BORUSAN PIPE

OUR PRODUCTS, OUR COMMITMENT


BORUSAN
PIPE

CONTENTS

MILESTONES

1944 Foundation of Borusan

1958 Borusan Pipe was founded

1968 Halkalı ERW Pipe Plant started production, İstanbul

1969 First exports

1976 Gemlik ERW Pipe Plant started production, Bursa

1979 Borusan Port inagurated

1994 Borusan Pipe quoted on İstanbul Stock Exchange

1998 Borusan and Mannesmann merged their pipe business activities in Türkiye

2001 Acquistion of cold drawn pipe plant in Vobarno, Italy

2004 The company name is amended as “Borusan Mannesmann”

2009 Borusan Port expansion completed

2011 Gemlik HSAW Pipe Plant started production, Bursa

2014 Baytown ERW Plant started production, Texas

2016 Bursa Service Center started production, Bursa

2019 Gemlik Automotive Tubes Plant started production, Bursa

2023 Ploieşti Service Center started operations, Romania

2023 Acquisition LSAW pipe plant in Florida and HSAW pipe plant in Alabama

2024 Borusan and Salzgitter Mannesmann partnership has ended. The name of the company has changed as Borusan Boru in Türkiye and Borusan Pipe internationally

2024 Baytown SRM Plant & Ploieşti Service Center started operations, Romania

Gemlik Location

BORUSAN HOLDING AT A GLANCE

Borusan Group's basic strategy is based on a vision that focuses on developing innovative products and services while continuing to create added value for the Turkish economy, with an open horizon to world markets. Celebrating its 80th anniversary in 2024, Borusan Group continues its steady growth in manufacturing, machinery and power systems, automotive, logistics and energy sectors in different markets around the world, especially in Türkiye.

PRODUCTION GROUP

Borusan Pipe | Borçelik | Supsan

LOGISTICS GROUP

Borusan Logistics | Borusan Port

AUTOMOTIVE GROUP

Borusan Automotive Group | Parcapazari.com

ENERGY GROUP

Borusan EnBW Enerji

MACHINERY AND POWER SYSTEMS GROUP

Borusan CAT

BUSINESS PARTNERS

ArcelorMittal

EnBW | GIWA

BRANDS

BMW | CAT | BMW MOTORRAD | MINI | JAGUAR | LAND ROVER

BORUSAN PIPE IN BRIEF

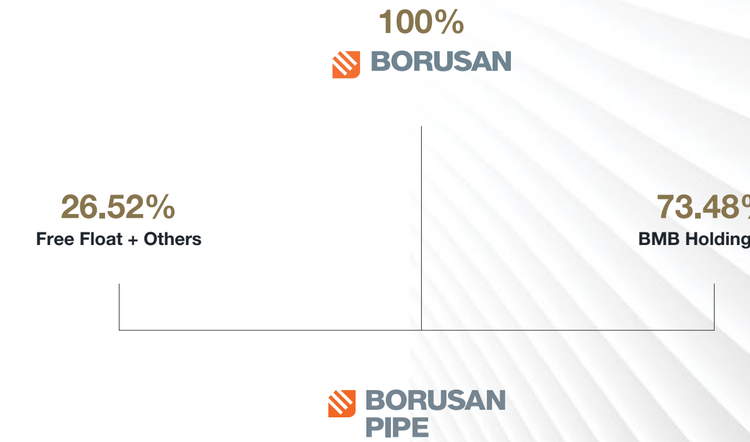
Borusan Pipe is among the leading manufacturer of steel pipes in the world.

Founded in 1958, Borusan Pipe is the first industrial initiative of the Borusan Group, one of Türkiye's leading powers. Today, Borusan Pipe carries its experience, expertise, and passion to all corners of the world with its high-tech pipes in every field, from automotive to construction, from energy to machinery production, with its high sales volume, and is among the leading manufacturers of Europe and the world in the steel pipe industry.

Continuing its investments with a global perspective in line with market dynamics, the company. It's first overseas investment by establishing Borusan Vobarno Tubi S.p.A. with the facility it purchased in Italy in 2001. In 2014, it founded Borusan Pipe US Inc. to manage the Houston Baytown factory investment in the USA. In 2023, within the scope of its strategy of becoming a local player in global markets, it purchased Berg Pipe, one of the companies in the USA that produces the highest quality and capacity, and incorporated it as Borusan Berg Pipe.

In 2024, with its investment, it opened the Ploiești Service Center in Romania, which has a production and storage area of 4800m^2, and started the production of over 10,000 tons of short-cut shock absorber tubes.

Borusan Pipe, in the top 100 in the list of Türkiye's largest industrial enterprises since its first year, is building Türkiye's future beyond producing pipes with its thousands of products, reliable service, quality, and the firsts it has achieved in Turkiye and the world. It offers a sustainable society and world with its management policies, and a developed country, and a safe future with its large-scale investments.



BEYOND BORDERS, BEYOND EXPECTATIONS

Türkiye

Gemlik ERW Pipe Plant

Sectors served: Energy, Construction, Water Transmission
Workforce : 750
Area : 388.000 m²

Türkiye

Gemlik HSAW Pipe Plant

Sectors served: Energy, Construction, Water Transmission
Workforce : 140
Area : 70.000 m²

Türkiye

Gemlik Automotive Tubes Plant

Sectors served: Automotive

Workforce : 130
Area : 20.000 m²

USA

Baytown ERW Plant

Sectors served : Energy Sector

Workforce : 300
Area : 500.000 m²

USA

Baytown SRM Plant

Sectors served : Water Transmission

Workforce : 85
Area : 15.000 m²

USA

Borusan Berg Pipe Panama City LSAW Pipe Plant

Sectors served: Energy Sector

Workforce : 171
Area : 28.600 m²

Türkiye

Bursa Service Center

Sectors served: Automotive

Workforce : 80
Area : 24.000 m²

Türkiye

Halkalı ERW Pipe Plant

Sectors served: Engineering Technologies
Workforce : 450
Area : 67.000 m²

USA

Borusan Berg Pipe Mobile HSAW Pipe Plant

Sectors served: Energy Sector

Workforce : 99
Area : 30.800 m²

Romania

Ploiești Service Center

Sectors served: Automotive

Expected workforce till 2026 : 62
Area : 4.800 m²

Italy

Vobarno Plant

Sectors served: Engineering Technologies

Workforce : 90
Area : 24.000 m²

BORUSAN GROUP SUSTAINABILITY STRATEGY

To inspire, you must first dream with the inspiration you get from today. You must produce with higher consciousness than yesterday, with a brand-new vision, and make your dream come true by exhausting all of your resources.To be an inspiration, you must produce a real benefit with the inspiration you get from the future. As Borusan, we aim to produce benefits since the day we were founded.

We strive toward building better lives and a sustainable future for all.

We dream of, design, produce, and make new things a reality.

We mobilize all of our resources to inspire us all.

We know that dreams come true in the hands of those who imagine them. To that end, we combine our creativity with our producing power. We are inspired by the cycle of nature, our human resources, and innovative ideas. We inspire a sustainable future with our producing power, employees, business models as well as our stakeholders and partnerships.

Climate

We dream, design and produce for a healthy climate. We use our innovative ideas, manufacturing skills, competencies, and creativity to overcome the climate crisis. Our aim is to help mend the broken workings of the climate. With all of our resources, we dream of building, designing, and actualising healthier systems for the climate in our own operations as well as across our value chain.

Human

We dream, design, and turn into reality for a human-oriented corporate culture and social development. We work with our colleagues and stakeholders in creating a bright future. We design innovative relationship models to benefit our society. Our goal is to inspire a refreshing and sustainable future for all. With our human resources, we dream of, design, and turn into reality a bright future.

Innovation

We dream, design, and produce for a new era. aWe are inspired by innovative ideas, and in turn, inspire a brand-new future. Our priority is to implement innovative and sustainable business models that are fit for the future. With our corporate resources and innovative capacities, we dream, design, and turn into reality an innovative future.

As Borusan, we strive to inspire a sustainable future since our establishment. We meet those who inspire the future in Borusan, for a new era, a new world, new dreams, and innovative ideas.

BORUSAN PIPE SUSTAINABILITY STRATEGY

We are Inspiring the Future by owning the **Climate**, **People** and **Innovation**…

We know that resources are not unlimited, at the same time, we are aware that we are not the owner but the trustee of nature and the environment, and that we must leave a future inspired by them for future generations.

We believe that sustainability is possible with our focus areas that we have determined according to our entire value chain and priorities, and we benefit by making a difference…

We are owning the Climate by creating benefits for the planet…

Within the scope of the climate theme, which we have set as our goal of making a difference, we proceed with the inspiration we receive from nature. We focus on protecting the ecological balance in the face of the climate crisis, which is critical for our future, and develop projects that help reduce our environmental footprint by paying attention to resource consumption. We work for a healthy climate by designing new carbon-free and circular business models.

We dream, we design, we turn it into reality and we are owning our people…

We believe that the difference in business life comes from “People” and we consider it our priority to offer a happy, healthy, safe and transparent work environment to our employees. We dream of the future with them and get inspired by our speed of making it a reality; We design the future.

We own innovation by designing innovative ideas.

We know that maintaining our success depends on investing in the future with an innovative perspective. We work to transform our business model in line with the needs of the future, and we carry forward our new product and innovation processes, which are one of the most important links in achieving this goal, with the high meticulousness brought by our industry experience. In addition to the responsibility of being a pioneer in the sector, we undertake projects, investments and affiliates that nurture the entrepreneurial and innovative spirit with the responsibility we feel towards our nature and our stakeholders.

CUSTOMER BENEFITS

Exceeding Limits with Continuous R&D

Borusan Pipe research and development philosophy enables us to carry out research activities in all markets and develop new products for our customer's and market needs. As Borusan Mannesmann; we also conduct joint projects with our raw material suppliers to develop special material qualities for the manufacture of desired products. We collaborate in performing trial productions and troubleshooting activities to maintain excellence in product and process design and implementation to the best possible extent.

As a company that embraces Lean 6 Sigma methodology; launching breakthrough technologies, improving production and process control steps is a part of our daily life.

Integrated Delivery Services

Challenging the dynamics of global competition, Borusan Pipe gets the maximum benefits from the location advantage of its plants. Borusan Pipe's state of the art Houston Plant has direct rail and barge accesses with dedicated trucks. Also owned solely by Borusan Group, Borusan Port in Gemlik location is one of Europe's most important ports in terms of both size and location. Its physical conditions and Equipment Park enables Borusan Port to serve container and bulk vessels at the same time with the capacity to handle 5 million tons of cargo, 250.000 vehicles and 400.000 TEU containers.

Borusan Pipe regularly provides shipping to many different destinations in the world - an ability, which gives the company a certain edge on transportation by sea. Borusan Logistics is our delivery partner that provides services of chartering and project transportation, as well as international bulk, container, land, railway and air transportation. As a solution partner with its reliable services and tracking systems in international transportation, Borusan Logistics creates value for us in terms of our "port to door" deliveries.

Turnkey Synergetic Solutions

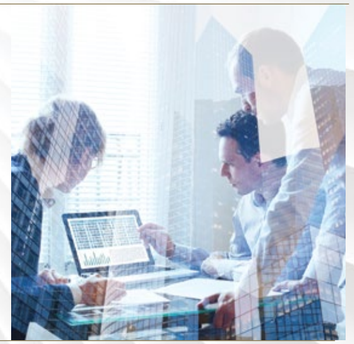
Our customers are assured that all of our products meet their expectations varying from internationally recognized specifications to special requirements. Borusan Pipe provides turnkey products either with its modern integrated facilities or reliable processing suppliers, for its customers.

VOC - Most Valuable Driving Force

Borusan Pipe has been capturing the requirements and feedback of our customers to provide the best product and service quality. We have been applying the VOC - Voice of Customer process since 2003. Serving to our customers and delivering synergetic solutions in the most cost effective way is a consistent discipline in Borusan Pipe. We aim to compose personal recipes for special market needs. This approach leads us to go beyond ourselves and present valuable services for our customers.

Well Established Sales Organization

Borusan Pipe's sales experts provide fast response and reliable technical consultation in close cooperation with our customers before and after the sales process. Our sales organization is made of professional local representatives who speak our customer's language in their market and always provide the best solutions for the business. Company's representatives are carefully picked from the best of highly qualified distributors in the local market. We provide the best solutions; in your country, in your language with equipped people.



OUR TEAM

There is no limit to human potential. Success brings the desire to achieve more. Having a principle of ‘being one step ahead,our talented workforce is dedicated to achieving high customer service. Our sales organization comprises planning, sales, and trade operations experts. The educational and developmental programs which will create a significant difference for Borusan members in means of business processes and personal development are designed by the Borusan Academy. The Leadership and Sales Faculty programs are jointly offered with the Sabancı University, Executive Development Unit. They consist of various certification programs, including long-term postgraduate education and development topics prepared by locally and internationally renowned experts in their fields.

QEHS Management

Borusan Group companies all share a common set of guiding principles, which help this vast enterprise to operate in complete harmony. These principles are commitments to productivity, innovation, and environmental responsibility.

From raw material to finished product, Borusan Pipe determines the impacts on the environment and reduce impacts control each step of the process. Our Environmental Management System Certificate (ISO 14001) proves our commitment to environment.

Healthy performance is delivered through healthy people. In compliance with ISO 45001, Borusan Pipe endeavors to protect the health and safety of its workforce and service providers.

Borusan Pipe; exemplary with its modern management approach, as well as its investments, has been applying The Lean Six Sigma methodology since 2002 and Voice of Customer (VOC) process since 2003.

The Lean Six Sigma methodology is a highly disciplined business management strategy that seeks to remove the causes of defects in production and business processes, and to continuously improve productivity, profitability, and customer satisfaction. Besides with the VOC process, we capture the requirements and feedback from our customers to provide the best product and service quality.

Ongoing efforts to improve customer satisfaction brought Borusan Pipe, Complaints Handling Management Systems Certificate (ISO 10002), which is a first in the steel pipe sector globally.

ENERGY

OCTG-CASING AND TUBING

Sizes

Outside Diameter	Wall Thickness	Length
26,7 mm - 339,7 mm	2,87 mm - 13,06 mm	6,00 m - 18,30 m
1.050” - 13.375”	0.113” - 0.514”	19,68 ft - 60,04 ft

Production Standards & Material Qualities

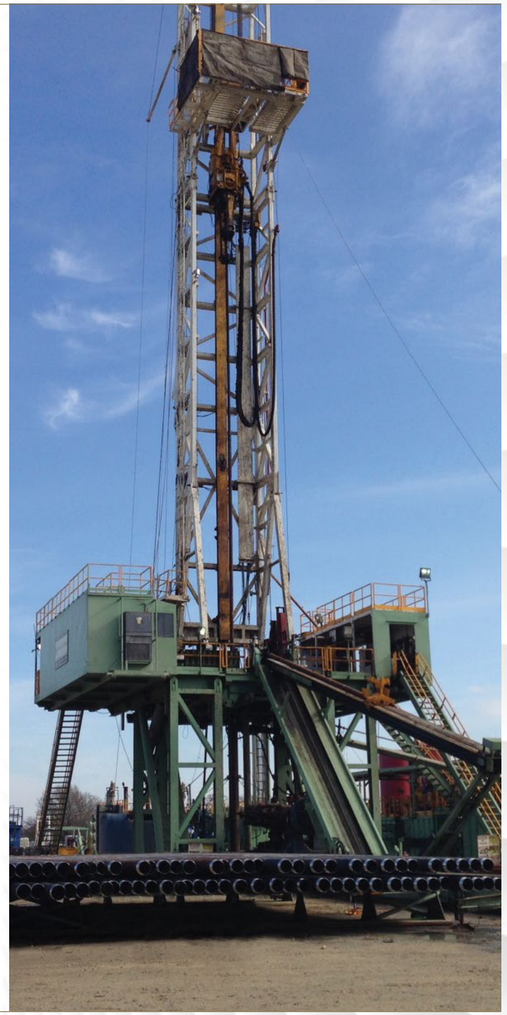
- API 5CT certified for threaded and coupled casing and tubing (According to API 5B)
- Full ERW grade range: H40, J55/K55, L80, N80, FBNAU, P110 and Q125
- Proprietary as rolled 80, 90 grade available
- Enhanced high collapse versions of L80 and P110 grades available

Tests & Certificates

- API 5CT
- Visual and dimensional inspection
- Mechanical Tests: Tensile, Flattening, Expanding
- Steady scarfing with 100% weldline ultrasonic testing
- Hydrotesting in place of 100%
- Consistent wall thickness with oversize drift options available
- Reduced tolerances through statistical process control
- Uniform concentricity, roundness, straightness and cylindricity
- Fully normalized weld zones
- NDT Standards: U/S (ASTM E 213 Level 3)
- Suitable for directional drilling and multiple fracturing operations
- Accredited lab tests and third party inspection available (full body and weld line UT, EMI, SEA)

Finishing Operations

- Plain end square cut or high quality API 5B certified threading and coupling
- Premium and semi-premium threads available
- High quality threaded compound, couplings and protectors
- Torque controlled coupling application
- External corrosion prevention with durable and environmentally safe coating



Tubing - Production Range

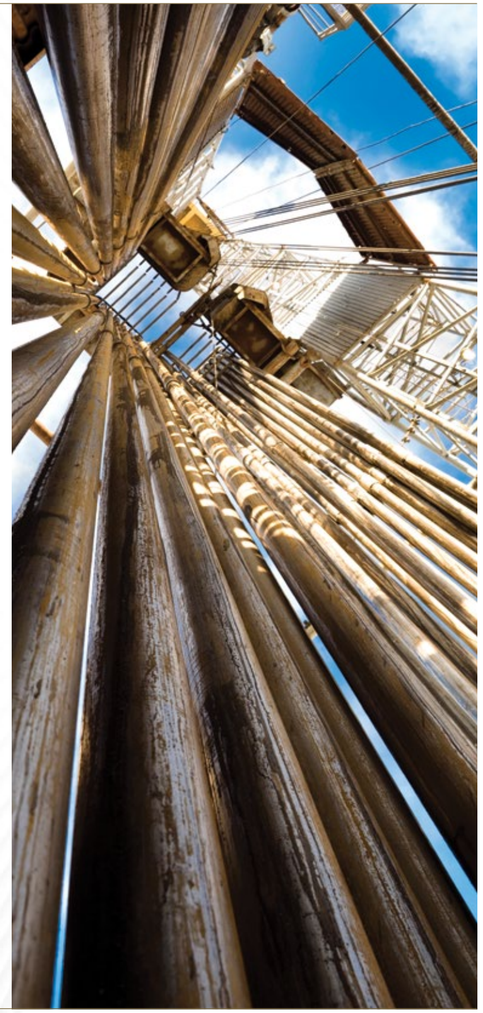
	Range 1	Range 2	Range 3
(ft)	20.0 - 24.0	28.0 - 32.0	38.0 - 42.0

Labels

Nominal linear mass shown for information and assistance in ordering only (T&C: threaded and coupled)

OD (inch)	Non-Upset T&C Nominal Linear mass (lb/ft)	External Upset T&C Nominal Linear mass (lb/ft)	Wall Thickness (inch)
1.050	1.14	1.20	0.113
1.050	1.48	1.54	0.154
1.315	1.70	1.80	0.133
1.315	2.19	2.24	0.179
1.660	2.09	-	0.125
1.660	2.30	2.40	0.140
1.660	3.03	3.07	0.191
1.900	2.40	-	0.125
1.900	2.75	2.90	0.145
1.900	3.65	3.73	0.200
1.900	4.42	-	0.250
1.900	5.15	-	0.300
2.063	3.24	-	0.156
2.063	4.50	-	0.225
2.375	4.00	-	0.167
2.375	4.60	4.70	0.190
2.375	5.80	5.95	0.254
2.375	6.60	-	0.295
2.375	7.35	7.45	0.336
2.875	6.40	6.50	0.217
2.875	7.80	7.90	0.276
2.875	8.60	8.70	0.308
2.875	9.35	9.45	0.340
2.875	10.50	-	0.392
3.500	7.70	-	0.216
3.500	9.20	9.30	0.254
3.500	10.20	-	0.289
3.500	12.70	12.95	0.375
4.000	9.50	-	0.226
4.000	10.70	11.00	0.262
4.500	12.60	12.75	0.271
4.500	15.20	-	0.337

API 5CT Tubing grades: J55, J55N, N80Q, L80, P110, FBNAU



Casing - Production Range

Range Lengths:	Range 1	Range 2	Range 3	Extra long
(ft)	18.0 - 25.0	25.0 - 34.0 (95% 28ft min)	34.0 - 48.0 (95% 36ft min)	48.0 - 65.00

Labels

Nominal linear mass shown for information and assistance in ordering only (T&C: threaded and coupled)

OD (inch)	T&C Nominal linear mass (lb/ft)	Wall Thickness (inch)
4.5	9.50	0.205
4.5	10.50	0.224
4.5	11.60	0.250
4.5	13.50	0.290
4.5	15.10	0.337
4.5	16.60	0.375
4.5	18.90	0.430
4.5	21.50	0.500
5	11.50	0.220
5	13.00	0.253
5	15.00	0.296
5	18.00	0.362
5.5	14.00	0.244
5.5	15.50	0.275
5.5	17.00	0.304
5.5	20.00	0.361
5.5	23.00	0.415
5.5	26.00	0.476
5.5	26.80	0.500
5.5	29.70	0.562
6.00	24.1	0.400
6.625	24.00	0.352
6.625	28.00	0.417
6.625	32.00	0.475
6.625	35.00	0.525
7	17.00	0.231
7	20.00	0.272
7	23.00	0.317
7	26.00	0.362
7	29.00	0.408
7	32.00	0.453
7	35.00	0.498
7	38.00	0.540
7	41.00	0.590
7.625	24.00	0.300

OD (inch)	T&C Nominal linear mass (lb/ft)	Wall Thickness (inch)
7.625	26.40	0.328
7.625	29.70	0.375
7.625	33.70	0.430
7.625	39.00	0.500
7.625	42.80	0.562
7.625	45.30	0.595
8.625	24.00	0.264
8.625	28.00	0.304
8.625	32.00	0.352
8.625	36.00	0.400
8.625	40.00	0.450
8.625	44.00	0.500
9.625	32.30	0.312
9.625	36.00	0.352
9.625	40.00	0.395
9.625	43.50	0.435
9.625	47.00	0.472
9.625	53.50	0.545
9.625	58.40	0.595
10.75	32.75	0.279
10.75	40.50	0.350
10.75	45.50	0.400
10.75	51.00	0.450
10.75	55.50	0.495
10.75	60.70	0.545
10.75	65.70	0.595
11.75	42.00	0.333
11.75	47.00	0.375
11.75	54.00	0.435
11.75	60.00	0.489
13.375	48.00	0.330
13.375	54.50	0.380
13.375	61.00	0.430
13.375	68.00	0.480
13.375	72.00	0.514

Grades
- API 5CT: H40, J55, N80, L80, L80-D10, P110
- API 5CT Monogrammed Proprietary: N80HC, L80HC, L80 EHC, P110 HC, P110 EHC, P110 HSCY
- Proprietary (no API Monogram): B-80, B90, Borusan-K55HC, B-110CY,

- End finish options*: PE, STC, LTC, BTC, P110CY
- Please contact our sales department for premium and semi-premium connections availability

ERW LINE PIPES

Sizes

Outside Diameter	Wall Thickness	Length
21,3 mm - 339,7 mm	2,8 mm - 12,7 mm*	6,00 m - 18,30 m
1/2'' - 13 3/8''	0.109" - 0.500"	19,68 ft - 60,04 ft

Please ask for shorter lengths
* For US mill up to 15,88 mm available

Production Standards & Material Qualities

Line Pipe	
API 5L, PSL 1, PSL 2	A, B, X42, X46, X52, X56, X60, X65, X70
CSA Z 245.1	Gr 241-Gr 359
EN ISO 3183	L245-L485 (N, M, NE, ME)
SI 530	Grade B

Tests & Certificates

- Visual and Dimensional Inspection
- Mechanical Tests:
  Tensile, Flattening, Expanding, Bending
  Weld Ductility, Fracture Toughness, PP, PE Testing
- Metallographic Examination
  Purity Analysis
- Chemical Analysis
- Hydrostatic Test
- Non Destructive Inspection:
  Eddy Current, Ultrasonic Test (Weld Check)
  Ultrasonic (full body, optional)
- Mill Test Certificates
  Acc. to EN 10204 2.1; 2.2; 3.1; 3.2
- NDT Standards
  UT (EN ISO 10893-11 Level U2), ET (EN ISO 10893-2 Level E2), API, EN ISO 3183, CSA Z.245.1

Threading

114.3 mm≤OD≤323.9 mm: API 5L
(Line Pipe according to API 5B)

Finishing Operations

Plain End-Square cut or bevelled / Zaplok
Black self colored / uncoated
Mill protective coating (black varnish) on outside surface
Epoxy lining and coating (AWWA C210), API RP5L2
3 Layer PE coating (DIN 30670, ISO 21809-1)
3 Layer PP coating (DIN 30678, ISO 21809-1)

Heat Treatment

21.3 mm≤OD≤88.9 mm: full body
114.3 mm≤OD≤323.9 mm: weld seam
21.3 mm≤OD≤168,3 mm: off-line heat treatment.

Production Range

OD		Wall Thickness (mm & inch)																						
mm	mm	2.8	3.0	3.2	3.6	3.68	3.7	4.0	4.5	5.1	5.2	6	6.6	7	7.1	8.1	8.4	8.6	9.0	9.5	10.0	11	12	12.7
	inch	0.109	0.113	0.133	0.140	0.145	0.147	0.154	0.179	0.200	0.203	0.237	0.258	0.277	0.280	0.318	0.331	0.337	0.354	0.375	0.394	0.432	0.472	0.500
21.3	1/2	1.28	1.35	1.43	1.57	1.60	1.61	1.71																
26.9	3/4	1.66	1.77	1.87	2.07	2.11	2.12	2.26	2.49															
33.7	1	2.13	2.27	2.41	2.67	2.72	2.74	2.93	3.24	3.60											up to X 52			
42.4	1 1/4	2.73	2.91	3.09	3.44	3.51	3.53	3.79	4.21	4.69	4.77										up to X 60			
48.3	1 1/2	3.14	3.35	3.56	3.97	4.05	4.07	4.37	4.86	5.43	5.53										up to X 65			
60.3	2 3/8	3.97	4.24	4.51	5.03	5.14	5.16	5.55	6.19	6.94	7.07										up to X 70			
73	2 7/8	4.85	5.18	5.51	6.16	6.29	6.32	6.81	7.60	8.54	8.69	9.91	10.81	11.39	11.54									
88.9	3 1/2	5.95	6.35	6.76	7.57	7.73	7.77	8.37	9.37	10.54	10.73	12.27	13.39	14.14	14.32									
114.3	4 1/2		8.23	8.77	9.83	10.04	10.09	10.88	12.18	13.73	13.99	16.02	17.53	18.52	18.77	21.21	21.94	22.42	23.37	24.55				
141.3	5 9/16		10.23	10.90	12.22	12.49	12.55	13.54	15.18	17.13	17.45	20.02	21.92	23.18	23.50	26.61	27.53	28.14	29.36	30.88	32.38			
168.3	6 5/8			13.03	14.62	14.94	15.02	16.21	18.18	20.53	20.91	24.01	26.32	27.84	28.22	32.00	33.12	33.87	35.36	37.20	39.04	42.67		
219.1	8 5/8				19.13	19.55	19.65	21.22	23.81	26.91	27.43	31.53	34.59	36.61	37.12	42.15	43.65	44.64	46.63	49.10	51.56	56.45	61.29	64.64
273	10 3/4							26.53	29.80	33.69	34.34	39.51	43.36	45.92	46.56	52.91	54.81	56.07	58.59	61.73	64.86	71.07	77.24	81.52
323.9	12 3/4							31.55	35.44	40.09	40.87	47.04	51.64	54.70	55.47	63.08	65.35	66.87	69.89	73.65	77.41	84.88	92.30	97.46
339.7	13 3/8								37.20	42.08	42.89	49.37	54.21	57.43	58.23	66.24	68.63	70.22	73.40	77.36	81.30	89.16	96.97	102.41

SPIRALLY WELDED LINE PIPES

Sizes

Outside Diameter	Wall Thickness	Length
508 mm - 3.048 mm	5,16 mm - 25,4 mm	Single lengths up to 24,50 m*
20'' - 120''	0,203'' - 1''	

* For pilling pipes single lengths up to 55 m

Production Standards & Material Qualities

API 5L	PSL1 - PSL2 GRA - X80 (N, M)	CSA Z245.1 : Requirement of category I, II, III
ISO 3183	L555 - X80 (N, M, ME)	

Coating Standards

- Abrasion Resistant Overlay (ARO) OD Coating: API 5L7, CSA Z245.20, NACE RP 0394, AWWA C213
- FBE (Fusion Bonded Epoxy) OD Coating: API 5L7, CSA Z245.20, NACE RP 0394, AWWA C213
- Polyethylene OD Coating: DIN 30670, TS 5139, NF A 49-710, UNI 9099, EN ISO 21809-1
- Polypropylene OD Coating: DIN 30678, NF A 49-711, EN ISO 21809-1
- Flowcoat Epoxy ID Coating: API RP 5L2, EN 10301
- Solvent Free Epoxy (SFE) ID Coating: AWWA C 210
- Glass fibre reinforced plastic GRP OD Coating

Quality Certificates

- API 5L
- API Q1
- ISO9001
- ISO14001
- ISO45001
- EN ISO/IEC 17025
- EN ISO 3183

Production Range

OD	Wall Thickness (mm & inch)																							
mm	mm	4.78	5.16	5.56	6.35	7.14	7.92	8.74	9.52	10.31	11.13	11.91	12.70	13.49	14.27	15.00	16.66	17.48	18.26	19.05	20.62	22.23	23.83	25.40
	inch	0.188	0.203	0.219	0.250	0.281	0.312	0.344	0.375	0.406	0.438	0.469	0.500	0.531	0.562	0.591	0.656	0.688	0.719	0.750	0.812	0.875	0.938	1
508	20																							
559	22																							
610	24																							
660	26																							
711	28																							
762	30																							
813	32																							
864	34																							
914	36																							
965	38																							
1.016	40																							
1.067	42																							
1.118	44																							
1.168	46																							
1.219	48																							
1.270	50																							
1.321	52																							
1.372	54																							
1.422	56																							
1.524	60																							
1.626	64																							
1.676	66																							
1.727	68																							
1.829	72																							
2.032	80																							
2.083	82																							
2.235	88																							
2.540	100																							
2.794	110																							
3.048	120																							

up to 55 meter
up to 24.5 meter
Min. length 8 meters

TUBES FOR PRESSURE PURPOSE / BOILER TUBES

Sizes

Outside Diameter	Wall Thickness	Length
21,3 mm - 339,7mm	2,0 mm - 12,7 mm	5,00 m - 18,30 m
1/2'' - 13 3/8''	0,079'' - 0,500''	16,40 ft - 60 ft

Please ask for shorter lengths.

Finishing Operations

- Plain End-Square cut or bevelled
- Black self colored/uncoated
- Surface protective coating (black varnished)

Production Standards & Material Qualities

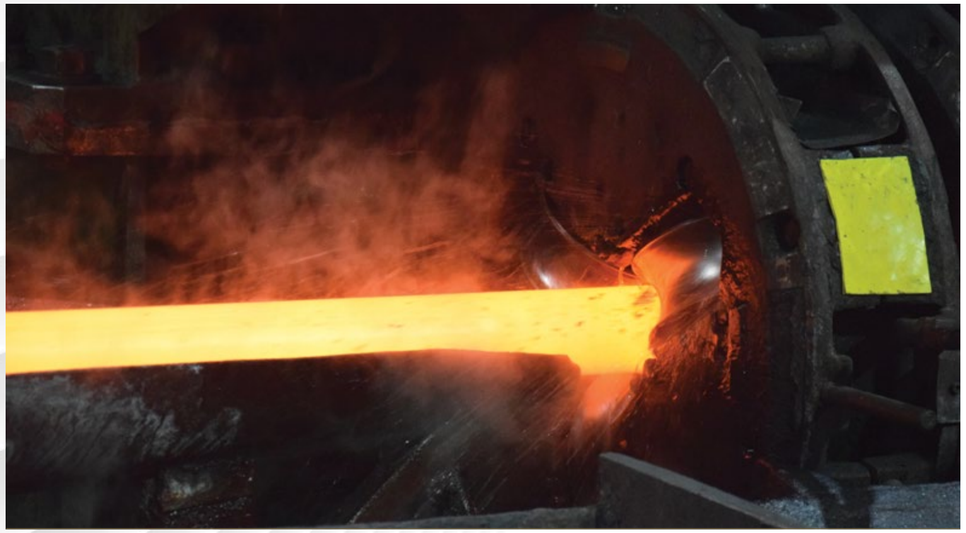
ASTM A 178	GrA, GrC, GrD
EN 10217-1 (BS 3059 Part 1)	P195 TR1/TR2, P235 TR1/TR2, P265 TR1/TR2
EN 10217-2 (BS 3059 Part 2)	P195 GH, P235 GH, P265 GH
EN 10217-3	P355 N, P355 NH

Quality Certificates

AD-2000 WO, AD-2000 W4, PED

NDT Standards

UT (EN ISO 10893-11), ET (EN ISO 10893-2),
UT (EN ISO 10893-8)



Tests & Certificates

- Visual and Dimensional Inspection
- Mechanical Tests:
  - Tensile Test, Flattening Test, Flaring Test
  - Expanding Test
- Metallographic Examination
- Chemical Analysis
- Hydrostatic Test
- Non Destructive Inspection:
  - In-Line Ultrasonic (weld check)
  - Eddy Current
- Mill Test Certificates

Acc. to EN 10204 2.1; 2.2; 3.1; 3.2
PED Certifed-Pressure Equipment Directive 2014/68/eu Certified

Production Range

OD	Wall Thickness (mm)																								
mm	2.0	2.3	2.7	2.9	3.0	3.2	3.4	3.6	3.8	4.0	4.2	4.5	4.7	5.0	5.2	5.4	5.5	6.0	6.5	7.0	7.5	8.0	8.5	9.0	9.5	10.0
21.3																										
21.3<D<23																										
23.0																										
23.<D<25.0																										
25.0																										
25.0<D<26.9																										
26.9																										
26.9<D<28.0																										
28.0																										
28.0<D<30.0																										
30.0																										
30.0<D<32.0																										
32.0																										
32.0<D<33.7																										
33.7																										
33.7<D<38.0																										
38.0																										
38.0<D<42.4																										
42.4																										
42.4<D<45.0																										
45.0																										
45.0<D<48.3																										
48.3																										
48.3<D<51.0																										
51.0																										
51.0<D<54.0																										
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57.0<D<60.3																										
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63.5																										
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67.0																										
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70.0																										
70.0<D<73.0																										
73.0																										
73<D<76.1																										
76.1																										
76.1<D<80.0																										
80.0																										
80.0<D<82.5																										
82.5																										
82.5<D<85.0																										
85.0																										
85.0<D<88.9																										
88.9																										

Please contact our sales department for tolerances.

LSAW LINE PIPES

Sizes

Outside Diameter	Wall Thickness	Length
610 mm - 1524 mm	9,5 mm - 38,1 mm	Single lengths up to 12 m
24" – 60"	0,375" – 1,500"	Double jointed lengths up to 24 m

Production Standards & Material Qualities

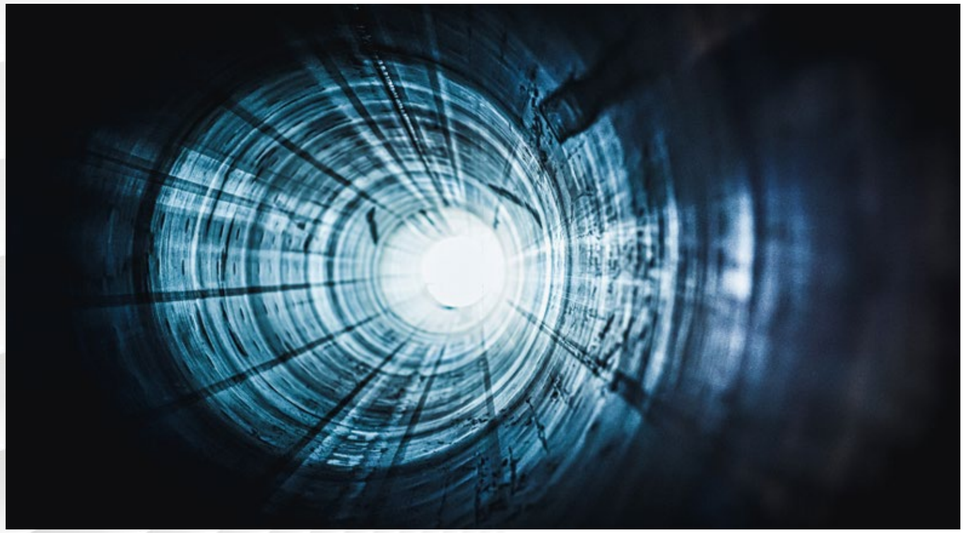
API 5L PSL1 - PSL2 GRA - X80 (M)
CSA Z245.1 : Requirement of category I, II, III

Coating Standards

- Abrasion Resistant Overlay (ARO) OD Coating: CSA Z245.20, NACE RP 0394
- FBE (Fusion Bonded Epoxy) OD Coating: CSA Z245.20, NACE RP 0394
- Flowcoat Epoxy ID Coating: API RP 5L2

Quality Certificates

- API 5L
- API Q1
- ISO9001



Production Range

Outside diameter	Wall Thickness (mm & inch)										
mm	mm	9.5	12.7	15.9	19.1	22.2	25.4	28.6	31.8	34.9	38.1
mm	inch	0.374	0.500	0.625	0.750	0.875	1.000	1.125	1.250	1.375	1.500
1524	60										
1473	58										
1422	56										
1372	54										
1321	52										
1270	50										
1219	48										
1168	46										
1118	44										
1067	42										
1016	40										
965	38										
914	36										
864	34										
813	32										
762	30										
711	28										
660	26										
610	24										

- HIGH STRENGTH UP TO X80 / L555
- SOUR SERVICE UP TO X70 / L485
- HEAVY WALL UP TO 1.5"

WATER TRANSMISSION

ERW WATER PIPES

Sizes

Outside Diameter	Wall Thickness	Length
21,3 mm - 339,7 mm	2,0 mm - 12,7 mm	3,00 m - 18,30 m
1/2'' - 13 3/8''	0,079'' - 0,500''	9,8 ft - 60 ft

Production Standards & Material Qualities

- Production Norms
  EN 10224, EN 10255, ISO 65, ASTM A 53, ASTM A 795, ASTM A 589
- Galvanizing Norms
  EN 10240, EN ISO 1461 (BS 729), ASTM A 53, NFA 49-700, UNI 5745
- Production Standard for Threading and Coupling (1/2''- 6'')
  ISO 7/1, ANSI B.1.20.1, EN 10255
- Grooving (3/4''-12'') according to Victaulic Standard.
- Our medium series pipes can be guaranteed up to 25 bar operating pressure for water.
- Material Qualities
  DIN 17100 St 37, St 44, St 52
  EN 10025 S 195, S 235, S 275, S 355
  Gr A, Gr B

Production Range (EN 10255)

Outside Diameter	Nominal Bore		Wall Thickness (mm)									
(mm)	(mm)	(inch)	2,0	2,3	2,6	2,9	3,2	3,6	4,0	4,5	5,0	5,4
21,3	15	1/2	L2	L/L1	M		H					
26,9	20	3/4		L2/L1/L	M		H					
33,7	25	1			L2	L/L1	M		H			
42,4	32	1 1/4			L2	L/L1	M		H			
48,3	40	1 1/2				L2/L/L1	M		H			
60,3	50	2				L2	L/L1	M		H		
76,1	65	2 1/2					L2/L/L1	M		H		
88,9	80	3					L2/L	L1	M		H	
114,3	100	4						L2/L	L1	M		H
139,7	125	5								L	M	H
165,1	150	6								L	M	H

H Heavy Series
M Medium Series
L Light Series

Unit Weights for Black Plain End Pipes						
Outside Diameter (ich)	Outside Diameter (mm)	Unit Weights L Series (kg/mt)	Unit Weights L1 Series (kg/mt)	Unit Weights L2 Series (kg/mt)	Unit Weights M Series (kg/mt)	Unit Weights H Series (kg/mt)
1/2	21,30	1,08	1,08	0,95	1,21	1,44
3/4	26,90	1,40	1,39	1,38	1,56	1,87
1	33,70	2,20	2,20	1,98	2,41	2,93
11/4	42,40	2,82	2,82	2,54	3,10	3,79
11/2	48,30	3,25	3,24	3,23	3,56	4,37
2	60,30	4,51	4,49	4,08	5,03	6,19
21/2	76,10	5,75	5,73	5,71	6,42	7,93
3	88,90	6,76	7,55	6,72	8,36	10,30
4	114,30	9,83	10,80	9,75	12,20	14,50
5	139,70	15,00			16,60	17,90
6	165,10	17,80			19,80	21,30

Tests & Certificates

- Visual and Dimensional Inspection
- Leak tightness testing: Hydrostatic Test, Eddy Current Test
- Destructive Tests: Flattening, Bending
- Mechanical Tests
- Chemical Analysis
- Metallographic Examination
- Others as required by the standards
- Ultrasonic weld seam test if applicable for gas pipes
- Mill Test Certificates
  - Issued upon request according to EN 10204 2.1; 2.2; 3.1; 3.2
- NDT Standards:
  - ET (EN ISO 10893-2), ET (ASTM E309)
- UKCA Certification

Finishing Operations

- Plain end (square cut or bevelled)
- Threaded and coupled (Max OD: 168.3 mm)
- Grooved
- Outside protective coating (black or red vanished)
- Temporary oil application
  (Other colors are available upon request.)
- Hot dip galvanizing
- PE, PP Coating
- Bare Pipe (Uncoated)
- Temporary oil application

TABLE X2.2 Dimensions, Weights (Masses) per Unit Length, and Test Pressures for Plain-End Pipe

NPS Designator	DN Designator	Specified Outside Diameter, in (mm)	Specified Wall Thickness, in (mm)	Nominal Weight (Mass) per Unit Length, Plain End,lb/ft (kg/m)	Weight Class	Schedule No.	Test Pressure, psi (kPa)	
							Grade A	Grade B
1/2	15	0.840 (21.3)	0.109 (2.77)	0.85 (1.27)	STD	40	700 (4800)	700 (4800)
			0.147 (3.73)	1.09 (1.62)	XS	80	850 (5900)	850 (5900)
			0.188 (4.78)	1.31 (1.95)	...	160	900 (6200)	900 (6200)
			0.294 (7.47)	1.72 (2.55)	XXS	...	1000 (6900)	1000 (6900)
3/4	20	1.050 (26.7)	0.113 (2.87)	1.13 (1.69)	STD	40	700 (4800)	700 (4800)
			0.154 (3.91)	1.48 (2.20)	XS	80	850 (5900)	850 (5900)
			0.219 (5.56)	1.95 (2.90)	...	160	950 (6500)	950 (6500)
			0.308 (7.82)	2.44 (3.64)	XXS	...	1000 (6900)	1000 (6900)
1	25	1.315 (33.4)	0.133 (3.38)	1.68 (2.50)	STD	40	700 (4800)	700 (4800)
			0.179 (4.55)	2.17 (3.24)	XS	80	850 (5900)	850 (5900)
			0.250 (6.35)	2.85 (4.24)	...	160	950 (6500)	950 (6500)
			0.358 (9.09)	3.66 (5.45)	XXS	...	1000 (6900)	1000 (6900)
1 1/4	32	1.660 (42.2)	0.140 (3.56)	2.27 (3.39)	STD	40	1200 (8300)	1300 (9000)
			0.191 (4.85)	3.00 (4.47)	XS	80	1800 (12400)	1900 (13000)
			0.250 (6.35)	3.77 (5.61)	...	160	1900 (13100)	2000 (13800)
			0.382 (9.70)	5.22 (7.77)	XXS	...	2200 (15200)	2300 (15900)
1 1/2	40	1.900 (48.3)	0.145 (3.68)	2.72 (4.05)	STD	40	1200 (8300)	1300 (9000)
			0.200 (5.08)	3.63 (5.41)	XS	80	1800 (12400)	1900 (13100)
			0.281 (7.14)	4.86 (7.25)	...	160	1950 (13400)	2050 (14100)
			0.400 (10.16)	6.41 (9.56)	XXS	...	2200 (15200)	2300 (15900)
2	50	2.375(60.3)	0.154 (3.91)	3.66 (5.44)	STD	40	2300 (15900)	2500 (17200)
			0.218 (5.54)	5.03 (7.48)	XS	80	2500 (17200)	2500 (17200)
			0.344 (8.74)	7.47 (11.11)	...	160	2500 (17200)	2500 (17200)
			0.436 (11.07)	9.04 (13.44)	XXS	...	2500 (17200)	2500 (17200)
2 1/2	65	2.875 (73.0)	0.203 (5.16)	5.80 (8.63)	STD	40	2500 (17200)	2500 (17200)
			0.276 (7.01)	7.67 (11.41)	SXS	80	2500 (17200)	2500 (17200)
			0.375 (9.52)	10.02 (14.90)	...	160	2500 (17200)	2500 (17200)
			0.552 (14.02)	13.71 (20.39)	XXS	...	2500 (17200)	2500 (17200)
3	80	3.500 (88.9)	0.125 (3.18)	4.51 (6.72)	...	...	1290 (8900)	1500 (1000)
			0.156 (3.96)	5.58 (8.29)	...	...	1600 (11000)	1870 (12900)
			0.188 (4.78)	6.66 (9.92)	...	...	1930 (13330)	2260 (15600)
			0.216 (5.49)	7.58 (11.29)	STD	40	2220 (15300)	2500 (17200)
			0.250 (6.35)	8.69 (12.93)	...	...	2500 (17200)	2500 (17200)
			0.281 (7.14)	9.67 (14.40)	...	...	2500 (17200)	2500 (17200)
			0.300 (7.62)	10.26 (15.27)	XS	80	2500 (17200)	2500 (17200)
			0.438 (11.13)	14.34 (21.35)	...	160	2500 (17200)	2500 (17200)
			0.600 (15.24)	18.60 (27.68)	XXS	...	2500 (17200)	2500 (17200)
3 1/2	90	4.000 (101.6)	0.125 (3.18)	5.18 (7.72)	...	...	1120 (7700)	1310 (19000)
			0.156 (3.96)	6.41 (9.53)	...	...	1400 (6700)	1640 (11300)
			0.188 (4.78)	7.66 (11.41)	...	...	1690 (11700)	1970 (13600)
			0.226 (5.74)	9.12 (13.57)	STD	40	2030 (14000)	2370 (16300)
			0.250 (6.35)	10.02 (14.92)	...	...	2250 (15500)	2500 (17200)
			0.281(7.14)	11.17 (16.63)	...	...	2500 (17200)	2500 (17200)
			0.318 (8.08)	12.52 (18.63)	XS	80	2800 (19300)	2800 (19300)
4	100	4.500 (114.3)	0.125 (3.18)	5.85 (8.71)	...	...	1000 (6900)	1170 (8100)
			0.156 (3.96)	7.24 (10.78)	...	...	1250 (8600)	1460 (10100)
			0.188 (4.78)	8.67 (12.91)	...	...	1500 (10300)	1750 (12100)
			0.219 (5.56)	10.02 (14.91)	...	...	1750 (12100)	2040 (14100)
			0.237 (6.02)	10.80 (16.07)	STD	40	1900 (13100)	2210 (15200)
			0.250 (6.35)	11.36 (16.90)	...	...	2000 (13800)	2330 (16100)
			0.281 (7.14)	12.67 (18.87)	...	...	2250 (15100)	2620 (18100)
			0.312 (7.92)	13.97 (20.78)	...	...	2500 (17200)	2800 (19300)
			0.337 (8.56)	15.00 (22.32)	XS	80	2700 (18600)	2800 (19300)
			0.438 (11.13)	19.02 (28.32)	...	120	2800 (19300)	2800 (19300)
			0.531 (13.49)	22.53 (33.54)	...	160	2800 (19300)	2800 (19300)
			0.674(17.12)	27.57 (41.03)	XXS	...	2800 (19300)	2800 (19300)
5	125	5.563 (141.3)	0.156 (3.96)	9.02 (13.41)	...	...	1010 (7000)	1180 (8100)
			0.188 (4.78)	10.80 (16.09)	...	...	1220 (8400)	1420 (9800)
			0.219 (5.56)	12.51 (18.61)	...	...	1420 (9800)	1650 (11400)
			0.258 (6.55)	14.63 (21.77)	STD	40	1670 (11500)	1950 (13400)
			0.281 (7.14)	15.87 (23.62)	...	...	1820 (12500)	2120 (14600)
			0.312 (7.92)	17.51 (26.05)	...	...	2020 (13900)	2360 (16300)
			0.344 (8.74)	19.19 (28.57)	...	...	2230 (15400)	2600 (17900)
			0.375 (9.52)	20.80 (30.94)	XS	80	2430 (16800)	2800 (19300)
			0.500 (12.70)	27.06 (40.28)	...	120	2800 (19300)	2800 (19300)
			0.625 (15.88)	32.99 (49.11)	...	160	2800 (19300)	2800 (19300)
			0.750 (19.05)	38.59 (57.43)	XXS	...	2800 (19300)	2800 (19300)
6	150	6.625 (168.3)	0.188 (4.78	12.94 (19.27)	...	...	1020 (7000)	1190 (8200)
			0.219 (5.56)	15.00 (22.31)	...	...	1190 (8200)	1390 (9600)
			0.250 (6.35)	17.04 (25.36)	...	...	1360 (9400)	1580 (10900)
			0.280 (7.11)	18.99 (28.26)	STD	40	1520 (10500)	1780 (12300)
			0.312 (7.92)	21.06 (31.32)	...	...	1700 (11700)	1980 (13700)
			0.344 (8.74)	23.10 (34.39)	...	...	1870 (12900)	2180 (15000)
			0.375 (9.52)	25.05 (37.28)	...	...	2040 (14100)	2380 (16400)
			0.432 (10.97)	28.60 (42.56)	XS	80	2350 (16200)	2740 (18900)
			0.562 (14.27)	36.43 (54.20)	...	120	2800 (19300)	2800 (19300)
			0.719 (18.26)	45.39 (67.56)	...	160	2800 (19300)	2800 (19300)
			0.864 (21.95)	53.21 (79.22)	XXS	...	2800 (19300)	2800 (19300)
8	200	8.625 (219.1)	0.188 (4.78)	16.96 (25.26)	...	...	780 (5400)	920 (6300)
			0.203 (5.16)	18.28 (27.22)	...	...	850 (5900)	1000 (6900)
			0.219 (5.56)	19.68 (29.28)	...	...	910 (6300)	1070 (7400)
			0.250 (6.35)	22.38 (33.31)	...	20	1040 (7200)	1220 (8400)
			0.277 (7.04)	24.72 (36.31)	...	30	1160 (7800)	1350 (9300)
			0.312 (7.92)	27.73 (41.24)	...	...	1300 (9000)	1520 (10500)
			0.322 (8.18)	28.58 (42.55)	STD	40	1340 (9200)	1570 (10800)
			0.344 (8.74)	30.45 (45.34)	...	...	1440 (9900)	1680 (11600)
			0.375 (9.52)	33.07 (49.20)	...	...	1570 (10800)	1830 (12600)
			0.406 (10.31)	35.67 (53.08)	...	60	1700 (11700)	2000 (13800)
			0.438 (11.13)	38.33 (57.08)	...	...	1830 (12600)	2130 (14700)
			0.500 (12.70)	43.43 (64.64)	XS	80	2090 (14400)	2430 (16800)
			0.594 (15.09)	51.00 (75.92)	...	100	2500 (17200)	2800 (19300)
			0.719 (18.26)	60.77 (90.44)	...	120	2800 (19300)	2800 (19300)
			0.812 (20.62)	67.82 (100.92)	...	140	2800 (19300)	2800 (19300)
			0.875 (22.22)	72.49 (107.88)	XXS	...	2800 (19300)	2800 (19300)
			0.906 (23.01)	74.76 (111.27)	...	160	2800 (19300)	2800 (19300)
10	250	10.750 (273.0)	0.188 (4.78)	21.23 (31.62)	...	...	630 (4300)	730 (5000)
			0.203 (5.16)	22.89 (34.08)	...	...	680 (4700)	800 (5500)
			0.219 (5.56)	24.65 (36.67)	...	...	730 (5000)	860 (5900)
			0.250 (6.35)	28.06 (41.75)	...	20	840 (5800)	980 (6800)
			0.279 (7.09)	31.23 (46.49)	...	...	930 (6400)	1090 (7500)
			0.307 (7.80)	34.27 (51.01)	...	30	1030 (7100)	1200 (8300)
			0.344 (8.74)	38.27 (56.96)	...	...	1150 (7900)	1340 (9200)
			0.365 (9.27)	40.52 (60.29)	STD	40	1220 (8400)	1430 (9900)
			0.438 (11.13)	48.28 (71.87)	...	...	1470 (10100)	1710 (11800)
			0.500 (12.70)	54.79 (81.52)	XS	60	1670 (11500)	1950 (13400)
			0.594 (15.09)	64.49 (95.97)	...	80	1990 (13700)	2320 (16000)
			0.719 (18.26)	77.10 (114.70)	...	100	2410 (16600)	2800 (19300)
			0.844 (21.44)	89.38 (133.00)	...	120	2800 (19300)	2800 (19300)
			1.000 (25.40)	104.23 (155.09)	XXS	140	2800 (19300)	2800 (19300)
			1.125 (28.57)	115.75 (172.21)	...	160	2800 (19300)	2800 (19300)
12	300	12.750 (323.8)	0.203 (5.16)	27.23 (40.55)	...	...	570 (3900)	670 (4600)
			0.219 (5.56)	29.34 (43.63)	...	...	620 (4300)	720 (5000)
			0.250 (6.35)	33.41 (49.71)	...	20	710 (4900)	820 (5700)
			0.281 (7.14)	37.46 (55.75)	...	...	790 (5400)	930 (6400)
			0.312 (7.92)	41.48 (61.69)	...	...	880 (6100)	1030 (7100)
			0.330 (8.38)	43.81 (65.18)	...	30	930 (6400)	1090 (7500)
			0.344 (8.74)	45.62 (67.90)	...	...	970 (6700)	1130 (7800)
			0.375 (9.52)	49.61 (73.78)	STD	...	1060 (7300)	1240 (8500)
			0.406 (10.31)	53.57 (79.70)	...	40	1150 (7900)	1340 (9200)
			0.438 (11.13)	57.65 (85.82)	...	...	1240 (8500)	1440 (9900)
			0.500 (12.70)	65.48 (97.43)	XS	...	1410 (9700)	1650 (11400)
			0.562 (14.27)	73.22 (108.92)	...	60	1590 (11000)	1850 (12800)
			0.688 (17.48)	88.71 (132.04)	...	80	1940 (13400)	2270 (15700)
			0.844 (21.44)	107.42 (159.86)	...	100	2390 (16500)	2780 (19200)
			1.000 (25.40)	125.61 (186.91)	XXS	120	2800 (19300)	2800 (19300)
			1.125 (28.57)	139.81 (208.00)	...	140	2800 (19300)	2800 (19300)
			1.312 (33.32)	160.42 (238.68)	...	160	2800 (19300)	2800 (19300)

A795/A795M

TABLE 1 Dimensions, Weights, and Test Pressure For Light -Weight Fire Protection Pipe - Schedule

NPS Designator	DN Designator	Outside Diameter		Nominal Wall Thickness		Weight Plain End		Electric-Resistance-Welded		
		in.	mm	in.	mm	lb/ft	kg/m	kPa	kPa	kPa
3/4	20	1.050	(26.7)	0.083	(2.11)	0.86	(1.28)	(3400)	700	(4800)
1	25	1.315	(33.4)	0.109	(2.77)	1.41	(2.09)	(3400)	700	(4800)
1 1/4	32	1.660	(42.2)	0.109	(2.77)	1.81	(2.69)	(3400)	1000	(6900)
1 1/2	40	1.900	(48.3)	0.109	(2.77)	2.09	(3.11)	(3400)	1000	(6900)
2	50	2.375	(60.3)	0.109	(2.77)	2.64	(3.93)	(3400)	1000	(6900)
2 1/2	65	2.875	(73.0)	0.120	(3.05)	3.53	(5.26)	(3400)	1000	(6900)
3	80	3.500	(88.9)	0.120	(3.05)	4.34	(6.46)	(3400)	1000	(6900)
3 1/2	90	4.000	(101.6)	0.120	(3.05)	4.98	(7.41)	(3400)	1200	(8300)
4	100	4.500	(114.3)	0.120	(3.05)	5.62	(8.37)	(3400)	1200	(8300)
5	125	5.563	(141.3)	0.134	(3.40)	7.78	(11.58)	B	1200	(8300)
6	150	6.625	(168.3)	0.134	(3.40)	9.30	(13.85)	B	1000	(6900)
8	200	8.625	(219.1)	0.188C	(4.78)	16.96	(25.26)	B	800	(5500)
10	250	10.750	(273.1)	0.188C	(4.78)	21.23	(31.62)	B	700	(4800)

TABLE 2 Dimensions,Weights, Test Pressures For Standard-Weight Fire Protection Pipe - Schedule 30 and Schedule 40

NPS Designator	DN Designator	Specified Outside Diameter		Nominal Wall Thickness		Weight Plain End		Weight Threaded and Coupled		Electric - Resistance - Welded		
		in.	mm	in.	mm	lb/ft	kg/m	lb/ft	kg/m	kPa	kPa	kPa
1/2	15	0.840	(21.3)	0.109	(2.77)	0.85	(1.27)	0.85	(1.27)	(4800)	700	(4800)
3/4	20	1.050	(26.7)	0.113	(2.87)	1.13	(1.69)	1.13	(1.68)	(4800)	700	(4800)
1	25	1.315	(33.4)	0.133	(3.38)	1.68	(2.50)	1.68	(2.50)	(4800)	700	(4800)
1 1/4	32	1.660	(42.2)	0.140	(3.56)	2.27	(3.39)	2.28	(3.40)	(6900)	1000	(6900)
1 1/2	40	1.900	(48.3)	0.145	(3.68)	2.72	(4.05)	2.73	(4.07)	(6900)	1000	(6900)
2	50	2.375	(60.3)	0.154	(3.91)	3.66	(5.45)	3.69	(5.50)	(6900)	1000	(6900)
2 1/2	65	2.875	(73.0)	0.203	(5.16)	5.80	(8.64)	5.83	(8.68)	(6900)	1000	(6900)
3	80	3.500	(88.9)	0.216	(5.49)	7.58	(11.29)	7.62	(11.35)	(6900)	1000	(6900)
3 1/2	90	4.000	(101.6)	0.226	(5.74)	9.12	(13.58)	9.21	(13.71)	(8300)	1200	(8300)
4	100	4.500	(114.3)	0.237	(6.02)	10.80	(16.09)	10.91	(16.25)	(8300)	1200	(8300)
5	125	5.563	(141.3)	0.258	(6.55)	14.63	(21.79)	14.82	(22.07)	C	1200	(8300)
6	150	6.625	(168.3)	0.280	(7.11)	18.99	(28.29)	19.20	(28.60)	C	1200	(8300)
8	200	8.625	(219.1)	0.277A	(7.04)	24.72	(36.82)	25.57	(38.09)	C	1200	(8300)
10	250	10.750	(273.1)	0.307A	(7.80)	34.27	(51.05)	35.78	(53.29)	C	1000	(6900)

FIRESPRINKLER PIPES - FIRESIST+

Firesist+ FIRE PROTECTION SYSTEMS

Sizes

Outside Diameter	Wall Thickness
21,3 mm - 323,9 mm	2,0 mm - 12,70 mm
1/2” - 12,751”	0,079” - 0,500’’

Technical Specifications

- Superior epoxy coating up to 250 microns
- Corrosivity category C4-M certified
- DEKRA certified
- Available in Gray (RAL 7012)
- Roll grooved, Threaded & Coupled or Beveled pipe end
- Eliminates field painting
- Widest range of UL and FM approval, CE certified
- Produced according to ASTM and EN standards
- Pressure ratings up to 300 psi
- Size range between 1/2” -12”
- Reliable in all sizes
- Inner weld seam removal and custom length upon request
- Tight tolerances, consistent roundness and straightness

FIRESPRINKLERS PIPES - FIRESIST®

Sizes

Outside Diameter	Wall Thickness
21,3 mm - 323,9 mm	2,0 mm - 12,70 mm
1/2” - 12,751”	0,079” - 0,500’’

Technical Specifications

- FM approved
- UL/C-UL Listed
- NFS certified
- Tight tolerances
- Consistent wall thickness, straightness, roundness
- CE, PED certified
- Pressure tested
- Reliable high steel quality
- Galvanised sandblasted varnished coated black, red (RAL 3000, RAL 3002, RAL 3009) or grey (RAL 7012), Signal Blue (Ral 5005), Moss Green (Ral 6005)
- Plain Ends, Grooved or Threaded & Coupled
- Custom length availability

ASTM & EN EASY FLOW NON THREADABLE LIGHTWALL

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	Weight (kg/m)	Weight (lb/ft)	UL	FM
Easy Flow Light Wall	33,7	1"	2,00	0,079	1,56	1,05		✓
	33,7	1"	2,60	0,102	1,99	1,34		✓
	42,4	1 1/4"	2,00	0,079	1,99	1,34		✓
	42,4	1 1/4"	2,30	0,091	2,27	1,53		✓
	42,4	1 1/4"	2,60	0,102	2,55	1,71		✓
	48,3	1 1/2"	2,00	0,079	2,28	1,53		✓
	48,3	1 1/2"	2,30	0,091	2,61	1,75		✓
	48,3	1 1/2"	2,60	0,102	2,93	1,97		✓
	60,3	1 1/2"	2,00	0,079	2,88	1,93		✓
	60,3	2"	2,60	0,102	3,70	2,49		✓
	60,3	2"	2,90	0,114	4,10	2,76		✓
	76,1	2 1/2"	2,18	0,086	3,97	2,67		✓
	76,1	2 1/2"	2,60	0,102	4,71	3,17		✓
	76,1	2 1/2"	2,90	0,114	5,23	3,52		✓
	88,9	3"	2,36	0,093	5,04	3,38		✓
	88,9	3"	2,90	0,114	6,15	4,13		✓
	88,9	3"	3,20	0,126	6,76	4,54		✓
	114,3	4"	2,60	0,102	7,16	4,81		✓
	114,3	4"	3,60	0,142	9,83	6,60		✓
	139,7	5"	3,40	0,134	11,43	7,68		✓
SCH 7	33,4	1"	2,00	0.079	1,55	1,04	✓	✓
	42,2	1 1/4"	2,00	0.079	1,98	1,33	✓	✓
	48,3	1 1/2"	2,13	0.084	2,42	1,62	✓	✓
	60,3	2"	2,13	0.084	3,05	2,05	✓	✓
	73	2 1/2"	2,18	0.086	3,80	2,55	✓	✓
	88,9	3"	2,36	0.093	5,04	3,38	✓	
	114,3	4"	2,60	0.102	7,16	4,81	✓	✓
	141,3	5"	3,40	0.134	11,56	7,76	✓	
SCH 10	26,7	3/4"	2,11	0.083	1,28	0,86	✓	
	33,4	1"	2,77	0.109	2,09	1,41	✓	✓
	42,2	1 1/4"	2,77	0.109	2,69	1,81	✓	✓
	48,3	1 1/2"	2,77	0.109	3,11	2,09	✓	✓
	60,3	2"	2,77	0.109	3,93	2,64	✓	✓
	73	2 1/2"	3,05	0,120	5,26	3,53	✓	✓
	88,9	3"	3,05	0,120	6,46	4,34	✓	✓
	101,6	3 1/2"	3,05	0,120	7,41	4,98	✓	✓
	114,3	4"	3,05	0,120	8,37	5,62	✓	✓
	139,7	5 1/2"	3,6	0,142	12,08	8,12		✓
	141,3	5"	3,4	0.134	11,58	7,78	✓	✓
	168,3	6"	3,4	0.134	13,85	9,30	✓	✓
	219,1	8"	3,76	0.148	19,97	13,4	✓	✓
	219,1	8"	4,78	0.188	25,26	16,96	✓	✓
	273,1	10"	4,19	0.165	27,79	18,67	✓	✓
	273,1	10"	4,78	0.188	31,62	21,23	✓	✓
	323,8	12"	4,78	0.188	37,61	25,28		✓
SCH 30	33,4	1"	2,90	0,114	2,18	1,46		✓
	42,2	1 1/4"	2,97	0,117	2,87	1,93		✓
	48,3	1 1/2"	3,18	0,125	3,53	2,37		✓
	60,3	2"	3,18	0,125	4,48	3,00		✓
	73	2 1/2"	4,78	0,188	8,04	5,40		✓
	88,9	3"	4,78	0,188	9,92	6,65		✓
	101,6	3 1/2"	4,78	0,188	11,41	7,65		✓
	114,3	4"	4,78	0,188	12,91	8,66		✓
	141,3	5"	5,56	0,219	18,61	12,51		✓
	168,3	6"	5,56	0,219	22,31	15,00		✓
	219,1	8"	7,04	0,277	36,82	24,72		✓
	273,1	10"	7,8	0,307	51,05	34,27		✓
SCH 40	21,3	1/2"	2,77	0.109	1,27	0,85	✓	✓
	26,7	3/4"	2,87	0.113	1,69	1,13	✓	✓
	33,4	1"	3,38	0.133	2,50	1,68	✓	✓
	42,2	1 1/4"	3,56	0.140	3,39	2,27	✓	✓
	48,3	1 1/2"	3,68	0.145	4,05	2,72	✓	✓
	60,3	2"	3,91	0.154	5,45	3,66	✓	✓
	73	2 1/2"	5,16	0.203	8,64	5,80	✓	✓
	88,9	3"	5,49	0.216	11,29	7,58	✓	✓
	101,6	3 1/2"	5,74	0,226	13,58	9,12	✓	✓
	114,3	4"	6,02	0.237	16,09	10,80	✓	✓
	141,3	5"	6,55	0.258	21,79	14,63	✓	✓
	168,3	6"	7,11	0.280	28,29	18,99	✓	✓
	219,1	8"	8,18	0,322	45,34	30,45	✓	✓
	273,1	10"	9,27	0,365	60,29	40,52	✓	✓
SCH 80	21,3	1/2"	3,73	0.147	1,62	1,09		✓
	26,7	3/4"	3,91	0,154	2,20	1,48		✓
	33,4	1"	4,55	0,179	3,25	2,19		✓
	42,2	1 1/4"	4,85	0,191	4,49	3,03		✓
	48,3	1 1/2"	5,08	0,200	5,39	3,65		✓
	60,3	2"	5,54	0,218	7,55	5,08		✓
	73	2 1/2"	7,01	0,276	11,52	7,75		✓
	88,9	3"	7,62	0,300	15,39	10,35		✓
	101,6	3 1/2"	8,08	0,318	18,82	12,67		✓
	114,3	4"	8,56	0,337	22,60	15,20		✓
	141,3	5"	9,52	0,375	31,42	21,04		✓
	168,3	6"	10,97	0,432	43,05	28,88		✓
	219,1	8"	12,70	0,500	65,41	44,00		✓

ASTM FM & UL

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	UL	FM
EASYFLOW LIGHTWALL	33,7	1"	2	0,079		✓
	33,7	1"	2,60	0,102		✓
	42,4	1 1/4"	2,00	0,079		✓
	42,4	1 1/4"	2,30	0,091		✓
	42,4	1 1/4"	2,60	0,102		✓
	48,3	1 1/2"	2,00	0,079		✓
	48,3	1 1/2"	2,30	0,091		✓
	48,3	1 1/2"	2,60	0,102		✓
	60,3	1 1/2"	2,00	0,079		✓
	60,3	2"	2,60	0,102		✓
	60,3	2"	2,90	0,114		✓
	76,1	2 1/2"	2,18	0,086		✓
	76,1	2 1/2"	2,60	0,102		✓
	76,1	2 1/2"	2,90	0,114		✓
	88,9	3"	2,36	0,093		✓
	88,9	3"	2,90	0,114		✓
	88,9	3"	3,20	0,126		✓
	114,3	4"	2,60	0,102		✓
	114,3	4"	3,60	0,142		✓
	139,7	5"	3,40	0,134		✓

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	UL	FM
EN10255 Medium	21,3	1/2"	2,6	0,102		
	26,9	3/4"	2,6	0,102		
	33,7	1"	3,2	0,126		✓
	42,4	1 1/4"	3,2	0,126	✓	✓
	48,3	1 1/2"	3,2	0,126	✓	✓
	60,3	2"	3,6	0,142	✓	✓
	76,1	2 1/2"	3,6	0,142	✓	✓
	88,9	3"	4	0,157	✓	✓
	114,3	4"	4,5	0,177	✓	✓
	139,7	5"	5	0,197	✓	✓
	165,1	6"	5	0,197	✓	✓

	OD (mm)	OD (inch)	Wall Thickness (mm)	Wall Thickness (inch)	FM
EN10255 Heavy	21,3	1/2"	3,2	0,126	✓
	26,9	3/4"	3,2	0,126	✓
	33,7	1"	4	0,157	✓
	42,4	1 1/4"	4	0,157	✓
	48,3	1 1/2"	4	0,157	✓
	60,3	2"	4,5	0,177	✓
	76,1	2 1/2"	4,5	0,177	✓
	88,9	3"	5	0,197	✓
	114,3	4"	5,4	0,213	✓
	139,7	5"	5,4	0,213	✓
	165,1	6"	5,4	0,213	✓

WATER WELL CASING PIPES

Sizes

Outside Diameter	Wall Thickness	Length
33,4 mm - 323,9 mm	3,2 mm - 9,5 mm	6,00 m - 18,30 m
1,314'' - 12,751"	0,126'' - 0,374''	19,68 ft - 60 ft

Production Standards & Material Qualities

- ASTM A 589 Type I, II, III, IV Production Standard
- ASTM A 53
- Reliable High Steel Quality
- From Grade A or Grade B Material Quality
- Weldable
- Threadable

Finishing Operations

- Threaded up to 6"
- Hot Dip Galvanised up to 6"

Tests & Certificates

- Visual and Dimensional Inspection
- Leak tightness testing: Hydrostatic Test, Eddy Current Test
- Destructive Tests: Flattening, Bending
- Mechanical Tests
- Chemical Analysis
- Metallographic Examination
- Others as required by the standards
- Mill Test Certificates
  - Issued upon request according to EN 10204 2.1; 2.2; 3.1; 3.2
- NDT Standards:
  - ET (EN ISO 10893-2), ET (ASTM E309)
- Glass fibre reinforced plastic (GRP), OD Coating

Product Options

OD (inch)	OD (mm)	Wall Thickness (inch)	Wall Thickness (mm)
4 1/2''	114,3	0,237	6,02
5 1/2''	141,3	0,188	4,78
5 1/2''	141,3	0,258	6,55
6 5/8''	168,3	0,188	4,78
6 5/8''	168,3	0,219	5,56
6 5/8''	168,3	0,25	6,35
6 5/8''	168,3	0,28	7,11
8 5/8''	219,1	0,219	5,56
8 5/8''	219,1	0,25	6,35
8 5/8''	219,1	0,277	7,04
8 5/8''	219,1	0,322	8,18
10 3/4''	273	0,25	6,35
10 3/4''	273	0,279	7,09
10 3/4''	273	0,365	9,27
12 3/4''	323,8	0,25	6,35
12 3/4''	323,8	0,33	8,38
12 3/4''	323,8	0,375	9,52

SPIRALLY WELDED WATER LINE PIPES

Sizes

Outside Diameter	Wall Thickness	Length
508 mm - 3.048 mm	5,16 mm - 25,4 mm	Single lengths up to 24,50 m
20'' - 120''	0,203'' - 1''	

Production Standards & Material Qualities

EN 10217-1	P195 - P265 TR1&TR2
EN 10224	L235 - L355
AWWA C 200	Grade 30 - Grade 50
UNI 6363	Fe 360 - Fe 510

*Production Range: See page 21

Coating Standards

- Dual Layer Abrasion Resistant FBE OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- FBE (Fusion Bonded Epoxy) OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- Polyethylene OD Coating: DIN 30670, TS 5139, NF A 49-710, UNI 9099, EN ISO 21809-1
- Polypropylene OD Coating: DIN 30678, NF A 49-711, EN ISO 21809-1
- Flow Coat Epox ID Coating: API RP 5L2, EN 10301
- Epoxy ID Coating: AWWA C 210
- Glass fibre reinforced plastic (GRP), OD Coating

CONSTRUCTION

CIRCULAR HOLLOW SECTIONS

Sizes

Outside Diameter	Wall Thickness	Length
21,3 mm - 339,7 mm	2,0 mm - 12,7 mm	5,00 m - 18,3 m
1/2'' - 13 3/8''	0.079'' - 0.500''	16,40 ft - 60,00 ft

Production Standards & Material Qualities

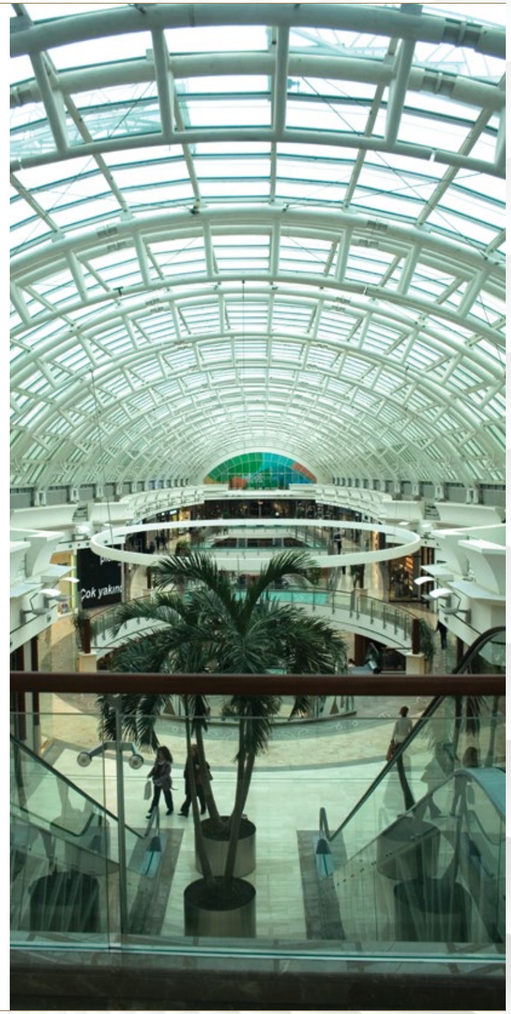
EN 10305-3	E 195, E 235, E 275, E 355
ASTM A 500	GR A, GR B, GR C
EN 10219 (BS 6363)	S 235, S 275, S 355, S 460 MH, NH (J0H, JRH, J2H, K2H, GR 34/26, GR 43/36)
EN 10210	S 235, S 275, S355, S460 MH, NH (J0H, JRH, J2H, K2H)

Tests & Certificates

- Visual and Dimensional Inspection
- Mechanical Tests:
  Tensile Test
  Flattening Test, Flaring Test
  Expanding Test
  Impact Test
- Metallographic Examination
- Chemical Analysis
- Non Destructive Inspection: In-Line Ultrasonic (weld check)
  In-Line and offline Eddy Current (for round tubes)
- Mill Test Certificates
  - According to EN 10204 2.1; 2.2; 3.1; 3.2
- NDT Standards
  - ET (ISO 10893-2)
- Quality Certificates
  - EN 10219 - EN10210 CE marked

Finishing Operations

• Plain End-Square cut or bevelled
• Black, self-colored/uncoated
• Mill protective oil coating; for both round, square and rectangular tubes, black & red varnish for outside surface of round tubes.



Production Range (EN 10219)

OD	Wall Thickness (mm)																	
mm	2.0	2.5	2.7	2.9	3.0	3.2	3.6	4.0	5.0	5.5	6.0	7.0	8.0	8.5	9.20	10.0	11.0	12.0	12.7
21,3	■	■	■	■	■	■	■	■	■	■									
25,0	■	■	■	■	■	■	■	■	■	■									
26,9	■	■	■	■	■	■	■	■	■	■									
32,0	■	■	■	■	■	■	■	■	■	■	■								
33,7	■	■	■	■	■	■	■	■	■	■	■	■							
38,0	■	■	■	■	■	■	■	■	■	■	■	■							
42,4	■	■	■	■	■	■	■	■	■	■	■	■							
48,3	■	■	■	■	■	■	■	■	■	■	■	■							
51,0	■	■	■	■	■	■	■	■	■	■	■	■							
57,0	■	■	■	■	■	■	■	■	■	■	■	■							
60,3	■	■	■	■	■	■	■	■	■	■	■	■							
63,5		■	■	■	■	■	■	■	■	■	■	■							
70,0		■	■	■	■	■	■	■	■	■	■	■							
73,0		■	■	■	■	■	■	■	■	■	■	■							
76,1		■	■	■	■	■	■	■	■	■	■	■							
82,5			■	■	■	■	■	■	■	■	■	■							
88,9			■	■	■	■	■	■	■	■	■	■							
101,6				■	■	■	■	■	■	■	■	■	■						
114,3					■	■	■	■	■	■	■	■	■						
127,0					■	■	■	■	■	■	■	■	■						
133,0					■	■	■	■	■	■	■	■	■						
139,7					■	■	■	■	■	■	■	■	■	■	■	■			
141,3					■	■	■	■	■	■	■	■	■	■	■	■			
159,0					■	■	■	■	■	■	■	■	■	■	■	■	■		
165,1					■	■	■	■	■	■	■	■	■	■	■	■	■		
168,3					■	■	■	■	■	■	■	■	■	■	■	■	■		
177,8						■	■	■	■	■	■	■	■	■	■	■	■	■	
219,1						■	■	■	■	■	■	■	■	■	■	■	■	■	■
244,5								■	■	■	■	■	■	■	■	■	■	■	■
273,0								■	■	■	■	■	■	■	■	■	■	■	■
323,9								■	■	■	■	■	■	■	■	■	■	■	■
339,7								■	■	■	■	■	■	■	■	■	■	■	■

SELF DRILLING ANCHOR PIPES

Sizes

Outer Diameter	Wall Thickness
21,3 mm - 88,9 mm	Up to 10.00 mm
½” - 3 1/2”	Up to 0.394’’

Production Standards

EN 10210

FOUNDATION / PILING TUBES

Sizes

For Spirally Welded Pipes

Outside Diameter	Wall Thickness	Length
508 mm - 3.048 mm	5,16 mm - 25,4 mm	Single lengths up to 55,0 m
20'' - 120''	0,203'' - 1''	

For ERW Micro Piling Pipes

Outside Diameter	Wall Thickness	Length
21,3 mm - 339,7 mm	2,0 mm - 12,7 mm	5,00 m - 18,30 m
1/2" - 13 3/8"	0,078'' - 0.500''	16,40 ft - 60,00 ft

Production Standards & Material Qualities

EN 10219-1	Grade including S355 J2H, CE marking according to S355, S460 MH, S550 J2H
ASTM A252	Grade including Grade 3
Inner weld bead removed	

Coating Standards

- Dual Layer Abrasion Resistant FBE OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- FBE (Fusion Bonded Epoxy) OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- Polyethylene OD Coating: DIN 30670, TS 5139, NF A 49-710, UNI 9099, EN ISO 21809-1
- Polypropylene OD Coating: DIN 30678, NF A 49-711, EN ISO 21809-1
- Epoxy ID Coating: AWWA C 210 Dual Layer Abrasion Resistant FBE OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- FBE (Fusion Bonded Epoxy) OD Coating: API 5L7, CSA Z 245-20, NACE RP 0394, AWWA C213
- Polyethylene OD Coating: DIN 30670, TS 5139, NF A 49-710, UNI 9099, EN ISO 21809-1
- Polypropylene OD Coating: DIN 30678, NF A 49-711, EN ISO 21809-1
- Epoxy ID Coating: AWWA C 210

Protective Paint Systems

BS EN ISO 12944-5.2019
Paints and varnishes. Corrision protection of steel structures by protective paint systems.

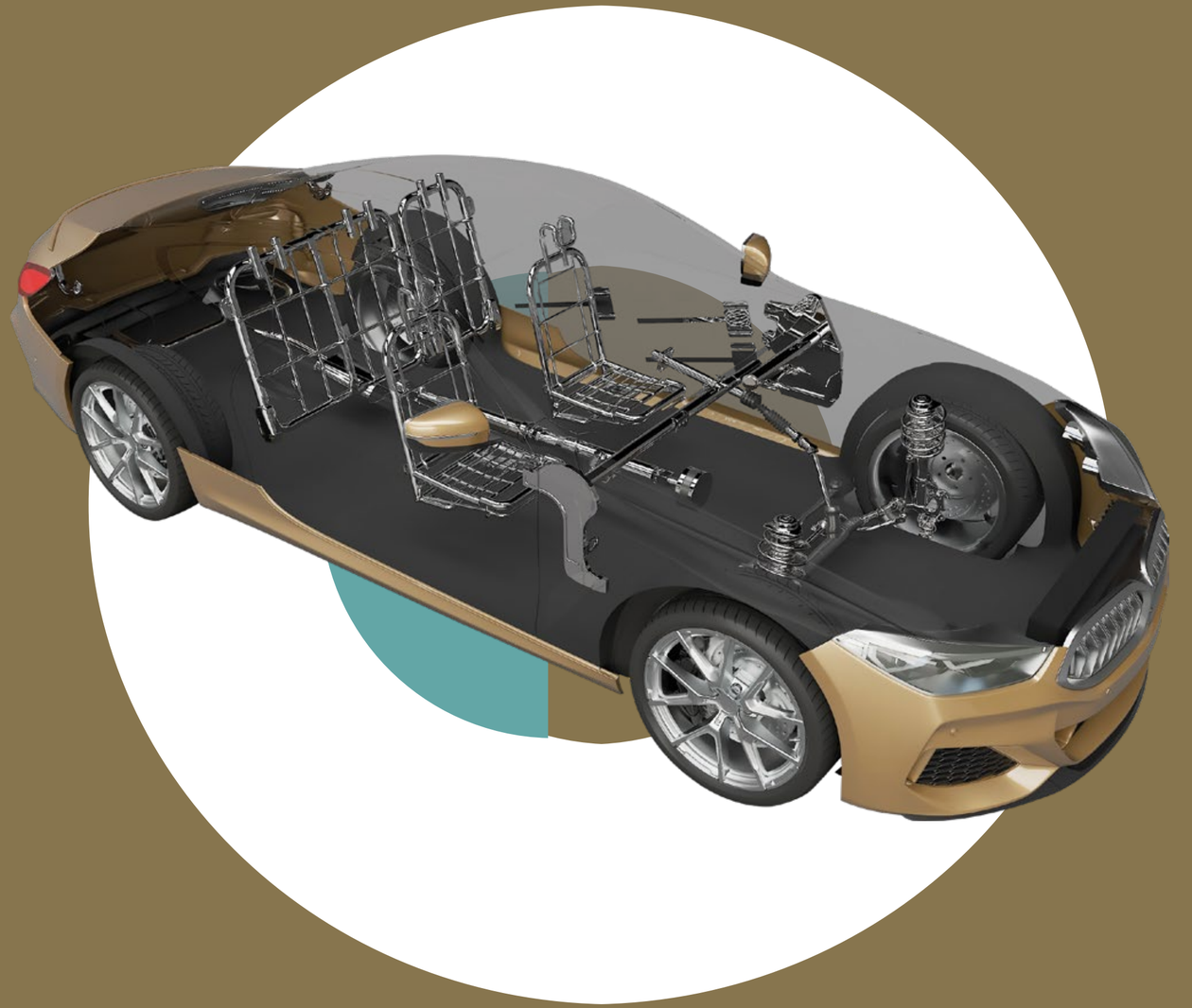
Most Common ERW Piling Tube Sizes

Diameter (mm)	Wall Thickness (mm)	kg/meter
76,1	6,3	10,84
88,9	6,3	12,83
114,3	6,3	16,78
114,3	8	20,97
139,7	8	25,98
139,7	10	31,99
168,3	10	39,04
168,3	12,5	48,03
219,1	10	51,57
219,1	12,5	63,69
273,0	10	64,86
273,0	12,5	80,30
323,9	10	77,41
323,9	12,5	95,99

Chemical (max)	C	Mn	P	S	CEV%
S 460 MH	0,20%	1,70%	0,035%	0,03%	0,46%
S 550 J2H	0,16%	2,20%	0,03%	0,03%	0,47%

Mechanical	Yield Strenght (Mpa) min	Tensile Strength (Mpa) min	Elongation min	Impact Energy at -20°C
S 460 MH	460	530 - 720	17%	40 Joule
S 550 J2H	550	605 - 760	14%	27 Joule

ENGINEERING TECHNOLOGIES



ENGINEERING TECHNOLOGIES

Production Standards

- Welded Cold Sized Tubes : EN 10305-3
- Welded Cold Drawn Tubes : EN 10305-2
- Welded Cold Sized Square and Rectangular Tubes : EN 10305-5

Note: Other standards such as ASTM A513, JIS G 3445 etc. upon request

Steel Grades

- Structural Steels : S235, S275, S355
- DQ Steels : DC01, DC03, DC04
- HSLA Steels : HC260LA, HC300LA, HC340LA, HC380LA, HC420LA S315MC, S355MC, S420MC, S460MC, S500MC, S550MC, S600MC, S700MC
- Dual Phase Steels : DP500, DP600, DP800, DP1000
- Heat Treatable Steels : 20MnB5, 22MnB5, 26MnB5, 30MnB5, 34MnB5
- Coated (Galvanized, aluminized) Steels : DX51, DX52, DX53, S220, S350, DX54, HX300LAD, HX340LAD

Note: Other grades upon request

Tests & Inspections

- Visual Examination
- Dimensional Inspection
- Metallographic Inspection
- Tensile Test
- Drift Expanding / Flaring Test
- Flattening Test
- Hardness Testing (HV, HRB, HRC)
- Ultrasonic Testing
- Flanging Test
- Chemical Analysis
- Eddy Current Testing
- Surface Roughness Measurement

Inspection Documents

- MTC (Mill Test Certificates) acc. to EN 10204 3.1; 2.2

AUTOMOTIVE TUBES

Borusan Pipe is a highly recognized manufacturer for its product and service quality in the automotive industry.

Our plants, one in Vobarno, Italy, one in Gemlik, Türkiye, one in Halkalı, Türkiye, and the last one in Ploieşti, Romania, specialize in the production of value-added precision tubes used in critical vehicle components. Our sales, quality, and design teams work together to manage various technical and schematic inquiries, providing our customers with custom-made solutions. Products are commonly used in passenger cars, light and heavy commercial vehicles which are travelling around the globe.

SHOCK ABSORBER TUBES

FRONT SEAT FRAME TUBES

CARDAN SHAFT TUBES

TIE ROD TUBES

HEAD REST TUBES

CROSS CAR BEAMS

STEERING COLUMN TUBES

STABILIZER

EXHAUST TUBES

REAR SEAT FRAME TUBES

GAS SPRING

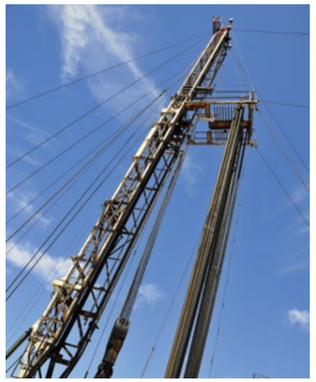
AXLE

TRUNK HINGE

DOOR IMPACT BEAMS

HYDRAULIC APPLICATION

Borusan Pipe's wide product range in the precision business enables the company to serve various industries, ranging from hydraulic-pneumatic and drilling to mechanical applications. We have been proud to be a preferred supplier of the industry for years with our delicate approach to meeting the most stringent customer requirements.



INDUSTRIAL APPLICATIONS
CUSTOM SHAPED STEEL PROFILES

Borusan Pipe manufactures custom-shaped profiles with the highest degree of functionality according to customer expectations.

Custom-designed profiles are used in a variety of applications for different sectors such as automotive, construction, agricultural machinery, towel rails, furniture, etc.

We supply profiles with the most accurate tolerances to meet customers' requirements and drawings. Borusan Pipe has the knowledge to select the most suitable forming technologies to meet specific needs.

TECHNOLOGIES FOR SPECIAL SHAPE PROFILES

- Direct Roll Forming
- HFW + Cold Forming
- Forming by Cold Drawing

We are ready to produce according to different standards and/or customers' specialized technical requirements.

Steel grades, wall thickness, dimensions, and tolerances may vary according to the requirements of the final product. Different pre-coated raw materials and final coating methods are available upon request.

FURTHER PROCESSING

- Length Cutting
- Bending
- Hole Drilling
- Online Die Stamping

INSPECTION DOCUMENTS

- MTC (Mill Test Certificates) acc. to EN 10204 2.2, 3.1

TESTS & INSPECTIONS

- Visual Examination
- Dimensional Inspection
- Metallographic Inspection
- Tensile Test
- Chemical Analysis
- Flattening Test
- Hardness Testing (HV, HRB, HRC)
- Eddy Current Testing
- 3D Scanning

Welded Cold Sized Tubes for Precision Applications

OD	Wall Thickness (mm)																								
mm	0,70	1,00	1,20	1,50	1,70	2,00	2,20	2,50	2,80	3,00	3,30	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00	7,50	8,00	8,50	9,00	9,50	10,00	10,50	11,00
5	■	■	■																								
5,5	■	■	■																								
6	■	■	■																								
7	■	■	■																								
8	■	■	■																								
8,2	■	■	■																								
9	■	■	■																								
9,3	■	■	■																								
9,5	■	■	■																								
10	■	■	■	■																							
11	■	■	■	■																							
11,1	■	■	■	■	■	■																					
12	■	■	■	■	■	■																					
12,6	■	■	■	■	■	■																					
12,7	■	■	■	■	■	■																					
13	■	■	■	■	■	■																					
13,5	■	■	■	■	■	■																					
14	■	■	■	■	■	■	■																				
15	■	■	■	■	■	■	■																				
15,5	■	■	■	■	■	■	■																				
16	■	■	■	■	■	■	■																				
17	■	■	■	■	■	■	■																				
18	■	■	■	■	■	■	■																				
19	■	■	■	■	■	■	■																				
20	■	■	■	■	■	■	■																				
20,5	■	■	■	■	■	■	■																				
21	■	■	■	■	■	■	■	■																			
21,5	■	■	■	■	■	■	■	■																			
22	■	■	■	■	■	■	■	■																			
23	■	■	■	■	■	■	■	■																			
24	■	■	■	■	■	■	■	■																			
24,5	■	■	■	■	■	■	■	■																			
25	■	■	■	■	■	■	■	■	■	■	■																
25,4	■	■	■	■	■	■	■	■	■	■	■																
26	■	■	■	■	■	■	■	■	■	■	■																
26,9	■	■	■	■	■	■	■	■	■	■	■																
27,2	■	■	■	■	■	■	■	■	■	■	■																
28	■	■	■	■	■	■	■	■	■	■	■																
28,6	■	■	■	■	■	■	■	■	■	■	■																
30	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
31,8	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
32	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
33,7	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
34	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■												
35		■	■	■	■	■	■	■	■	■	■	■	■	■	■												
36		■	■	■	■	■	■	■	■	■	■	■	■	■	■												
38		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
40		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
41		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
41,5		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									
42		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
44		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
44,5		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
45		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
48		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
48,6		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
50		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
51		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
54		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
55		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
55,6		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
56,4		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
56,8		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
57		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
60		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
63,5			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
65			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
67			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
68			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
70			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
76				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
80				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
83				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
88,9				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
93				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	

Welded Cold Sized Tubes (EN 10305-3)
Delivery Conditions:
BKM (+CR1 ve + CR2) = Standard
NBK (+N) = Normalized
GBK (+A) = Annealed
Steel Grades: St 14, St 13, St 12, St 34, St 37, St 44, St 52
(E155) (E195) (E235) (E275) (E355)

Welded Cold Drawn Tubes for Precision Applications

OD	Wall Thickness (mm)																								
mm	0.9	1	1.25	1.5	1.75	2	2.25	2.5	2.75	3	3.25	3.5	4	4.25	4.5	5	5.5	6	6,5	7	7.5	8	8.5	9	10
15	■	■	■	■	■	■	■	■	■	■	■														
16 - 17	■	■	■	■	■	■	■	■	■	■	■	■													
18 - 19	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■										
20 - 21	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■									■
22 - 23	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■								■
24 - 25	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
26 - 27	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
28 - 30	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
31 - 33		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
34 - 36		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
37 - 39		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
40 - 44		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							■
45 - 47		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				■
48 - 49		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		■
50 - 54		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
55 - 57		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
58 - 61				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
62 - 64				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
65 - 66				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
67 - 69				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
70 - 72				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
73 - 74				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
75 - 77				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
78 - 83				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
84 - 87				■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
88 - 89						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
90 - 91						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
92 - 96						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
97 - 100						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
101 - 105						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
106 - 110									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
111 - 120									■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
121 - 130										■	■	■	■	■	■	■	■	■	■	■	■	■	■		

Cold Drawn Welded Steel Tubes (EN 10305-2)
Please contact our sales department for intermediate sizes.
Delivery Conditions:
+ C (BK) = Cold finished/hard
+ LC (BKW) = Cold finished/soft
+ N (NBK) = Normalized
+ SR (BKS) = Cold finished and stress relieved
+ A (GBK) = Annealed
Standard Norms: TS EN 10305-2, UNI 7946, BS 6323 Part 6, NFA 49-341, ASTM A 513
Steel Grades mainly used: RSt 34-2, RSt 37-2, St 44-2, St 52-3
(E 195) (E 235) (E 275) (E 355)

ASTM A 513 Mechanical Tubing (Type V-VI)

	Wall Thickness (inch)																						
OD (inch)	**0.035**	**0.049**	**0.058**	**0.065**	**0.083**	**0.095**	**0.109**	**0.120**	**0.125**	**0.134**	**0.156**	**0.165**	**0.180**	**0.188**	**0.207**	**0.219**	**0.238**	**0.250**	**0.281**	**0.284**	**0.313**	**0.344**	**0.375**	**0.406**
0.625	■	■	■	■	■	■	■	■	■	■														
0.688	■	■	■	■	■	■	■	■	■	■	■	■												
0.750	■	■	■	■	■	■	■	■	■	■	■	■												
0.813	■	■	■	■	■	■	■	■	■	■	■	■	■											
0.875	■	■	■	■	■	■	■	■	■	■	■	■	■											
0.938	■	■	■	■	■	■	■	■	■	■	■	■	■	■										
1.000	■	■	■	■	■	■	■	■	■	■	■	■	■	■										
1.063	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
1.125	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
1.188	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
1.250	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■							
1.313	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■						
1.375	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
1.500	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
1.563	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
1.625	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
1.688	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■					
1.750	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
1.768	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■				
1.875	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
2.000	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
2.125	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
2.250	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■			
2.375		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.438		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.500		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.563		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.625		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.750		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
2.875		■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.000			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.063			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.125			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.250			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.375			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.500			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.555			■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.625					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.688					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.750					■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3.875						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.000						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.022						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.062						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.095						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.125						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.250						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.375						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.500						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.562						■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.593							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.625							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4.750							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	
5.000							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		
5.125							■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■		

Delivery Conditions: M.D., S.S.I.D.
M.D.: Mandrel Drawn
S.S.I.D.: Special Smooth Inside Diameter
Standard Norms Supplied: ASTM A 513
Steel Grades Mainly Used: 1008-1040

Please contact our sales department for any inquiries.

Welded Hollow Sections for Precision Applications (EN 10305-5)

Side Length	**Wall Thickness (mm)**										
b x h (mm)	**0,80**	**0,90**	**1,00**	**1,20**	**1,50**	**2,00**	**2,50**	**3,00**	**3,50**	**4,00**	**5,00**
8 x 20	■	■	■	■							
10 x 10	■	■	■	■	■						
10 x 15	■	■	■	■	■						
10 x 18	■	■	■	■	■						
10 x 20	■	■	■	■	■						
10 x 25	■	■	■	■	■						
10 x 30	■	■	■	■	■						
10 x 33	■	■	■	■	■						
10 x 35	■	■	■	■	■						
10 x 40	■	■	■	■	■						
10 x 50	■	■	■	■	■						
12,7 x 12,7	■	■	■	■	■						
15 x 15	■	■	■	■	■						
15 x 20	■	■	■	■	■						
15 x 25	■	■	■	■	■	■					
15 x 30	■	■	■	■	■	■					
15 x 35	■	■	■	■	■	■					
15 x 40	■	■	■	■	■	■					
15 x 50	■	■	■	■	■	■	■				
16 x 16	■	■	■	■	■	■	■				
17 x 21	■	■	■	■	■	■	■				
17 x 35	■	■	■	■	■	■					
18 x 18	■	■	■	■	■	■	■				
18 x 30	■	■	■	■	■	■	■				
19 x 19	■	■	■	■	■	■					
20 x 20	■	■	■	■	■	■	■	■	■	■	■
20 x 25	■	■	■	■	■	■	■	■	■	■	■
20 x 30	■	■	■	■	■	■	■	■	■	■	■
20 x 35	■	■	■	■	■	■	■	■	■	■	■
20 x 40	■	■	■	■	■	■	■	■	■	■	■
20 x 45	■	■	■	■	■	■	■	■	■	■	■
20 x 50	■	■	■	■	■	■	■	■	■	■	■
20 x 55	■	■	■	■	■	■	■	■	■	■	■
20 x 60			■	■	■	■	■	■	■	■	■
20 x 80			■	■	■	■	■	■	■	■	■
21 x 21	■	■	■	■	■	■	■	■	■	■	■
23 x 30	■	■	■	■	■	■	■	■	■	■	■
25 x 25	■	■	■	■	■	■	■	■	■	■	■
25,4 x 25,4	■	■	■	■	■	■	■	■	■	■	■
25,4 x 50,80	■	■	■	■	■	■	■	■	■	■	■
25 x 30	■	■	■	■	■	■	■	■	■	■	■
25 x 35	■	■	■	■	■	■	■	■	■	■	■
25 x 40	■	■	■	■	■	■	■	■	■	■	■
25 x 45	■	■	■	■	■	■	■	■	■	■	■
25 x 50	■	■	■	■	■	■	■	■	■	■	■
25 x 55			■	■	■	■	■	■	■	■	■
25 x 60			■	■	■	■	■	■	■	■	■
27 x 27	■	■	■	■	■	■	■	■	■	■	■
30 x 30	■	■	■	■	■	■	■	■	■	■	■
30 x 35	■	■	■	■	■	■	■	■	■	■	■
30 x 40		■	■	■	■	■	■	■	■	■	■
30 x 45		■	■	■	■	■	■	■	■	■	■
30 x 50		■	■	■	■	■	■	■	■	■	■
30 x 60			■	■	■	■	■	■	■	■	■
30 x 70			■	■	■	■	■	■	■	■	■
30 x 80			■	■	■	■	■	■	■	■	■
30 x 90			■	■	■	■	■	■	■	■	■
32 x 32			■	■	■	■	■	■	■	■	■
32 x 60			■	■	■	■	■	■	■	■	■
33 x 60			■	■	■	■	■	■	■	■	■
35 x 35			■	■	■	■	■	■	■	■	■
35 x 40			■	■	■	■	■	■	■	■	■
35 x 45			■	■	■	■	■	■	■	■	■
35 x 50			■	■	■	■	■	■	■	■	■
35 x 75			■	■	■	■	■	■	■	■	■
38 x 38			■	■	■	■	■	■	■	■	■
40 x 40			■	■	■	■	■	■	■	■	■
40 x 50			■	■	■	■	■	■	■	■	■
40 x 60			■	■	■	■	■	■	■	■	■
40 x 70			■	■	■	■	■	■	■	■	■
40 x 80			■	■	■	■	■	■	■	■	■
44,5 x 44,5			■	■	■	■	■	■	■	■	■
45 x 45			■	■	■	■	■	■	■	■	■
50 x 50			■	■	■	■	■	■	■	■	■
50 x 60			■	■	■	■	■	■	■	■	■
50 x 80			■	■	■	■	■	■	■	■	■
50,8 x 50,8			■	■	■	■	■	■	■	■	■
60 x 60			■	■	■	■	■	■	■	■	■
70x70			■	■	■	■	■	■	■	■	■
80x80			■	■	■	■	■	■	■	■	■
90x90			■	■	■	■	■	■	■	■	■
100x100			■	■	■	■	■	■	■	■	■
110x110			■	■	■	■	■	■	■	■	■
120x120			■	■	■	■	■	■	■	■	■
120x130			■	■	■	■	■	■	■	■	■
120x140			■	■	■	■	■	■	■	■	■
130x130			■	■	■	■	■	■	■	■	■

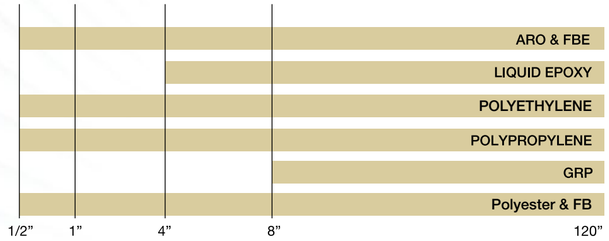
(Thicknesses bigger than 5mm must be examined.)
Grades stronger than S700 must be examined.

COATINGS AND LININGS

COATINGS AND LININGS

Scope and Field of Application

Borusan Pipe products are manufactured with modern types of equipment, offering a wide range of anti-corrosive coatings.The below graph illustrates the type of coatings applied externally and internally according to standards and particular customer requirements.



Surface Preparation

The process enabling the appropriate surface cleanliness and smoothness level according to the type of coating is applied by blasting method. (Sa 2 1/2)
(DIN 55928, SIS 55900)

Galvanizing

Especially for water pipes, Borusan Pipe galvanizing operations are currently applied to export U.S. and many European countries. (ASTM A53, TS EN 10240)

Polyethylene - Polyproplene Coating

Excellent protection for buried pipes, high mechanical strength, and corrosion resistance.
Low, medium, or high-density polyethylene or polypropylene coating.
3 Layer Coating Method:
Layer 1: Electrostatic epoxy primer.
Layer 2: Extrusion adhesive wrapping for spiral, an electrostatic adhesive layer for ERW.
Layer 3: Extrusion polyethylene or polypropylene wrapping for spiral, hot extrusion for ERW.
For PE: EN ISO 21809-1 (DIN 30670, NF A 49-710, UNI 9099)
For PP: EN ISO 21809-1 (DIN 30678, NFA 49-711)

Flow-Coat Epoxy Lining

For gas transmission lines, in order to reduce pipe wall roughness, thus increasing throughput. Average thickness 60 µm. (API RP 5L2)

Liquid Epoxy

Various epoxy coatings enable a hygienic inner surface for potable water transportation and an outer surface to resist soil or seawater corrosion. The coating thickness of up to 600 micron. (AWWA C 210, TS 5140, EN 12944-5)

FBE-Fusion Bonded Epoxy

Provides high protection of pipe lines used for oil, gas, and water transmission. (AWWA C 213, API 5L7, CSA Z 245-20, NACE RP 0394)

Abrasion Resistant Overlay ARO

Dual-layer fusion bonded epoxy provides excellent abrasion, impact resistance and also maintains excellent protection for gas-oil line pipes. (AWWA C 213, API 5L7, CSA Z 245-20, NACE RP 0394)

Glass fibre reinforced plastic (GRP) Coating

For buried and HDD line pipes, GRP coating provides excellent mechanical protection.

Tests Performed

Coating Thickness
Holiday Testing
Impact Strength
Adhesion Test
Indentation Strength
Coating Resistivity
Elongation Percentage at Break
Strain at Break Test
MFR and MVR Test
CD (Cathodis Disbondment Test)
DSC Test (Differential Scanning Calorimetry test)
Manuel Holiday
Wet Sponge Pinhole Test
Hot Water Immersion Test
Buchholz Hardness Test
Shore A &Shore D Measurement
PE/PP Breaking Elongation Test
Cross Cut Test
Epoxy Bend Test
V Cut Test
FBE Porosity Test
Porosity Test
Cross Section Porosity
Low-temperature Flexibility Test
Cure & Gel Time Test
Moisture Content Test
FBE Particle Size Test

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