25,0	28,0
BBD C42 C52 C52 C42 C52 C42 C52 C42 C43 C42 C43 C43 <thc43< th=""> <thc43< th=""> <thc43< th=""></thc43<></thc43<></thc43<>															
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343.0 72.5 82.1 90.1 101.9 115.1 129.0 140.5 159.3 175.6 196.1 217.5 355.6 75.3 85.2 93.5 105.8 119.6 134.0 145.9 165.5 182.5 203.8 226.2 386.0 80.8 91.5 100.4 113.6 128.5 144.0 156.9 176.1 196.4 219.5 243.8 381.0 83.6 94.7 103.9 117.6 133.0 149.2 162.5 184.5 203.6 227.5 252.7 406.4 78.6 86.3 97.8 107.3 124.4 137.3 154.0 167.8 190.6 210.3 235.1 261.3 419.0 104.0 114.2 123.3 146.2 164.1 178.8 209.6 231.5 258.9 287.9 445.0 104.0 114.2 123.3 150.9 169.3 184.5 209.6 231.5 258.9 287.9 457.2 88.6 97.3 110.3 121.0 137.1 155.1 174.1 </td <td></td>															
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0.0. 6,3 7,1 8,0 8,8 10,0 11,0 12,5 14,2 16,0 17,5 20,0 22,2 25,0 28,0				-											
	mm.	6,3	7,1	8,0	8,8	10,0	11,0	12,5	14,2	16,0	17,5	20,0	22,2	25,0	28,0

HOT FINISHED SEAMLESS MECHANICAL TUBES

HOT FINISHED SEAMLESS MECHANICAL TUBES

							1			norri				
30,0	35,0	40,0	45,0	50,0	55,0	60,0	65,0	70,0	75,0	80,0	85,0	90,0	100,0	O.D. mm.
														26,9
														33,7 38,0
								TOLERA	NCES					42,4
								W.Т.						44,5
								VV.I.						48,3 51,0
									. 10 5 %					54,0
									± 12,5 %					57,0
														60,3
									± 15 %					63,5 67,0
														70,0
									± 20 %					73,0
									120 //					76,1
								OUTSIDEF		1				82,5 88,9
								±1% on tl	he nominal	size,				95,0
53,0								with a mir	nimum ± 0,5	mm.				101,6
57,7 62.4	CO 1	70.0						STRAIGHT	INESS					108,0
62,4 67,3	68,4 74,2	73,3 79,9							33,7 mm, th	e maximi	um allowed	ł		114,3 121,0
71,8	79,4	85,8	91,0						on stragthtr					121,0
76,2	84,6	91,7	97,7						ds to 1,5% o			gth.		133,0
81,2	90,4	98,4	105,1	110,6										139,7
<mark>85,8</mark> 90,6	95,8 101,3	104,6 110,9	112,1 119,2	118,4 126,3										146,0 152,4
95,4	101,3	110,5	126,5	134,4	141,1	146,5			rm EN10297 do		any			152,4
100,0	112,3	123,4	133,3	141,9	149,3	155,5			ovality, eccentri se parameters a		,			165,1
102,3	115,1	126,6	136,8	145,9	153,7	160,3			d on OD and E.T					168,3
104,3 109,3	117,4 123,3	129,2 135,9	139,8 147,4	149,2 157,6	157,3 166,6	164,2 174,3								171,0 177,8
119,1	134,7	149,0	162,0	173,9	184,5	193,8								191,0
121,1	137,0	151,6	165,0	177,2	188,1	197,8								193,7
128,0	145,0	160,8	175,3	188,7	200,7	211,6	0.47.0							203,0
139,9 147,2	<mark>158,9</mark> 167,5	176,7 186,4	193,2 204,2	208,5 220,7	222,6 236,0	235,4 250,1	247,0 262,9	274,5						219,1 229,0
147,2	180,8	201,7	204,2	239,8	257,0	273,0	202,9	301,2						229,0
165,7	189,0	211,1	231,9	251,5	269,9	287,1	303,0	317,6						254,0
175,3	200,3	223,9	246,4	267,6	287,6	306,3	323,8	340,1	355,1					267,0
179,8 184,2	205,4 210,6	229,8 235,8	253,0 259,7	275,0 282,4	295,7 303,8	315,2 324,1	333,4 343,0	350,4 360,8	366,2 377,3	380,8 392,6	394,1 406,7			273,0 279,0
193,8	210,0	248,6	274,1	298,4	321,5	343,3	363,9	383,2	401,4	418,3	400,7			219,0
198,6	227,4	255,0	281,3	306,4	330,3	352,9	374,3	394,5	413,4	431,1	447,5			298,5
203,5	233,1	261,4	288,5	314,4	339,1	362,5	384,7	405,7	425,4	443,9	461,2	477,2		305,0
217,4 222,0	249,4 254,6	280,1 286,1	309,5 316,3	337,7 345,3	364,7 373,0	<mark>390,5</mark> 399,5	415,0 424,8	438,3 448,8	460,4 471,7	481,2 493,2	500,8 513,6	519,1 532,7	552,2 567,2	323,9 330,0
222,0	263,0	295,6	310,3	343,3	386,2	413,9	440,3	465,6	489,6	512,4	533,9	554,2	591,1	330,0
231,6	265,9	298,9	330,7	361,3	390,6	418,8	445,6	471,3	495,7	518,9	540,8	561,5	599,3	343,0
240,9	276,7	311,3	344,7	376,8	407,7	437,4	465,8	493,0	519,0	543,7	567,2	589,5	630,3	355,6
250,1 259,7	287,4 298,7	323,6 336,4	358,5 372,9	392,1 408,1	424,5 442,2	455,7 475,0	485,7 506,5	514,4 536,9	541,9 566,0	568,2 593,8	593,2 620,5	617,0 645,9	660,9 693,0	368,0 381,0
269,3	309,9	349,2	387,3	424,2	459,8	494,2	527,4	559,3	590,0	619,5	647,7	674,7	725,0	394,0
278,5	320,6	361,4	401,1	439,5	476,6	512,6	547,3	580,7	613,0	644,0	673,7	702,3	755,6	406,4
287,8	331,5	373,9	415,1	455,0	493,7	531,2	567,5	602,5	636,3	668,8	700,1	730,2	786,7	419,0
297,3 307,0	342,5 353,9	386,5 399,5	429,3 443,9	470,8 487,1	511,1 529,0	550,1 569,7	588,0 609,1	624,6 647,4	659,9 684,4	694,1 720,1	727,0 754,6	758,6 787,9	818,3 850,8	431,8 445,0
316,1	364,4	411,6	457,4	502,1	545,5	587,7	628,7	668,4	706,9	744,2	780,2	815,0	880,9	457,2
325,5	375,5	424,2	471,7	517,9	562,9	606,7	649,2	690,5	730,6	769,4	807,0	843,4	912,5	470,0
334,9	386,3	436,6	485,6	533,4	580,0	625,3	669,4	712,3	753,9	794,3	833,5	871,4	943,5	482,6
353,6 363,3	408,3 419,5	461,7 474,5	513,8 528,2	564,7 580,8	614,4 632,1	662,9 682,1	710,1 731,0	756,1 778,6	800,9 824,9	844,4 870,1	886,7 914,0	927,8 956,6	1.006,2 1.038,2	508,0 521,0
369,9	419,3	483,4	538,2	591,9	644,3	695,5	745,4	794,1	841,6	887,8	932,8	976,6	1.060,4	530,0
391,4	452,3	512,0	570,4	627,6	683,6	738,4	791,9	844,2	895,2	945,0	993,6	1.041,0	1.132,0	559,0
399,5	461,8	522,8	582,6	641,2	698,5	754,6	809,5	863,2	915,6	966,7	1.016,7	1.065,4	1.159,1	570,0
410,0 429,1	474,0 496,3	536,8 562,3	598,4 627,0	658,7 690,5	717,8 752,8	775,7 813,8	<mark>832,3</mark> 873,6	887,7 932,2	941,8 989,5	994,7 1.045,6	1.046,4 1.100,5	1.096,9 1.154,2	1.194,1 1.257,7	584,2 610,0
429,1	490,3 506,7	574,1	640,3	705,3	769,1	831,6	892,9	952,2	1.011,7	1.043,0	1.100,5	1.134,2	1.237,7	622,0
447,6	517,9	586,9	654,8	721,3	786,7	850,8	913,7	975,4	1.035,8	1.095,0	1.152,9	1.209,6	1.319,4	635,0
466,4	539,8	612,0 662.1	683,0 720.2	752,7	821,2	888,4	954,4	1.019,2	1.082,8	1.145,1	1.206,2	1.266,0	1.382,0	660,4
504,0 541,6	583,7 627,5	662,1 712,2	739,3 795,7	815,3 877,9	890,1 959,0	963,6 1.038,7	1.035,9 1.117,3	1.106,9 1.194,6	1.176,7 1.270,7	1.245,3 1.345,5	1.312,7 1.419,1	1.378,8 1.491,5	1.507,3 1.632,6	711,2 762,0
578,6	670,7	761,5	851,2	939,6	1.026,8	1.112,7	1.197,4	1.280,9	1.363,2	1.444,2	1.524,0	1.602,5	1.755,9	812,0
30,0	35,0	40,0	45,0	50,0	55,0	60,0	65,0	70,0	75,0	80,0	85,0	90,0	100,0	O.D. mm.

General features

GENERAL DESCRIPTION

Tubes for mechanical applications are mainly used in those processes in which turning and CNC machines are used.

The wide size range available, with OD from 21,3 to 812 mm, gives the possibility to manufacture several kinds of components for different applications.

SIZES

All the standard sizes according to the norm and stated in the table "Sizes, tolerances and masses" are to be considered as normal stock supply. It is possible to supply also special sizes upon request and with a minimum quantity to be agreed.

TOLERANCES

The tolerances to be applied on all supplied tubes are stated by the reference norm. Upon request it is possible to arrange special supplies for tubes with more restricted tolerances.

STEEL GRADES

Our standard stock of tubes for mechanical applications consists in steel grades E355/S355J2H. It is possible to supply material in all the existing steel grades stated in this catalogue upon request and with a minimum quantity to be agreed.

CERTIFICATES AND MARKINGS

Mill test certificates (3.1 EN 10204) can be supplied with all deliveries. All tubes in random lengths are marked with manufacturer logo, steel grade and norm, size and traceability reference.

CUTTING TO FIX LENGTH

All tubes for mechanical applications can be supplied cut to fix length, the quick delivery and the quality of the service are granted by modern automatic cutting machines with band saws. The standard tolerance on fix length is -0 / + 5 mm, more restricted tolerances can be agreed at the moment of the order.





LENGTHS

Pipes are supplied in random lengths, from 4 to 13.5 m, and cut to fix length.

ADDITIONAL WORKING PROCESSES

Upon request it is possible to supply tubes with working processes like sandblasting, boring and external turning. Tolerances and technical features are to be agreed at the time of the order.

PACKING

Tubes are loose or in bundles tightened with iron strips, according to sizes. Tubes cut to fix length are supplied stripped on a wire with polyester bands in order to unload and move the material easily. Upon request it is possible to arrange special packings: metal or wooden cases, pallets, etc.

DELIVERIES

We can use the best solution for each option and customer needs; truck, container vessel and air freight.







To say who we are, what we do and how we do it, We start with numbers:

- 10 countries where our Group is present
- **31** facilities comprising manufacturing units, warehouses and sales offices 14 operating companies 840 average number of employees
- 160.000 tonnage of stored goods ready for immediate delivery
- 255.000 square meters of production facilities and warehouses
 - **11.000** square meters of office space
 - **25** production facilities
 - **113** cutting installations
 - **36.000** number of items in stock
 - 23.000 number of active customers on our books worldwide

An international business for the distribution of steel tubes and auxiliary products amongst the largest in Europe and America. The right partner and the right link between the world's largest producers and users large, medium or small.





In 1958 the F. G. Bianco company opened its doors in Milan as a steel tube distributor, keeping its stock at the General Warehouse in Brescia and later built its first warehouse, in the sixties, in Flero (Brescia, Italy) where Tubindistria is now located.

In 1973 Sicam SpA was incorporated with offices and warehouse in Parona Lomellina on a large site located next to the railway line on which, at the time, most the products traded by the company were transported.

In the years that followed the sons of the founder opened new tube sales companies first in England later in France, Germany, the United States, Denmark, Spain and Sweden and, most recently, in 2015 in Canada. Expansion was gradual but built on solid foundations. We are proud to say that the Bianco Group works very much like a family. Its companies are still owned by the three branches of the Bianco family who continue to play an executive role in all its various business activities.

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Other products





CHROME PLATED BARS & TUBES FOR HYDRAULIC CYLINDERS

CHROME PLATED BARS

Dimensions Tolerances Steel grade (EN) DIAM. 8 to 250 mm DIAM. 8 to 18 mm f8 - 20 to 250 mm f7 C45E, 20MnV6 (E470), 42CrMo4 + QT

CHROME PLATED TUBES

Dimensions Tolerances Steel grade (EN) Delivery conditions

0.D. 12 to 120 mm - W.T. 2 to 10 mm 0.D. f7 E355 +SR (BKS), +N (NBK)



COLD DRAWN and HOT FINISHED TUBES FOR HYDRAULIC CYLINDERS

WELDED TUBES READY TO USE

Standard	EN 10305-2
Dimensions	I.D. 20 to 125 mm – W.T. 2 to 7.5mm
Tolerances	I.D ISO H9 (ISO H10 for W.T. < 4 mm)
Steel grade (EN)	E355
Delivery conditions	+C (BK), +SR (BKS), +N (NBK)

HONED or SKIVED ROLLER B. TUBES Standard

Dimensions Tolerances

EN 10305-1/2 I.D. 20 to 300 mm – W.T. 5 to 25mm in hot finished conditions (EN 10297)

Steel grade (EN) Delivery conditions

Bigger dimension can be supplied I.D ISO H8 E355 +SR (BKS), +N (NBK)

TUBES SUITABLE FOR HONING or SKIVE ROLLER B.



EN 10305-1/2 I.D. 20 to 300 mm – W.T. 5 to 25mm Bigger dimension can be supplied in hot finished conditions (EN 10297) E355 +SR (BKS), +N (NBK)





COLD DRAWN TUBES FOR HYDRAULIC and PNEUMATIC CIRCUITS

Standard Dimensions Steel grade (EN) Delivery conditions Surface treatment

FN 10305-3/4 0.D. 4 to 50 mm - W.T. 0.5 to 10 mm E235. E355 +N (NBK) Oiled, bonderised and oiled, galvanized white (Cr VI-free)





SEAMLESS and WELDED PIPES and ACCESSORIES FOR HYDROCARBON PROCESSING, POWER GENERATION and ONSHORE LINE PIPE

According to STD Norms EN / ASTM /API in Carbon, Low Alloy and Stainless Steel.





HOT ROLLED SEAMLESS TUBES FOR MECHANICAL and STRUCTURAL APPLICATIONS

Standard Dimensions

Steel grade (EN)

Delivery conditions

EN 10297/ EN 10210 O.D. 26.9 to 812 mm – W.T. 2.3 to 100 mm E355, E355K2, S355J2H, S355NH, S355NLH, E470, E590 As Rolled





COLD DRAWN PRECISION TUBES FOR MECHANICAL APPLICATIONS

Standard Dimensions Steel grade (EN) Delivery conditions EN 10305-1/2 O.D. 4 to 305 mm – W.T. 1 to 25 mm E235, E355 +C (BK), +SR (BKS), +LC (BKW)



HOT FINISHED and COLD FORMED HOLLOWS SECTIONS and TUBES FOR STRUCTURAL APPLICATIONS

Standard

EN 10210

Dimensions

Round Steel grade (EN) (seamless and welded hot finished) EN 10219 (welded cold formed) Square 30 x 30 x 3 to 400 x 400 x 20 Rectangular 50 x 30 x 3 to 600 x 400 x 20 O.D. 26.9 to 812 mm - W.T. 3 to 20 mm S235JR, S275JOH, S355J2H, S355NH

ROUND ROLLED, FORGED, GROUND and DRAWN BARS

Standard Dimensions Steel grade (EN) EN 10083-1 / EN 10027-1 DIAM. 20 to 450 mm C45, S355J







Quality assurance





Certification as standard

A salient feature of the Group operations is the standardization of good working practices by means of general directives that each company follows.

Quality certifications

First and foremost, quality controls: the targeted procedures od analysis and control of the product quality in and out of our premises is identical across all our warehouses in every corner of the world. All group companies have a quality certification that spans all phases of operation be it commercial, administrative, technical or works centered.

All products traded by the group are supplied with a certificate of origin and quality. Supported by an internal organization itself certified and standardized through all its operating phases, the product certificate follows the material down to every small portion of cut tube. Indeed, off-cuts are either stenciled by the sawing equipment or labelled by the operator to guarantee traceability.

LRQA CERTIFIED	
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NOTE

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