



Seamless Stainless Instrumentation Tubing



MANNESMANN
STAINLESS TUBES

A Member of the Salzgitter Group



Global Presence

In 6 countries on 3 continents.



Inventor

of the seamless steel tube.



Production & Sales Network

With plants and sales offices all around the globe, we link our production and sales processes internationally.



Sophisticated Logistic Concepts

Our CTS logistics system provides for greatest flexibility and very short lead times.

Our Profile

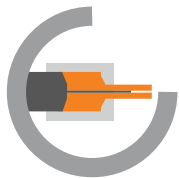
Mannesmann Stainless Tubes has one of the largest product portfolios in this sector and 125 years of history that dates back to invention of the seamless stainless steel tube.

Highest quality stainless tubes

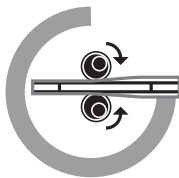
We are one of the worldwide leading manufacturers of seamless stainless steel and nickel based alloy tubes and pipes.

The Mannesmann History

The industrial production of seamless steel tubes dates back to the ground-breaking invention of the Mannesmann Brothers. The very same production site that was used by Max and Reinhard Mannesmann in the late 19th century, is still delivering seamless stainless steel tubes today. With modern equipment, we manufacture our products in Remscheid, Germany, as well as in France, Italy and the US.



Hot Extrusion



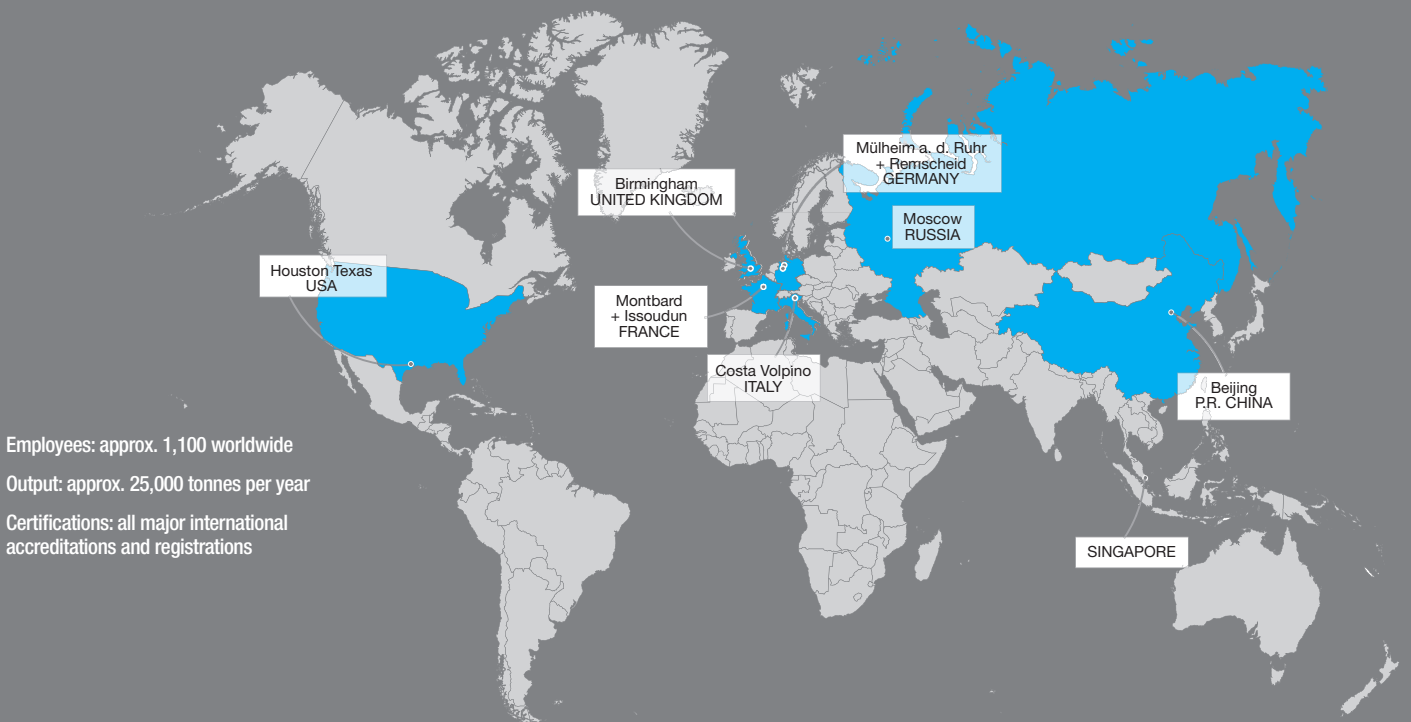
Cold Pilgering



Cold Drawing



MANNESMANN. Das Rohr.
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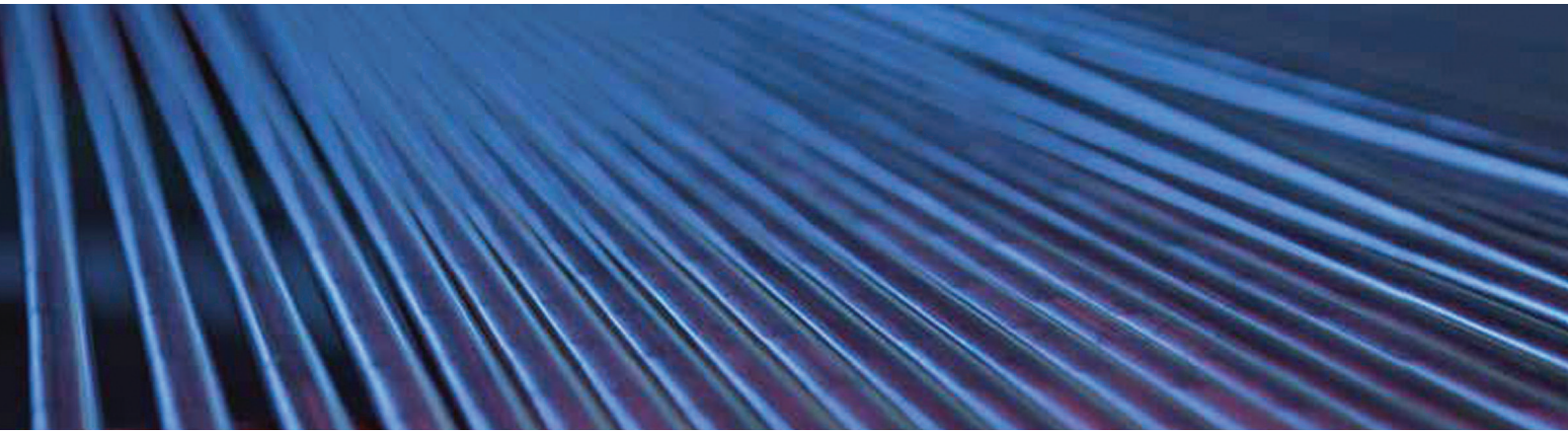
Industries and Applications

Industries and Applications for seamless stainless instrumentation tubing

Nuclear industry, Oil & Gas industry, Aerospace industry, Automotive industry, Railway industry, Chemical & Petrochemical, Conventional Powergen, Shipbuilding



Standard Stainless Steel and Nickel-Alloy Grades



Austenitic															
MST designation	Nearest equivalent standard			Typical chemical composition ¹⁾						Density		Min. mechanical prop. at RT			
	UNS	EN	JIS	C _{max}	Cr	Ni	Mo	Cu	Others	g/cm ³	lb/in ³	Rp _{0.2} Yield Strength		R _m Tensile Strength	
												MPa	ksi	MPa	ksi
DMV 304	S30400	1.4301	SUS 304	0.06	18.5	9.5				7.9	0.29	205	30	515	75
DMV 304L	S30403	1.4306	SUS 304L	0.03	19.0	11.0				7.9	0.29	170	25	485	70
DMV 321	S32100	1.4541	SUS 321	0.08	18.5	10.5			5xC<Ti<0.6%	7.9	0.29	170	25	485	70
DMV 316	S31600	1.4401	SUS 316	0.06	17.0	11.5	2.25			8.0	0.29	205	30	515	75
DMV 316L	S31603	1.4404		0.03	17.0	12.0	2.25			8.0	0.29	170	25	485	70
DMV 316LMoS	S31603	1.4435	SUS 316L	0.03	17.0	12.5	2.75			8.0	0.29	170	25	485	70
DMV 316Ti	S31635	1.4571		0.08	17.0	11.5	2.25			8.0	0.29	205	30	515	75
DMV 317L	S31703	1.4438	SUS 317L	0.03	18.0	14.5	3.5			8.0	0.29	205	30	515	75
DMV 904	N08904	1.4539		0.02	20.5	25.5	4.5	1.5		8.0	0.29	215	31	490	71
DMV 926	N08926	1.4529		0.02	20.0	25.0	6.5	0.8	N 0.20	8.0	0.29	295	43	650	94
DMV 954	S31254	1.4547		0.02	20.0	18.0	6.2		N 0.20	8.0	0.29	310	45	655	95
DMV 8367	N08367			0.03	21	24.5	6.5	0.75	0.18-N<0.25	8	0.29	365	53	745	108

Austenitic Ferritic															
MST designation	UNS	EN		C _{max}	Cr	Ni	Mo	Cu	Others	Density	Density	Min. mechanical prop. at RT		Min. mechanical prop. at RT	
										g/cm ³	lb/in ³	MPa	ksi	MPa	ksi
DMV 22.5	S31803	1.4462		0.03	22..0	55	3.0		N 0.17 ²⁾	7.8	0.28	450	65	620	90
DMV 25.7N	S32760	1.4501		0.03	25.0	7.0	4.0	0.5	N0.25;W0.5 ²⁾	7.8	0.28	550	80	750	109
DMV 29.7	S32906	1.4477		0.03	29	7	2.3	<0.8	N 0.35 ²⁾	7.8	0.28	650	94	800	116

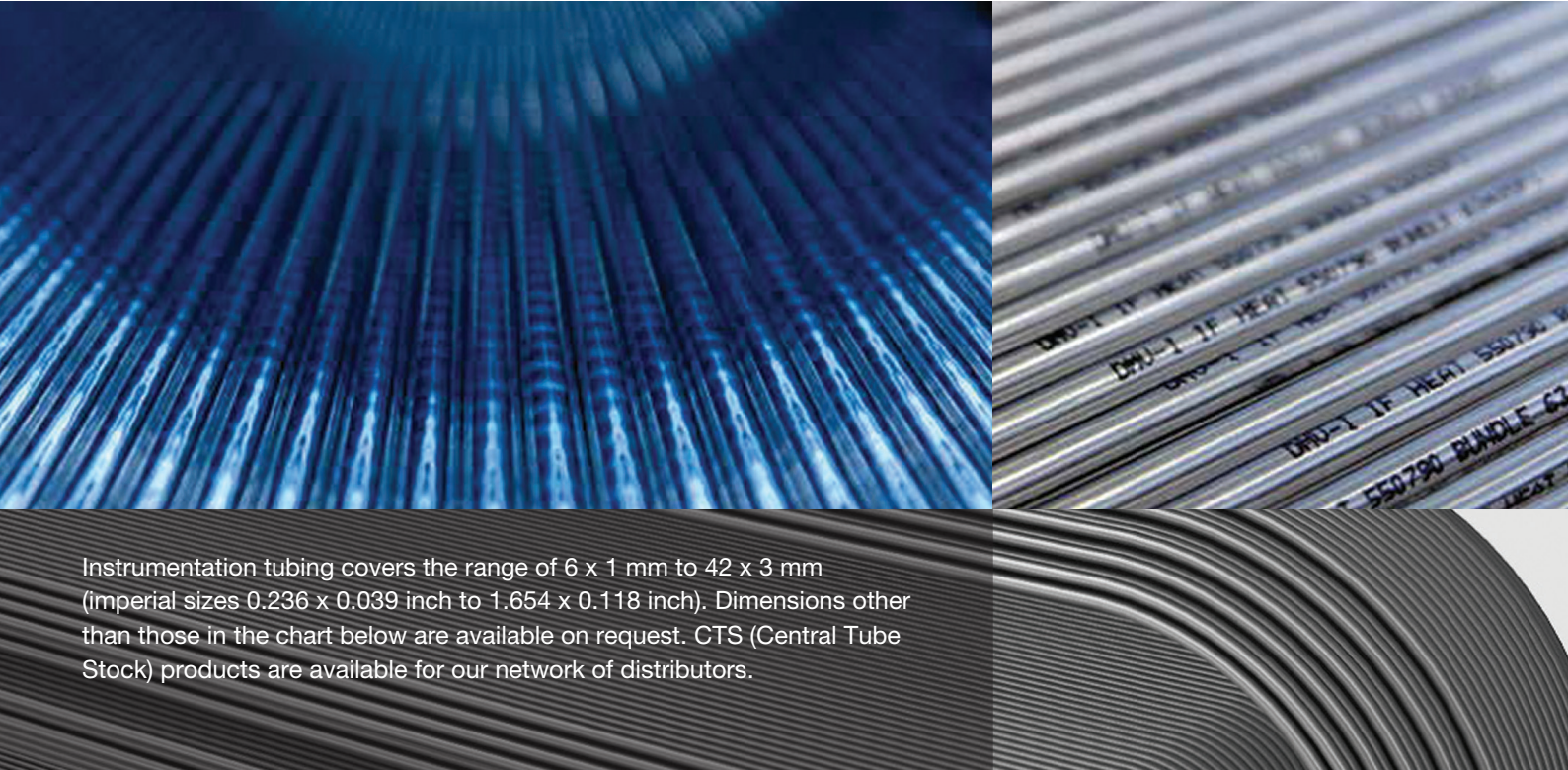
Nickel and Nickel-based alloys															
MST designation	Nearest equivalent standard			Typical chemical composition ¹⁾						Density		Min. mechanical prop. at RT			
	UNS	EN	C _{max}	Cr	Ni	Mo	Cu	Others	g/cm ³	lb/in ³	Rp _{0.2} Yield Strength		R _m Tensile Strength		
											MPa	ksi	MPa	ksi	
DMV 400	N04400	2.4360	0.15		65.0		30.0	Fe 2; Mn 1.5	8.8	0.32	180	26	450	65	
DMV 928	N08028	1.4563	0.02	27.0	31.0	3.5	1.2	N 0.10	8	0.29	210	31	500	73	
DMV 931	N08031	1.4562	0.015	27.0	31.0	6.5	1.2	N 0.20	8.1	0.29	280	41	650	94	
DMV 4692	N08034	2.4692	0.01	27.0	35.0	6.5	1.5	N 0.20	8.1	0.29	310	45	750	108	
DMV 825	N08825	2.4858	0.03	22.0	42.0	3.0	2.0	Ti 0.80; Al 0.10	8.1	0.29	180	26	530	75	
DMV 625	N06625 Gr.1	2.4856	0.025	22.0	63.0	9.0		Nb 3.5	8.5	0.31	414	60	827	120	
DMV C22	N06022	2.4602	0.01	22.0	57.0	13.0		W	8.7	0.31	310	45	690	100	
DMV 59	N06059	2.4605	0.01	23.0	59.0	16.0		Al	8.6	0.31	340	50	690	100	
DMV C276	N10276	2.4819	0.01	16.0	57.0	16.0		W	8.4	0.30	350	51	750	109	
DMV 718	N07718	2.4668	0.08	19.0	52.5	3		Nb 5.1; Mn 0.35; Ti 0.8; Al 0.5	8.2	0.29	1035	150	1276	185	

¹⁾ All figures in weight percentage. In case of order, the limits of the order specification will apply.

²⁾ Min PRE value controlled.

The above represents a selection of our grades, full details of which are available on our website.

Range of Dimensions | Metric Size



Instrumentation tubing covers the range of 6 x 1 mm to 42 x 3 mm (imperial sizes 0.236 x 0.039 inch to 1.654 x 0.118 inch). Dimensions other than those in the chart below are available on request. CTS (Central Tube Stock) products are available for our network of distributors.

Lengths

Metric sizes are normally delivered in standards length of 6,000 mm. For imperial sizes lengths of 6,096 mm are available. Longer straight tubes can be manufactured on request.

Delivery conditions

Tubes are delivered in bright annealed condition with plain ends.

Austenitic

- EN 10216-5 TC1/TC2
- ASTM A 269
- ASTM A 213 AW
- AD 2000-Merkblatt W 2
- AD 2000-Merkblatt W 10
- SEW 470

Duplex / Super Duplex

- ASTM A789
- ASTM A790

Nickel

- ASTM B163

Tolerances

- EN 10305-1
- ASTM A 269
- ASTM A 213 AW
- D4 EN ISO 1127: +/- 0.50 % but +/- 0.1 mm

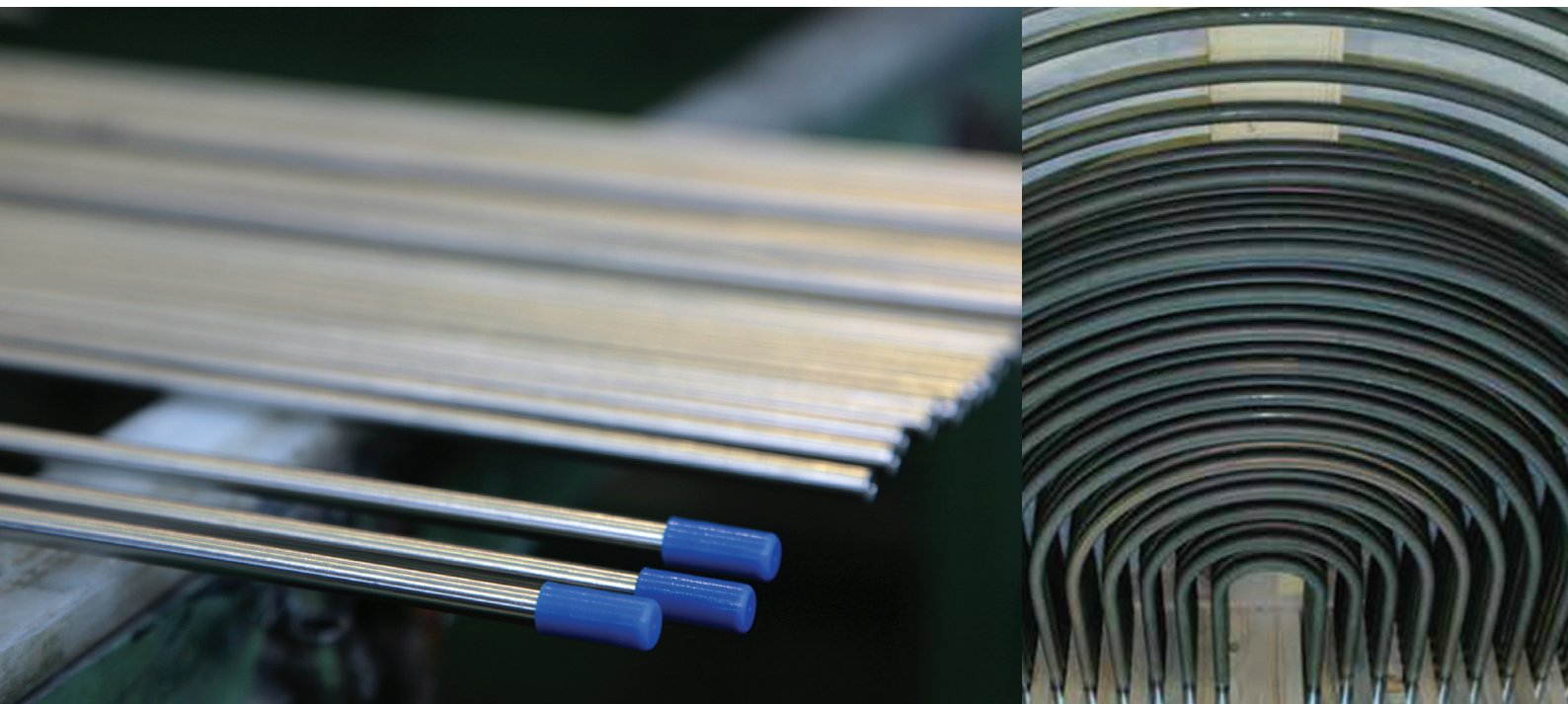
Other tight tolerances on request



All values are for information only and without responsibility.

Dimensions		Weight	Working pressure in bar up to 120°C for					
OD mm	WT mm	kg / m	DMV 304	DMV 304 L	DMV 316 L	DMV 316 LMoS	DMV 316 Ti	DMV 321
6.0	1.0	0.12	409	382	400	400	436	418
	1.5	0.17	664	621	650	650	708	679
8.0	1.0	0.17	307	287	300	300	327	313
	1.5	0.24	498	466	488	488	531	509
	2.0	0.29	690	645	675	675	735	705
10.0	1.0	0.22	245	229	240	240	261	251
	1.5	0.31	399	373	390	390	425	407
	2.0	0.40	552	516	540	540	588	564
10.2	1.0	0.23	241	225	235	235	256	246
	2.0	0.40	541	506	529	529	576	553
12.0	1.0	0.27	204	191	200	200	218	209
	1.5	0.39	332	311	325	325	354	339
	2.0	0.49	460	430	450	450	490	470
14.0	1.0	0.32	192	179	188	188	204	196
	2.0	0.59	383	358	375	375	408	392
	2.5	0.71	479	448	469	469	510	490
15.0	1.0	0.34	164	153	160	160	174	167
	1.5	0.50	266	248	260	260	283	272
	2.0	0.64	368	344	360	360	392	376
16.0	1.0	0.37	153	143	150	150	163	157
	1.5	0.54	249	233	244	244	265	255
	2.0	0.69	345	323	338	338	368	353
	2.5	0.83	431	403	422	422	459	441
	3.0	0.96	503	470	492	492	536	514
18.0	1.0	0.42	136	127	133	133	145	139
	1.5	0.61	221	207	217	217	236	226
	2.0	0.79	307	287	300	300	327	313
	3.0	1.11	447	418	438	438	476	457
20.0	1.5	0.68	199	186	195	195	212	204
	2.0	0.89	276	258	270	270	294	282
	2.5	1.08	345	323	388	388	368	353
	3.0	1.25	403	376	394	394	429	411
	4.0	1.57	537	502	525	525	572	548
	5.0	1.84	671	627	656	656	715	685
22.0	1.0	0.52	112	104	109	109	119	114
	1.5	0.75	181	169	177	177	193	185
	2.0	0.98	251	235	245	245	267	256
24.0	4.0	1.97	447	418	438	438	476	457
25.0	1.5	0.87	159	149	156	156	170	163
	2.0	1.13	221	206	216	216	235	226
	2.5	1.38	276	258	270	270	294	282
	3.0	1.62	331	310	324	324	353	338
28.0	5.0	2.83	479	448	469	469	510	490
30.0	2.5	1.69	230	215	225	225	245	235
	3.0	1.99	276	258	270	270	294	282
	4.0	2.56	368	344	360	360	392	376

Range of Dimensions | Imperial Size



Lengths

Metric sizes are normally delivered in standards length of 6,000 mm. For imperial sizes lengths of 6,096 mm are available. Longer straight tubes can be manufactured on request.

Delivery conditions

Tubes are delivered in bright annealed condition with plain ends.

Austenitic

- ASTM A269
- ASTM A213 AW
- ASME SA213

Nickel

- ASTM B163
- ASTM B165
- ASME SB163
- ASME SB165

Duplex / Super Duplex

- ASTM A789
- ASTM A790
- NACE MR0175
- MR0103
- ISO 15156-3

Tolerances

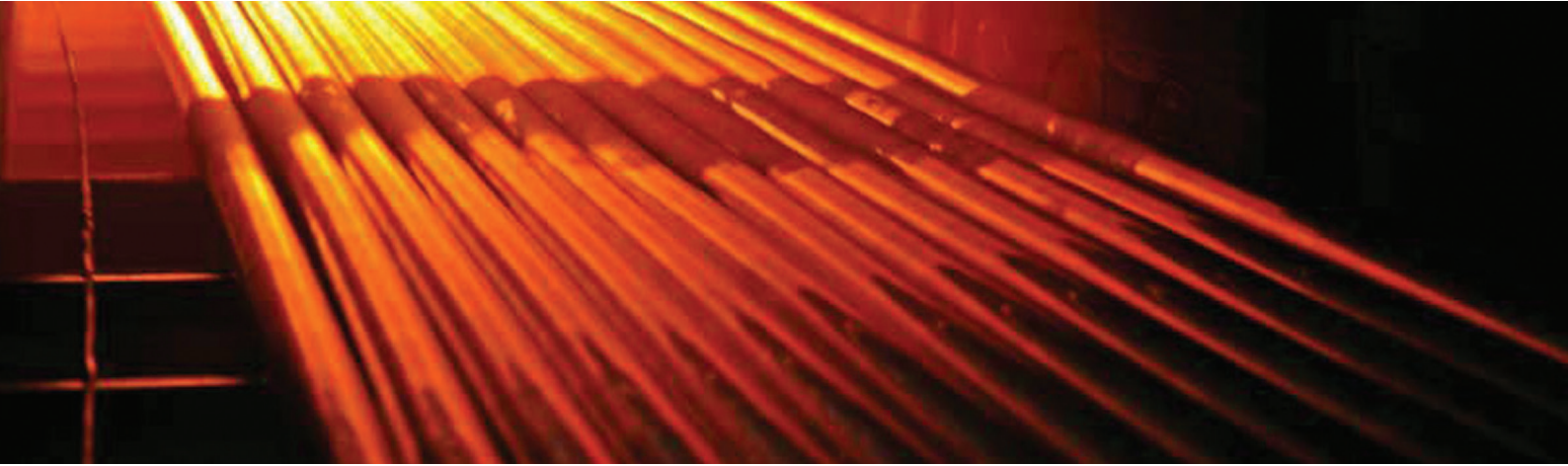
- ASTM A269
- ASTM A213 AW
- D4 EN ISO 1127:

Other tight tolerances on request

Gauge Equivalents

BWG / SWG	BWG (Birmingham Wire Gauge)		SWG (Standard Wire Gauge)	
	inches	mm	inches	mm
20	0.035	0.889	0.036	0.914
19	0.042	1.066	0.040	1.016
18	0.049	1.244	0.048	1.218
17	0.058	1.472	0.056	1.421
16	0.065	1.650	0.064	1.625
15	0.072	1.828	0.072	1.828
14	0.083	2.108	0.080	2.032
13	0.095	2.412	0.092	2.336
12	0.109	2.768	0.104	2.641
11	0.120	3.047	0.116	2.946
10	0.134	3.403	0.128	3.251
9	0.148	3.759	0.144	3.657
8	0.165	4.191	0.160	4.064
7	0.180	4.571	0.176	4.470
6	0.203	5.156	0.192	4.876
5	0.220	5.588	0.212	5.384
4	0.238	6.045	0.232	5.892
3	0.259	6.578	0.252	6.400
2	0.284	7.213	0.276	7.010
1	0.300	7.620	0.300	7.620
0	0.340	8.635	0.324	8.229

Range of Dimensions | Imperial Size



All values are for information only and without responsibility.

Dimensions		Imperial Size		Weight	Working pressure in bar up to 120°C for					
OD mm	WT mm	OD inch	WT inch	kg / m	DMV 304	DMV 304 L	DMV 316 L	DMV 316 LMoS	DMV 316 Ti	DMV 321
6.35	0.89 / 0.91	1/4	0.035 / 0.036	0.124	333 / 343	311 / 321	326 / 335	326 / 335	355 / 365	340 / 350
	1.22 / 1.24		0.048 / 0.049	0.159	493 / 502	460 / 470	482 / 491	482 / 491	525 / 535	503 / 513
	1.63 / 1.65		0.064 / 0.065	0.194	–	–	–	–	–	–
9.53	0.89 / 0.91	3/8	0.035 / 0.036	0.196	222 / 228	208 / 214	217 / 224	217 / 224	237 / 243	227 / 233
	1.22 / 1.24		0.048 / 0.049	0.254	328 / 335	307 / 313	321 / 327	321 / 327	350 / 356	335 / 342
	1.63 / 1.65		0.064 / 0.065	0.326	460 / 467	430 / 436	450 / 456	450 / 456	490 / 497	470 / 477
12.7	0.89 / 0.91	1/2	0.035 / 0.036	0.269	167 / 171	156 / 160	163 / 168	163 / 168	177 / 183	170 / 175
	1.22 / 1.24		0.048 / 0.049	0.356	246 / 251	230 / 235	241 / 246	241 / 246	262 / 268	252 / 257
	1.63 / 1.65		0.064 / 0.065	0.457	345 / 350	323 / 327	338 / 343	338 / 343	368 / 373	353 / 358
	2.11		0.083	0.560	459	429	449	449	488	469
15.88	0.91	5/8	0.035	0.341	158	148	155	155	168	167
	1.24		0.049	0.455	216	201	211	211	230	220
	1.65		0.065	0.588	287	268	281	281	305	293
	1.82		0.072	0.641	316	296	309	309	337	323
19.05	0.91	3/4	0.049	0.413	132	123	129	129	140	135
	1.24		0.065	0.553	180	168	176	176	191	184
	1.65		0.083	0.719	239	223	234	234	255	244
	2.11		0.118	0.895	306	286	296	299	326	312
25.4	1.24	1	0.049	0.750	135	126	132	132	144	138
	1.65		0.065	0.981	179	168	175	175	191	183
	2.03		0.078	1.188	221	206	216	216	235	225
	2.11		0.083	1.231	229	214	224	224	244	234
	2.41		0.095	1.387	262	245	256	256	279	268
	2.64		0.104	1.505	287	268	281	281	306	293
	2.77		0.109	1.570	301	281	294	294	321	308
	3.05		0.120	1.707	331	310	324	324	353	339
3.41	0.134	1.878	371	346	362	362	395	379		
38.1	1.65	1 1/2	0.065	1.506	120	112	117	117	127	122
	2.77		0.109	2.451	201	188	196	196	214	205
50.8	2.11	2	0.083	2.573	115	107	112	112	122	117
	2.77		0.109	3.331	150	141	147	147	160	154
	3.20		0.126	3.814	174	163	170	170	185	178

Quality: Zero Accident - our goal, our focus, our culture.

Zero Accident – our goal, our focus, our culture.

Across our global manufacturing locations the health & safety of everyone on our sites is paramount. The wellbeing of employees, contractors and visitors remains our number one priority.

The zero accident mantra is a mind-set which extends from our leadership team through the entire organisation.

Quality Management

At Mannesmann Stainless Tubes we take pride in meeting and exceeding our customer's quality expectations. We encourage and seek feedback on our performance and from this how we may learn and continuously improve. In our most recent customer survey we obtained a 100% quality score across our global manufacturing plants.

We have quality management systems which are routinely audited and approved by the world's leading organisations such as: ASME, ISO, TUV, DNV, JIS and Lloyd's Register. Our plants hold approvals which include, for example, ISO 9001, ISO 14001 & ISO 45001.



MST QR code system to fight fake products
All of our orders are shipped with QR code validated certificates. Expect authentic Mannesmann quality tubes only with validated QR code.



Quality: Zero Accident - our goal, our focus, our culture.

QMS / FACILITY	GERMANY, REMSCHIED	ITALY, COSTA VOLPINO	FRANCE, MONTBARD	FRANCE, ISSOUDUN	USA, HOUSTON
QMS / FACILITY	✓	✓	✓	✓	✓
PED 2014/68/EU	✓	✓	✓	✓	✓
AD 2000	✓	✓	✓	✓	
ISO 14001	✓	✓	✓		
ISO 45001			✓		
ISO 17025			✓		
ISO 50001	✓				
AS 9100				✓	
ISO 19443		✓			

Service & Flexibility

With short lead times and a program supporting '6 weeks' ex-works on a range of key standard sizes and grades you can be assured of our commitment to supporting breakdown and rapid delivery needs.



Stay in touch
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While our Company has compiled and organized this data to the best of its knowledge, the data is provided on an "as is" basis only. To the fullest extent permissible by applicable law, we neither make any representation nor give any warranty -neither express, implied or statutory- regarding this data, including, but not limited to, with respect to completeness, accuracy, reliability, security, timeliness, fitness or suitability for any particular purpose, merchantability or any decisions you may make based on it. To the same extent, our company does not assume any other liability regarding this data for any direct, indirect or consequential or any other losses or damages of whatsoever kind (whether based on contract, tort, delict, warranty or any other legal theory) resulting from its use. The use of this data is at your own risk, unless otherwise agreed in writing. Our company reserves the right to modify its content at its own discretion at any time and without prior notice."

