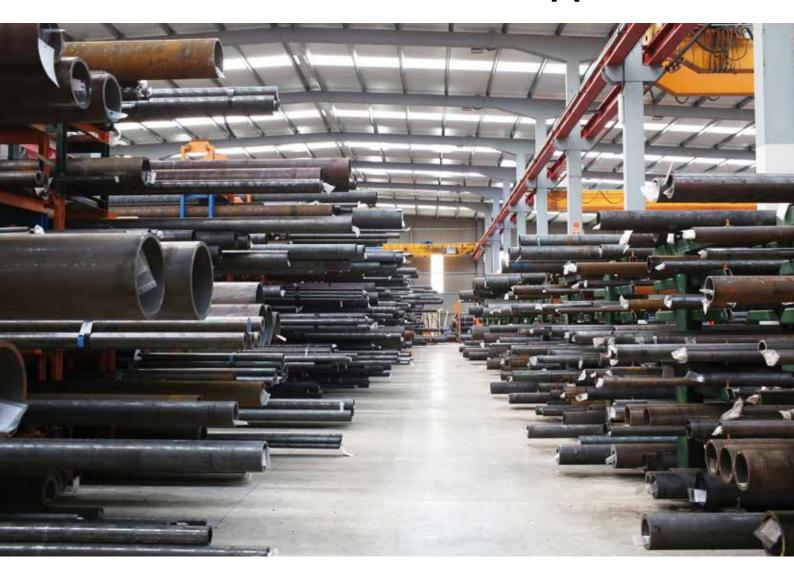
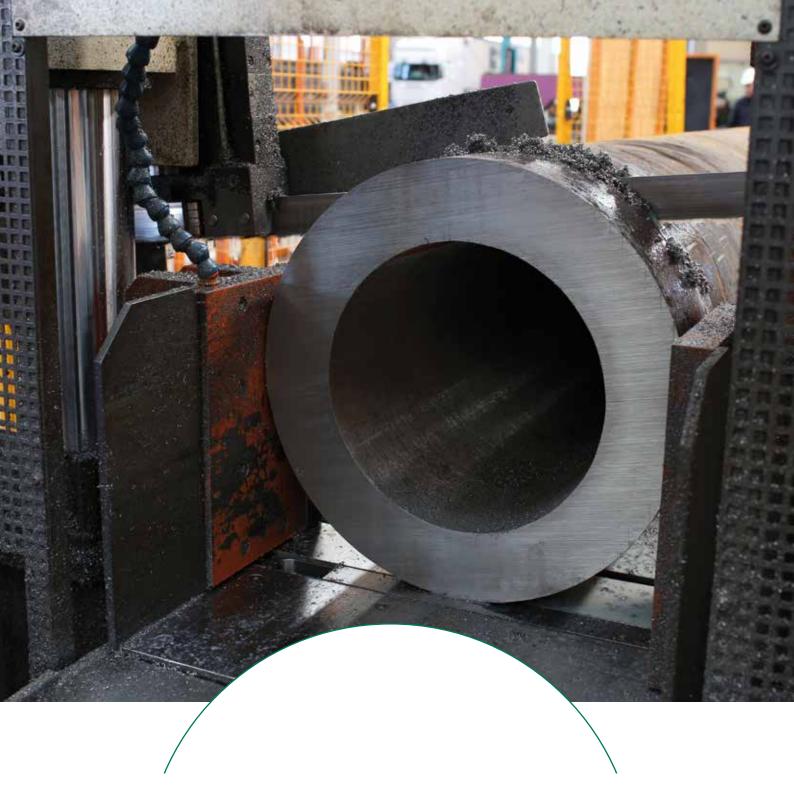


# Hot Rolled Seamless Tubes for Mechanical and Structural Applications









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Álava Madrid Tarragona

### Proveedora de Tubos Occidental

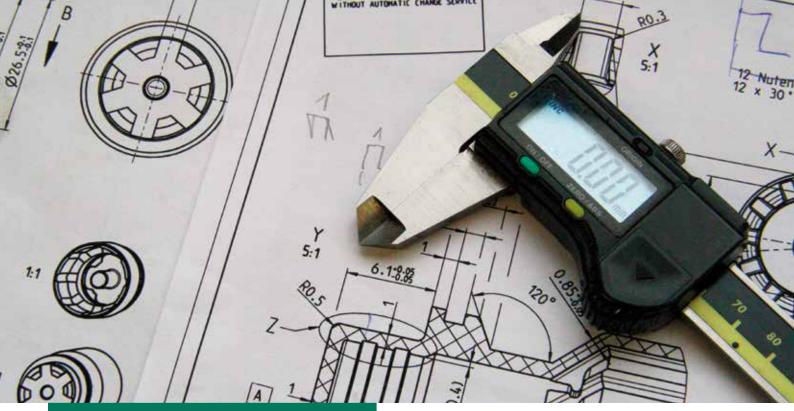
PROTUBSA is one of wholly-owned subsidiaries of Bianco Group. Established in 1994 as distributor of steel pipes and auxiliary products was, at the beginning, located in Caldes de Montbui (Barcelona). From the beginning of its history, PROTUBSA adopted the principles of the Group; commercial ethic, work 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												
E235 E275 E315 * \$355J2H / E355 (1)	(	:	S	<del>-</del>	N	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					
		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					

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

### MECHANICAL PROPERTIES FOR NON-ALLOY QUALITY TUBES

Hot Finished Seamless tube to EN10297-1

	Delianon	Yi	eld Strengtl	n (ReH) (N	/mm2 = Mp	a)	Tensile S	Longitudinal Elongation				
STEEL GRADE	Delivery Condition	for nominal W.T. in mm.										
		≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	> 80 ≤ 100	≤ 16	> 16 ≤ 40	> 40 ≤ 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	

<sup>\*</sup> Standard stock

<sup>(2)</sup> Al  $\geq$  0.010%; N  $\leq$  0.010%; Nb  $\leq$  0.07%; 0.08%  $\leq$  V  $\leq$  0.15%.

### Available from Group stocks

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

					Elements (%						
E275K2  * E355K2**  * E420J2 (1)  E460K2 (1)  * E490K2 (1)  E730K2   E275K2  * E355K2**  * E420J2 (1)  E460K2 (1)				~		poses onnly					
		C	Si		Mn		Р	S	Cr		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
	N	li .	A	۸I	C	Cu	N	Nb	Ti	1	/
	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	0,0	20	0,	70	0,025	0,05	0,05		0,20
* E490K2 (1)		0,40	0,0	10	0,	30	0,020	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 +  $V \le 0.20\%$ 

### MECHANICAL PROPERTIES FOR NON-ALLOY TUBES WITH SPECIFIED IMPACT PROPERTIES

STEEL	Delivery	Y	ield Streng	th (ReH)(	N/mm2 =	Мра)	Tensile S	trength (Rr	n) (N/mr	n2 = Mpa)	Longitudinal Elongation	Longitudinal Impact
GRADE	Condition					nominal W.T. in r	nm.				%	Va <b>l</b> ue -
		≤ 16	> 16 ≤ 40	> 40 ≤ 65	> 65 ≤ 80	>80 ≤100	≤ 16	> 16 ≤ 40	> 40 ≤ 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

<sup>\*</sup> Standard group stock



# Dimensional range

Sizes, Tolerances and Masses EN10297 (E355)

W.T. mm.

W.T. mm.														
0.D.	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. 26,9	3,2								,					
33,7	4,3	4,7	5,1	5,4	5,8									
38,0 42,4	4,9	5,4 6,2	5,9 6,8	6,3 7,3	6,9 8,0	8,5	9,2							
44,5	5,6 5,9	6,5	7,2	7,7	8,5	9,1	9,2							
48,3	6,5	7,2	8,0	8,6	9,4	10,1	11,0							
51,0	6,9	7,7	8,5	9,2	10,1	10,9	11,9	12,9						
54,0 57,0	7,4 7,9	8,2 8,7	9,1 9,7	9,8 10,5	10,9 11,6	11,7 12,5	12,8 13,7	13,9 15,0	16,2					
60,3	8,4	9,3	10,3	11,2	12,4	13,4	14,7	16,1	17,5	18,5				
63,5	8,9	9,9	10,9	11,9	13,2	14,2	15,7	17,3	18,7	19,9				
67,0	9,4	10,5	11,6	12,6	14,1	15,2	16,8	18,5	20,1	21,4	047			
70,0 73,0	9,9 10,4	11,0 11,5	12,2 12,8	13,3 13,9	14,8 15,5	16,0 16,8	17,7 18,7	19,5 20,6	21,3 22,5	22,7 24,0	24,7 26,1			
76,1	10,4	12,1	13,4	14,6	16,3	17,7	19,6	21,7	23,7	25,3	27,7			
82,5	11,8	13,2	14,7	16,0	17,9	19,4	21,6	23,9	26,2	28,1	30,8	33,0	35,5	
88,9	12,8	14,3	16,0	17,4	19,5	21,1	23,6	26,2	28,8	30,8	34,0	36,5	39,4	46.0
95,0 101,6	13,8 14,8	15,4 16,5	17,2 18,5	18,7 20,1	21,0 22,6	22,8 24,6	25,4 27,5	28,3 30,6	31,2 33,8	33,4 36,3	37,0 40,2	39,9 43,5	43,2 47,2	46,3 50,8
108,0	15,8	17,7	19,7	21,5	24,2	26,3	29,4	32,8	36,3	39,1	43,4	47,0	51,2	55,2
114,3	16,8	18,8	21,0	22,9	25,7	28,0	31,4	35,1	38,8	41,8	46,5	50,4	55,1	59,6
121,0 127,0	17,8 18,8	19,9 21,0	22,3 23,5	24,3 25,7	27,4 28,9	29,8 31,5	33,4 35,3	37,4 39,5	41,4 43,8	44,7 47,3	49,8 52,8	54,1 57,4	59,2 62,9	64,2 68,4
133,0	19,7	22,0	24,7	27,0	30,3	33,1	37,1	41,6	46,2	49,8	55,7	60,7	66,6	72,5
139,7	20,7	23,2	26,0	28,4	32,0	34,9	39,2	43,9	48,8	52,7	59,0	64,3	70,7	77,1
146,0	21,7	24,3	27,2	29,8	33,5	36,6	41,2	46,2	51,3	55,5	62,1	67,8	74,6	81,5
152,4 159,0	22,7 23,7	25,4 26,6	28,5 29,8	31,2 32,6	35,1 36,7	38,4 40,1	43,1 45,2	48,4 50,7	53,8 56,4	58,2 61,1	65,3 68,6	71,3 74,9	78,5 82,6	85,9 90,5
165,1	24,7	27,7	31,0	33,9	38,2	41,8	47,0	52,8	58,8	63,7	71,6	78,2	86,4	94,7
168,3	25,2	28,2	31,6	34,6	39,0	42,7	48,0	54,0	60,1	65,1	73,1	80,0	88,3	96,9
171,0	25,6	28,7	32,2	35,2	39,7	43,4 45,2	48,9	54,9	61,2	66,2	74,5	81,5	90,0	98,7
177,8 191,0	26,6 28,7	29,9 32,2	33,5 36,1	36,7 39,5	41,4 44,6	45,2	51,0 55,0	57,3 61,9	63,8 69,1	69,2 74,9	77,8 84,3	85,2 92,4	94,2 102,3	103,4 112,6
193,7	29,1	32,7	36,6	40,1	45,3	49,6	55,9	62,9	70,1	76,0	85,7	93,9	104,0	114,4
203,0	30,6	34,3	38,5	42,1	47,6	52,1	58,7	66,1	73,8	80,1	90,3	99,0	109,7	120,8
219,1 229,0	33,1 34,6	37,1 38,9	41,6 43,6	45,6 47,8	51,6 54,0	56,5 59,1	63,7 66,7	71,8 75,2	80,1 84,0	87,0 91,3	98,2 103,1	107,8 113,2	119,7 125,8	132,0 138,8
244,5	37,0	41,6	46,7	51,2	57,8	63,3	71,5	80,6	90,2	98,0	110,7	113,2	135,3	149,5
254,0	38,5	43,2	48,5	53,2	60,2	65,9	74,4	84,0	93,9	102,1	115,4	126,9	141,2	156,1
267,0	40,5	45,5	51,1	56,0	63,4	69,4	78,5	88,5	99,0	107,7	121,8	134,0	149,2	165,0
273,0 279,0	41,4 42,4	46,6 47,6	52,3 53,5	57,3 58,6	64,9 66,3	71,1 72,7	80,3 82,2	90,6 92,7	101,4 103,8	110,3 112,9	124,8 127,7	137,3 140,6	152,9 156,6	169,2 173,3
292,0	44,4	49,9	56,0	61,5	69,5	76,2	86,2	97,3	108,9	118,5	134,2	147,7	164,6	182,3
298,5		51,0	57,3	62,9	71,1	78,0	88,2	99,6	111,5	121,3	137,4	151,3	168,6	186,8
305,0 323,9	-	52,2 55,5	58,6 62,3	64,3 68,4	72,8 77,4	79,8 84,9	90,2 96,0	101,8 108,5	114,0 121,5	124,1 132,2	140,6 149,9	154,8 165,2	172,6 184,3	191,3 204,3
330,0		00,0	02,0	69,7	78,9	86,5	97,9	110,6	123,9	134,9	152,9	168,5	188,0	208,5
339,7				71,8	81,3	89,2	100,9	114,0	127,7	139,1	157,7	173,8	194,0	215,2
343,0				72,5 75,3	82,1	90,1 93,5	101,9	115,1	129,0	140,5	159,3	175,6	196,1 203,8	217,5
355,6 368,0				78,0	85,2 88,3	96,8	105,8 109,6	119,6 123,9	134,0 138,9	145,9 151,3	165,5 171,6	182,5 189,3	211,5	226,2 234,8
381,0				80,8	91,5	100,4	113,6	128,5	144,0	156,9	178,1	196,4	219,5	243,8
394,0			70.6	83,6	94,7	103,9	117,6	133,0	149,2	162,5	184,5	203,6	227,5	252,7
406,4 419,0			78,6 81,1	86,3 89,0	97,8 100,9	107,3 110,7	121,4 125,3	137,3 141,8	154,0 159,0	167,8 173,3	190,6 196,8	210,3 217,2	235,1 242,9	261,3 270,0
431,8			01,1	03,0	104,0	114,2	129,3	146,2	164,1	178,8	203,1	224,2	250,8	278,8
445,0					107,3	117,7	133,3	150,9	169,3	184,5	209,6	231,5	258,9	287,9
457,2			88,6 91,1	97,3 100,1	110,3 113,4	121,0 124,5	137,1 141,0	155,1	174,1 179,1	189,8	215,6 222,0	238,2	266,5 274,4	296,4
470,0 482,6			91,1	100,1	113,4	124,3	144,9	159,6 164,0	184,1	195,3 200,7	228,2	245,2 252,1	282,1	305,2 313,9
508,0				108,3	122,8	134,8	152,7	172,9	194,1	211,7	240,7	266,0	297,8	331,5
521,0				111,2	126,0	138,4	156,8	177,5	199,3	217,3	247,1	273,1	305,8	340,4
530,0 559,0					135,4	140,8 148,7	159,5 168,5	180,6 190,8	202,8 214,3	221,2 233,7	251,5 265,9	278,0 293,9	311,4 329,2	346,6 366,7
570,0					100,4	140,1	100,0	194,6	214,3	238,4	271,3	299,9	336,0	374,3
584,2					1000		176,2	199,6	224,2	244,6	278,3	307,7	344,8	384,1
610,0					148,0	162,5	184,2	208,6	234,4	255,7	291,0	321,8	360,7	401,9
622,0 635,0							191,9	212,8 217,4	239,1 244,2	260,9 266,5	296,9 303,3	328,4 335,5	368,1 376,1	410,2 419,1
660,4					160,4	176,2	199,7	226,3	254,3	277,5	315,9	349,4	391,7	436,7
711,2						189,9	215,4	244,1	274,3	299,4	340,9	377,2	423,1	471,8
762,0 812,0											366,0 390,6	405,0 432,4	454,4 485,2	506,8 541,4
O.D.	6,3	7,1	8,0	8,8	10,0	11,0	12,5	14,2	16,0	17,5	20,0	22,2	465,Z 25,0	28,0
mm.	-0,3	1,1	-0,0	0,0	10,0	11,0	12,3	17,2	10,0	11,5	20,0	22,2	23,0	20,0

										HOTFI	NISHED SE	AMLESS	MECHANIC	AL TUB
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
								<b>TOLERA</b>	NCES					42,4
								W.T.						44,5 48,3
								*****						46,3 51,0
									± 12,5 %					54,0
									± 12,5 %					57,0
														60,3 63,5
									± 15 %					67,0
														70,0 73,0
									± 20 %					76,1
								OUTOIDED		_				82,5
									<b>R DIAMETE</b> ne nominal					88,9 95,0
53,0									imum ± 0,					101,6
57,7								OTD 41011T						108,0
62,4 67,3	68,4 74,2	73,3 79,9						STRAIGHT For OD > 3	T <b>NESS</b> 33,7 mm. t	he maximi	ım allowed			114,3 121,0
71,8	74,2	85,8	91,0						on stragth			•		127,0
76,2	84,6	91,7	97,7						ds to 1,5%			gth.		133,0
81,2	90,4	98,4	105,1	110,6										139,7
85,8 90,6	95,8 101,3	104,6 110,9	112,1 119,2	118,4 126,3										146,0 152,4
95,4	107,0	117,4	126,5	134,4	141,1	146,5			m EN10297 do ovality, eccenti		any		111111	159,0
100,0	112,3	123,4	133,3	141,9	149,3	155,5		diameter: thes	se parameters	are settled by				165,1
102,3 104,3	115,1 117,4	126,6 129,2	136,8 139,8	145,9 149,2	153,7 157,3	160,3 164,2		what is stated	d on OD and E.	Т.				168,3 171,0
109,3	123,3	135,9	147,4	157,6	166,6	174,3								177,8
119,1	134,7	149,0	162,0	173,9	184,5	193,8								191,0
121,1 128,0	137,0 145,0	151,6 160,8	165,0 175,3	177,2 188,7	188,1 200,7	197,8 211,6								193,7 203,0
139,9	158,9	176,7	193,2	208,5	222,6	235,4	247,0							219,1
147,2	167,5	186,4	204,2	220,7	236,0	250,1	262,9	274,5						229,0
158,7 165,7	180,8 189,0	201,7 211,1	221,4 231,9	239,8 251,5	257,0 269,9	273,0 287,1	287,7 303,0	301,2 317,6						244,5 254,0
175,3	200,3	223,9	246,4	267,6	287,6	306,3	323,8	340,1	355,1					267,0
179,8	205,4	229,8	253,0	275,0	295,7	315,2	333,4	350,4	366,2	380,8	394,1			273,0
184,2 193,8	210,6 221,8	235,8 248,6	259,7 274,1	282,4 298,4	303,8 321,5	324,1 343,3	343,0 363,9	360,8 383,2	377,3 401,4	392,6 418,3	406,7 433,9			279,0 292,0
198,6	227,4	255,0	281,3	306,4	330,3	352,9	374,3	394,5	413,4	431,1	447,5			292,0
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	249,4 254,6	280,1	309,5 316,3	337,7	364,7 373,0	390,5	415,0 424,8	438,3	460,4	481,2	500,8 513,6	519,1 532,7	552,2 567,2	323,9
222,0 229,1	263,0	286,1 295,6	310,3	345,3 357,2	386,2	399,5 413,9	440,3	448,8 465,6	471,7 489,6	493,2 512,4	533,9	554,2	591,1	330,0 339,7
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	437,4 455.7	465,8 495.7	493,0	519,0 541.0	543,7 569.2	567,2 502.2	589,5 617.0	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
287,8 297,3	331,5 342,5	373,9 386,5	415,1 429,3	455,0 470,8	493,7 511,1	531,2 550,1	567,5 588,0	602,5 624,6	636,3 659,9	668,8 694,1	700,1 727,0	730,2 758,6	786,7 818,3	419,0 431,8
307,0	353,9	399,5	443,9	487,1	529,0	569,7	609,1	647,4	684,4	720,1	754,6	787,9	850,8	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
325,5 334,9	375,5 386,3	424,2 436,6	471,7 485,6	517,9 533,4	562,9 580,0	606,7 625,3	649,2 669,4	690,5 712,3	730,6 753,9	769,4 794,3	807,0 833,5	843,4 871,4	912,5 943,5	470,0 482,6
353,6	408,3	461,7	513,8	564,7	614,4	662,9	710,1	756,1	800,9	844,4	886,7	927,8	1.006,2	508,0
363,3	419,5	474,5	528,2	580,8	632,1	682,1	731,0	778,6	824,9	870,1	914,0	956,6	1.038,2	521,0
369,9 391,4	427,3 452,3	483,4 512,0	538,2 570,4	591,9 627,6	644,3 683,6	695,5 738,4	745,4 791,9	794,1 844,2	841,6 895,2	887,8 945,0	932,8 993,6	976,6 1.041,0	1.060,4 1.132,0	530,0 559,0
391,4	452,3 461,8	512,0	570,4	641,2	698,5	754,6	809,5	844,2	915,6	945,0	1.016,7	1.041,0	1.132,0	559,0 570,0
410,0	474,0	536,8	598,4	658,7	717,8	775,7	832,3	887,7	941,8	994,7	1.046,4	1.096,9	1.194,1	584,2
429,1	496,3	562,3	627,0	690,5	752,8	813,8	873,6	932,2	989,5	1.045,6	1.100,5	1.154,2	1.257,7	610,0
438,0 447,6	506,7 517,9	574,1 586,9	640,3 654,8	705,3 721,3	769,1 786,7	831,6 850,8	892,9 913,7	952,9 975,4	1.011,7 1.035,8	1.069,3 1.095,0	1.125,7 1.152,9	1.180,8 1.209,6	1.287,3 1.319,4	622,0 635,0
466,4	539,8	612,0	683,0	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	662,1	739,3	815,3	890,1	963,6	1.035,9	1.106,9	1.176,7	1.245,3	1.312,7	1.378,8	1.507,3	711,2
5/II h	627,5	712,2	795,7	877,9	959,0	1.038,7	1.117,3	1.194,6	1.270,7	1.345,5	1.419,1	1.491,5	1.632,6	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

### **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
- facilities comprising manufacturing units, warehouses and sales offices 14 operating 31

companies 840 average number of employees

tonnage of stored goods ready for immediate delivery 160.000

square meters of production facilities and warehouses 255.000 square meters of office space

11.000

production facilities 25

113 cutting installations

number of items in stock 36.000

number of active customers on our books worldwide 23.000

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 DIAM. 8 to 250 mm

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

#### **CHROME PLATED TUBES**

Dimensions O.D. 12 to 120 mm - W.T. 2 to 10 mm

Tolerances 0.D. f7 Steel grade (EN) E355

Delivery conditions +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 EN 10305-1/2

**Dimensions** I.D. 20 to 300 mm - W.T. 5 to 25mm

Bigger dimension can be supplied in hot finished conditions (EN 10297)

Tolerances I.D ISO H8

Steel grade (EN) E355

Delivery conditions +SR (BKS), +N (NBK)



Standard EN 10305-1/2

I.D. 20 to 300 mm - W.T. 5 to 25mm Dimensions

Bigger dimension can be supplied in hot finished conditions (EN 10297)

Steel grade (EN)

Delivery conditions +SR (BKS), +N (NBK)





### **COLD DRAWN TUBES FOR HYDRAULIC** and PNEUMATIC CIRCUITS

Standard FN 10305-3/4

**Dimensions** O.D. 4 to 50 mm - W.T. 0.5 to 10 mm

E235, E355 Steel grade (EN) Delivery conditions +N (NBK)

Oiled, bonderised and oiled, Surface treatment

galvanized white (Cr VI-free)

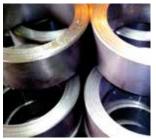




### SEAMLESS and WELDED PIPES and ACCESSORIES FOR HYDROCARBON PROCESSING, POWER GENERATION and ONSHORE LINE PIPE

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





### HOT ROLLED SEAMLESS TUBES FOR MECHANICAL and STRUCTURAL APPLICATIONS

Standard EN 10297/ EN 10210 Dimensions 0.D. 26.9 to 812 mm -W.T. 2.3 to 100 mm

Steel grade (EN) E355, E355K2, S355J2H, S355NH,

S355NLH, E470, E590

Delivery conditions As Rolled





### COLD DRAWN PRECISION TUBES FOR MECHANICAL APPLICATIONS

Standard EN 10305-1/2

Dimensions O.D. 4 to 305 mm - W.T. 1 to 25 mm

Steel grade (EN) E235, E355

Delivery conditions +C (BK), +SR (BKS), +LC (BKW)





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

Standard EN 10210

(seamless and welded hot finished) EN 10219 (welded cold formed) Square 30 x 30 x 3 to 400 x 400 x 20

Dimensions 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 EN 10083-1 / EN 10027-1 Dimensions DIAM. 20 to 450 mm

Steel grade (EN) C45, S355J

Round

Steel grade (EN)

### **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.

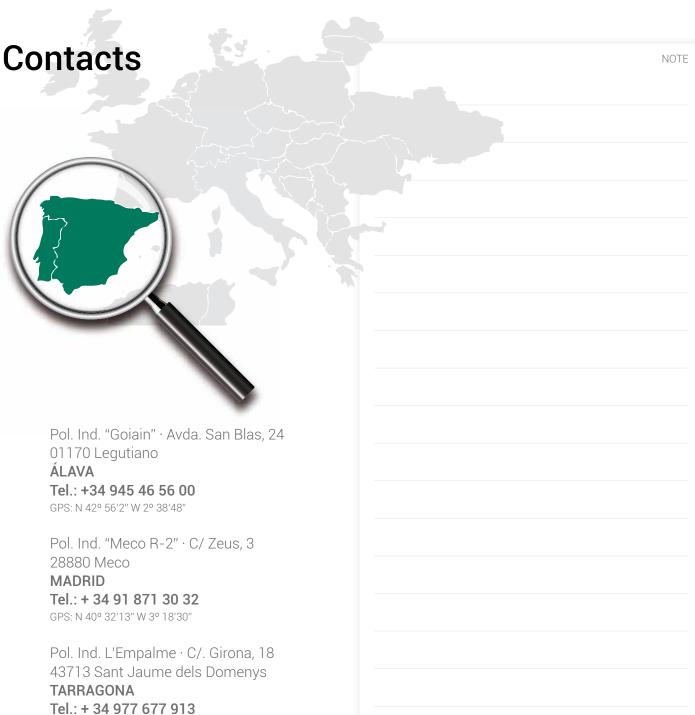
### **Quality certifications**

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.











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### www.protubsa.com







Álava Madrid Tarragona