



# Line Pipes

metal fabrication division

Ferrero is a dynamic, innovative and fully integrated company.

Business activity started in the metal fabrication sector at the beginning of the 1900's.

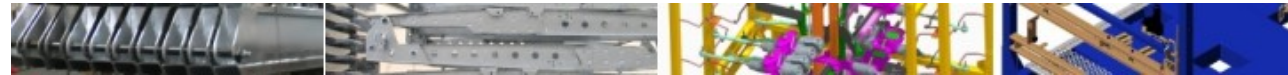
Financial resources are invested each year on our staff's continuous training.

Due to their many years of experience, our specialized technicians are able to satisfy the most complex of needs and to put forward innovative solutions.

Mission: we offer to the markets the potential of our know-how, production capacity and quality, that added to the environmental preservation, makes sure that our services and products are felt as a company commitment.

Strength: the commitment to the customer of our full service capability.

Priority: to further develop our technical knowledge, to improve teamwork and increase our employees satisfaction.







• Welder Approval according to UNI EN 287-1:2012. CERTIFICATION BODY RINA.



## Pipes for petrochemical industries

### Seamless Line Pipes

Supplying conditions:

**Production range:**

O.D. from 1/2" up to 10" mm; W.T. see dimensional table.  
On request O.D. up to 24"

**Steel grades:**

see table

**Lengths:**

tubes are supplied in single random lengths of 6 mt or double random lengths of 10/12 mt. Fixed lengths available on request

**Delivery condition:**

tubes are supplied according to the referenced production standard (see table); tubes supplied with black surface or varnished on request with or without ends caps

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to relevant production standard

**Certificates:**

according to En 10204 3.1; on request 3.2 certification can be issued by a 3rd party inspection company

**Packing:**

tubes are supplied in round bundles.

Maximum weight 2000 Kg

Seamless Line Pipes		
Standards	TDR Standards	Steel Grade
EN	10208-1	L210GA, L235GA, L245GA, L290GA, L360GA,
	10208-2	L245NB, L290NB, L360NB
API	5L	Gr. A, B, C Grade X42 X52

## Seamless Line Pipes

Outside Diameter	Outside Diameter	Wall thickness	Weight	Designation	
[mm]	[mm]	[mm]	[kg/m]	classe	schedula
3/8*	17,1	2,31	0,84	STD	40
1/2	21,3	2,77	1,27	STD	40
		3,73	1,61	XS	80
*		4,78	1,95		160
3/4	26,7	2,87	1,69	STD	40
		3,91	2,20	XS	80
*		5,56	2,90		160
1	33,4	3,38	2,50	STD	40
		4,55	3,24	XS	80
*		6,35	4,29		160
1.1/4	42,2	3,56	3,39	STD	40
		4,85	4,47	XS	80
		6,35	5,61	-	160
1.1/2	48,3	3,68	4,05	STD	40
		5,08	5,41	XS	80
		7,14	7,25	-	160
2	60,3	3,18	4,48	-	-
		3,58	5,01	-	-
		3,91	5,44	STD	40
		4,37	6,03	-	-
		4,78	6,54	-	-
		5,54	7,48	XS	80
		6,35	8,45	-	-
		7,14	9,36	-	-
		8,74	11,11	-	160
2. 1/2	73	3,18	5,48	-	-
		3,58	6,13	-	-
		3,96	6,74	-	-
		4,37	7,40	-	-
		4,78	8,04	-	-
		5,16	8,63	STD	40
		5,49	9,14	-	-
		6,35	10,44	-	-
		7,01	11,41	XS	80
		9,53	14,92	-	160
3	88,9	3,18	6,72	-	-
		3,58	7,53	-	-
		3,96	8,29	-	-
		4,37	9,11	-	-
		4,78	9,92	-	-
		5,49	11,29	STD	40
		6,35	12,93	-	-
		7,14	14,40	-	-
		7,62	15,27	XS	80
		11,13	21,35	-	160
3. 1/2	101,6	3,96	9,53	-	-
		4,37	10,48	-	-
		4,78	11,41	-	-
		5,74	13,57	STD	40
		6,35	14,92	-	-
		7,14	16,63	-	-
		8,08	18,63	XS	80

Outside Diameter	Outside Diameter	Wall thickness	Weight	Designation	
[mm]	[mm]	[mm]	[kg/m]	classe	schedula
4	114,3	3,96	10,78	-	-
		4,37	11,85	-	-
		4,78	12,91	-	-
		5,16	13,89	-	-
		5,56	14,91	-	-
		6,02	16,07	STD	40
		6,35	16,90	-	-
		7,14	18,87	-	-
		7,92	20,78	-	-
		8,56	22,32	XS	80
		11,13	28,32	-	120
		13,49	33,54	-	160
5	141,3	6,55	21,77	STD	40
		7,14	23,62	-	-
		7,92	26,05	-	-
		8,74	28,57	-	-
		9,53	30,97	XS	80
		12,70	40,28	-	120
6	168,3	4,78	19,27	-	-
		5,16	20,76	-	-
		5,56	22,31	-	-
		6,35	25,36	-	-
		7,11	28,26	STD	40
		7,92	31,32	-	-
		8,74	34,39	-	-
		9,53	37,31	-	-
		10,97	42,56	XS	80
		12,70	48,73	-	-
		14,27	54,20	XS	120
8	219,1	6,35	33,31	-	20
		7,04	36,81	-	30
		7,92	41,24	-	-
		8,18	42,55	STD	40
		8,74	45,34	-	-
		9,53	49,25	-	-
		10,31	53,08	-	60
		11,13	57,08	-	-
		12,7	64,64	XS	80
10	273,0	6,35	41,77	-	20
		7,09	46,51	-	-
		7,8	51,03	-	30
		8,74	56,98	-	-
		9,27	60,31	STD	40
		11,13	71,90	-	-
		12,70	81,55	XS	60
		14,27	91,08	-	-
		15,09	96,01	-	80

\* cold drawn

**Pipes for petrochemical industries**

**Seamless Line Pipes with specified elevated temperature properties**

Supplying conditions:

**Production range:**

O.D. from ½" up to 4" mm; W.T. from sch. 40 to sch. 160

**Steel grades:**

see table

**Lengths:**

tubes are supplied in single random lengths of 5000/7000 mm or double random lengths of 10000/12000 mm.

Fixed lengths are supplied on request

**Delivery condition:**

tubes are supplied according to relevant production standard (see table); tubes supplied with black surface; varnished tubes can be supplied on request with or without ends caps

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to production standard

**Certificates:**

according to En 10204 3.1; on request 3.2 certification can be issued by a 3rd party inspection company

**Packing:**

tubes are supplied in round bundles.

Maximum weight 2000 Kg

<b>Seamless Line Pipes with specified elevated temperature properties</b>		
Standards	TDR Standards	Steel Grade
ASTM	A 335	P1, P11, P22
ASME	SA 335	P1, P11, P22

**Pipes for petrochemical industries**

**Seamless Line Pipes with specified low temperature properties**

Supplying conditions:

**Production range:**

O.D. from ½" up to 4" mm; W.T. from sch. 40 to sch. 160

**Steel grades:**

see table

**Lengths:**

tubes are supplied in single random lengths of 6 mt.

Fixed lengths can be supplied on request

**Delivery condition:**

tubes are supplied according to relevant production standard. Tubes are supplied with black surface or varnished on request with or without ends caps

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to relevant production standard

**Certificates:** according to En 10204 3.1; on request 3.2 certification can be issued by a 3rd party inspection company

**Packing:**

tubes are supplied in round bundles.

Maximum weight 2000 Kg

<b>Seamless Line Pipes with specified low temperature properties</b>		
Standards	TDR Standards	Steel Grade
ASTM	A 333	Gr. 6



## Pipes for petrochemical industries

### Seamless Galvanized Line Pipes

Supplying conditions:

**Production range:**

O.D. from 1/2" up to 4" mm., sch. 40 / sch. 80.  
Other dimensions are available on request.

**Steel grades:**

see table

**Lengths:**

tubes are supplied in standard lengths of 6 mt

**Delivery condition:**

tubes are supplied galvanized according to ASTM A 53 with plain or threaded ends "NPT" series 3000LBS

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to relevant production standard

**Certificates:**

according to EN 10204 3.1 for the black tube and according to EN 10204 2.1 for the galvanized tube

**Packing:**

tubes are supplied in round bundles.  
Maximum weight 2000 Kg

## Seamless Galvanized Line Pipes

Outside Diameter	Outside Diameter	Wall Thickness	Designation		Black	Galvanized	Galvanized t.c.
					Weigth	Weigth	Weigth
[mm]	[mm]	[mm]	classe	schedula	[kg/m]	[kg/m]	[kg/m]
1/2	21,3	2,77	STD	40	1,27	1,31	1,33
		3,73	XS	80	1,61	1,67	1,70
3/4	26,7	2,87	STD	40	1,69	1,73	1,76
		3,91	XS	80	2,20	2,26	2,29
1	33,4	3,38	STD	40	2,50	2,58	2,62
		4,55	XS	80	3,24	3,33	3,38
1.1/4	42,2	3,56	STD	40	3,39	3,48	3,53
		4,85	XS	80	4,47	4,60	4,67
1.1/2	48,3	3,68	STD	40	4,05	4,17	4,23
		5,08	XS	80	5,41	5,57	5,65
2	60,3	3,91	STD	40	5,44	5,60	5,68
		5,54	XS	80	7,48	7,70	7,82
2. 1/2	73	5,16	STD	40	8,63	8,88	9,01
		7,01	XS	80	11,41	11,75	11,93
3	88,9	5,49	STD	40	11,29	11,63	11,80
		7,62	XS	80	15,27	15,73	15,97
4	114,3	6,02	STD	40	16,07	16,55	16,80
		8,56	XS	80	22,32	22,98	23,32

Seamless Galvanized Line Pipes		
Standards	TDR Standards	Steel Grade
API	5L PSL 1	Gr. B, Gr X42
ASTM	A 106	Gr. B
	A53	Gr. B
ASME	SA 106	Gr. B
	SA53	Gr. B

### Hot rolled standard pipes

#### Seamless pipes for water and gas

Supplying conditions:

**Production range:**

O.D. from 1/8" up to 4" ; W.T. LS light series, MS medium series

**Steel Grades:**

see table

**Lengths:**

tubes are supplied in fixed lengths to 6 mt.

On request tubes can be supplied in different lengths

**Delivery condition:**

tubes are supplied according to the relevant production standard as:

- black, plain ends
- galvanized threaded and coupled
- red painted by RAL 3000

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to the production standard

**Certificates:**

according to EN 10204 2.2 or 3.1

**Packing:**

tubes are supplied in round bundles.

Maximum weight 2000 Kg

Seamless pipes for water and gas		
Standards	TDR Standards	Steel Grade
EN	10255	S195T
DIN	2440	ST 33-2

### Seamless pipes for water and gas

Light series						
Sizes	Nominal Diameter	Outside diameter		Wall thickness	Black pipe	Galvanized pipe tc
		[mm]				
	[mm]	max.	min.	[mm]	[kg/m]	[kg/m]
1/8*	10,2	10,6	9,8	1,8	0,372	
1/4*	13,5	14	13,2	2	0,567	
3/8*	17,2	17,5	16,7	2	0,75	
1/2	21,3	21,7	21	2,35	1,1	1,17
3/4	26,9	27,1	26,4	2,35	1,41	1,49
1	33,7	34	33,2	2,9	2,21	2,34
1 1/4	42,4	42,7	41,9	2,9	2,84	3
1 1/2	48,3	48,6	47,8	2,9	3,26	3,45
2	60,3	60,7	59,6	3,25	4,56	4,78
2 1/2	76,1	76,3	75,2	3,25	5,81	6,12
3	88,9	89,4	87,9	3,65	7,65	8,04
4	114,3	114,9	113	4,05	11	11,52

Medium Series						
Sizes	Nominal Diameter	Outside diameter		Wall thickness	Black pipe	Galvanized pipe tc
		[mm]				
	[mm]	max.	min.	[mm]	[kg/m]	[kg/m]
1/8*	10,2	10,6	9,8	2	0,404	
1/4*	13,5	14	13,2	2,3	0,641	
3/8*	17,2	17,5	16,7	2,3	0,839	
1/2	21,3	21,8	21	2,65	1,22	1,29
3/4	26,9	27,3	26,5	2,65	1,58	1,66
1	33,7	34,2	33,3	3,25	2,44	2,57
1 1/4	42,4	42,9	42	3,25	3,14	3,31
1 1/2	48,3	48,8	47,9	3,25	3,61	3,81
2	60,3	60,8	59,7	3,65	5,1	5,4
2 1/2	76,1	76,6	75,3	3,65	6,51	6,93
3	88,9	89,5	88	4,05	8,47	9,03
4	114,3	115	113,1	4,5	12,1	13

\* cold drawn

### Hot rolled standard pipes

#### Commercial seamless pipes

Supplying conditions:

**Production range:**

O.D. from 21,3 to 323,9 mm; standard W.T.

**Steel Grades:**

see table

**Lengths:**

tubes are supplied in fixed lengths to 6000mm.

On request tubes can be supplied in different lengths

**Delivery conditions:**

tubes are supplied according to the relevant production standard (see table)

**NDT:**

chemical, mechanical and technological tests are performed according to the relevant standard; supplementary/optional tests are available on request

**Marking:**

according to the production standard

**Certificates:**

according to EN 10204 2.2 or 3.1

**Packing:**

tubes are supplied in round bundles.

Maximum weight 2000 Kg

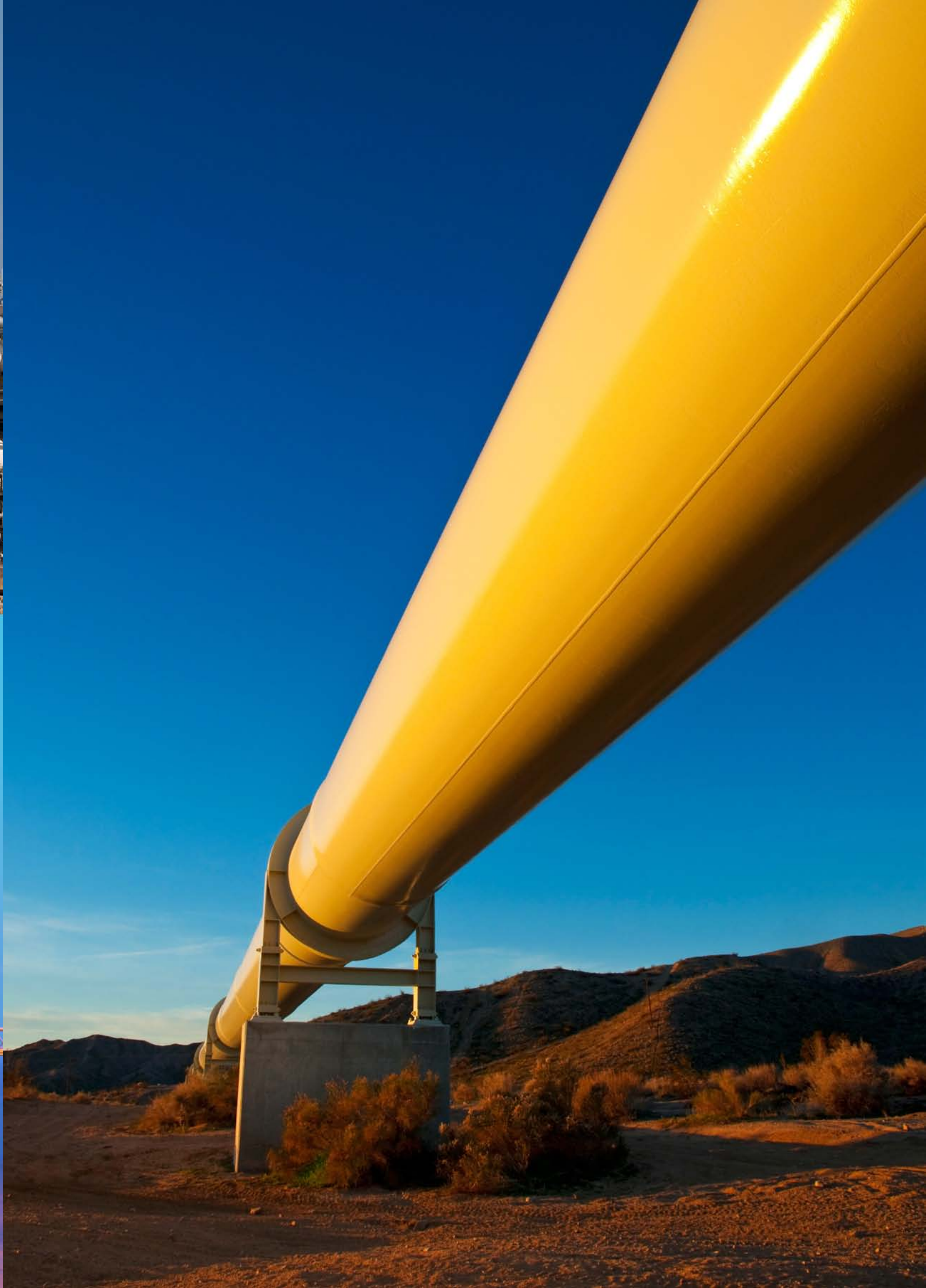
### Commercial seamless pipes

Outside diameter [mm]	Wall thickness [mm]	Weight [kg/m]
30,0	2,6	1,76
33,7	2,6	1,99
38,0	2,6	2,27
42,4	2,6	2,55
48,3	2,6	2,93
51,0	2,9	3,44
54,0	2,9	3,65
57,0	2,9	3,87
60,3	2,9	4,11
63,5	2,9	4,33
70,0	2,9	4,80
76,1	2,9	5,24
88,9	3,2	6,76
101,6	3,6	8,76
108,0	3,6	9,33
114,3	3,6	9,90
133,0	4	12,80
139,7	4	13,50
159,0	4,5	17,10
168,3	4,5	18,20
193,7	5,6	25,96
219,1	6,3	33,20
244,0	6,3	37,10
273,0	6,3	41,40
323,9	8	62,30

O.D. mm.	Tolerance of outside diameter	Tolerance of thickness			
		s/D <=0,025	<=0,050	<=0,10	>=0,10
<= 219,1	± 1% oppure ± 0,5mm	± 12,5% oppure ± 0,4 mm quale maggiore			
>= 219,1	quale dei due è maggiore	± 20%	± 15%	±12,5%	± 10%

Commercial seamless pipes		
Standards	TDR Standards	Steel Grade
EN	10216-1	P235 TR1, P235 TR2
DIN	1629	ST 37,0







## STEEL PIPES FOR WATERWORKS

### USE

Transportation of drinking water and conveyance of wastewater and other liquids.

### EXECUTION

- Longitudinal weld SAW
- Spiral weld SAW
- Longitudinal weld HFW
- Seamless

### REFERENCE STANDARDS

EN 10224 steel grade L235 – L275 – L355 and/or in according to national and European regulations.

### TOLERANCES

To execution specifications.

### LENGTHS

The pipes can be supplied in double lengths (8-13 meters) and/or according to customer requirements.

### ENDS

The pipes can be supplied as follows:

- with plain ends for thickness < 3,2 mm.
- with 30° angle bevel ends for thickness > 3,2 mm.
- with spherical joint for DN > 200.

### SURFACES

The pipes can be supplied bare or with special coatings depending on their intended use (See "Coatings" pages).

### CERTIFICATIONS

All materials are supplied with inspection certificates according to EN 10204 and/or Third Party Body if requested by the customer.

## STEEL PIPES FOR GAS and OIL PIPELINES

### USE

Transportation and distribution of natural gas (in compliance with D.M. - Ministerial Decree - 16/04/2008 ex D.M.24/11/1984) and petrochemical fluids.

### EXECUTION

- Longitudinal weld SAW
- Spiral weld SAW
- Longitudinal weld HFW
- Seamless

### REFERENCE STANDARDS

- API SPEC. 5L – ISO 3183.2007 quality steel grades Gr B/L245 – X42/L290 – X52/L360 – X56/L390 – X60/L415 – X65/L450 – X70/L485
- EN 10208 -1, EN 10208-2 in quality steel grades L210 – L235 – L245 – L290 - 360 – L415 – L450 – L485 – L555

### TOLERANCES

To execution specifications.

### LENGTHS

The pipes can be supplied in double lengths (8-13 meters) and/or according to customer requirements.

### ENDS

Bevelled with 30° angle.

### SURFACES

The pipes can be supplied bare or with special coatings (See "Coating" pages).

### CERTIFICATES

All materials are supplied with inspection certificates according to EN 10204 and/or Third Party Body if requested by the customer.



## STEEL PIPES FOR PETROCHEMICAL PLANTS

### USE

For petrochemical plants and transportation of fluids, liquids and natural gas used in the Oil & Gas and Power Generation industry.

### EXECUTION

- Longitudinal weld SAW
- Spiral weld SAW
- Longitudinal weld EFW
- Longitudinal weld HFW
- Seamless

### REFERENCE STANDARDS

1. API SPEC. 5L – ISO 3183.2007 quality steel grades Gr.B/L245 – X42/L290 – X52/L360 – X56/L390 – X60/L415 – X65/L450 – X70/L485
2. ASTM A671 GR. CC 60 – CC 65 – CC 70, Classe 12 – 22 – 32 - 42
3. ASTM A672 GR. CC 60 – CC 65 – CC 70, Classe 12 – 22 – 32 - 42
4. ASTM A53/A106 Gr.B

### TOLERANCES

To execution specifications.

### LENGTHS

The pipes can be supplied in double lengths (8-13 meters) and/or according to customer requirements.

### ENDS

Bevelled with 30° angle and/or according to customer requirements.

### SURFACES

The pipes can be supplied bare or with special coatings depending on the intended use (See "Coatings" pages)

### CERTIFICATES

All materials are supplied with inspection certificates according to EN 10204 and/or Third Party Body if requested by the customer.

## DIMENSIONS AND WEIGHTS TABLE

Nominal Outside Diameter			Wall Thickness		Weights		Schedules	Nominal Outside Diameter			Wall Thickness		Weights		Schedules
ND	mm	Inch	Inch	mm	Kg/m	lb/ft		ND	mm	Inch	Inch	mm	Kg/m	lb/ft	
40	48,3		0,109	2,77	3,11	2,09	10	150	168,3	6	0,189	4,80	19,35	13,00	STD 40
			0,145	3,68	4,05	2,72	STD 40								
			0,200	5,10	5,43	3,65	XS 80								
50	60,3	2	0,109	2,77	3,93	2,64	10	200	219,1	8	0,157	4,00	21,22	14,26	STD 40
			0,110	2,80	3,97	2,67	XS 80								
			0,126	3,20	4,51	3,03									
			0,142	3,60	5,03	3,38									
			0,154	3,90	5,42	3,64									
65	73,0		0,120	3,05	5,26	3,54	10	250	273,1	10	0,189	4,80	25,37	17,04	STD 40
			0,126	3,20	5,51	3,70	XS 80								
			0,142	3,60	6,16	4,14									
			0,154	3,90	6,65	4,47									
			0,205	5,20	8,69	5,84									
			0,276	7,00	11,39	7,66									
80	88,9	3	0,110	2,80	5,95	3,99	10	300	323,9	12	0,189	4,80	37,77	25,38	STD 40
			0,126	3,20	6,76	4,54	XS 80								
			0,142	3,60	7,57	5,09									
			0,157	4,00	8,37	5,63									
			0,189	4,80	9,95	6,69									
			0,217	5,50	11,31	7,60									
			0,299	7,60	15,24	10,24									
100	114,3	4	0,126	3,20	8,77	5,89	10	300	323,9	12	0,220	5,60	43,96	29,54	STD 40
			0,142	3,60	9,83	6,60	XS 80								
			0,157	4,00	10,88	7,31									
			0,189	4,80	12,96	8,71									
			0,205	5,20	13,99	9,40									
			0,220	5,60	15,01	10,09									
			0,237	6,02	16,07	10,80									
			0,339	8,60	22,42	15,06									
			125	141,3	5	0,126					3,20	10,90	7,24	10	
0,142	3,60	12,22				8,21	XS 80								
0,157	4,00	13,54				8,99									
0,189	4,80	16,16				10,73									
0,220	5,60	18,74				12,44									
0,260	6,60	21,92				14,73									
0,280	7,10	23,50				15,60									
0,374	9,50	30,88				20,75									
150	168,3	6	0,142	3,60	14,62	9,82	10	300	323,9	12	0,311	7,90	61,56	41,37	STD 40
			0,157	4,00	16,21	10,89	XS 80								
150	168,3	6	0,189	4,80	19,35	13,00	10	300	323,9	12	0,343	8,70	67,62	45,44	STD 40
			0,220	5,60	22,47	15,10	XS 80								
			0,252	6,40	25,55	17,17									
			0,280	7,10	28,22	18,97									
			0,311	7,90	31,25	21,00									
			0,433	11,00	42,67	22,00									
			0,500	12,70	48,73	32,75									
			0,157	4,00	21,22	14,26					STD 40				
			0,189	4,80	25,37	17,04									
			0,205	5,20	27,43	18,43									
0,220	5,60	29,48	19,81												
0,252	6,40	33,57	22,56	STD 40											
0,276	7,00	36,61	24,60												
0,311	7,90	41,14	27,65	STD 40											
0,323	8,20	42,65	28,66												
0,343	8,70	45,14	30,33												
0,437	11,10	56,94	38,26												
0,500	12,70	64,64	43,44	STD 40											
0,594	15,10	75,96	51,04												
0,157	4,00	26,54	17,84	STD 40											
0,189	4,80	31,76	21,34												
0,220	5,60	36,94	24,82												
0,252	6,40	42,09	28,28												
0,280	7,10	46,57	31,29												
0,307	7,80	51,03	34,29												
0,343	8,70	56,72	38,12												
0,366	9,30	60,50	40,65												
0,437	11,10	71,72	48,19												
0,500	12,70	81,55	54,80												
0,594	15,10	96,07	64,56												
0,189	4,80	37,77	25,38	STD 40											
0,220	5,60	43,96	29,54												
0,232	5,90	46,27	31,09												
0,252	6,40	50,11	33,67												
0,280	7,10	55,47	37,27												
0,311	7,90	61,56	41,37												
0,331	8,40	65,35	43,92												
0,343	8,70	67,62	45,44												
0,374	9,50	73,65	49,49												
0,406	10,30	79,65	53,52												



**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules
ND	mm	Inch	Inch	mm	Kg/m	lb/ft	
300	323,9	12	0,437	11,10	85,62	57,53	<b>XS</b> <b>60</b>
			0,469	11,90	91,56	61,52	
			0,500	12,70	97,46	65,49	
			0,563	14,30	109,18	73,36	
350	355,6	14	0,220	5,60	48,33	32,48	<b>10</b> <b>20</b> <b>STD</b> <b>30</b> <b>40</b> <b>XS</b>
			0,252	6,40	55,11	37,03	
			0,280	7,10	61,02	41,00	
			0,311	7,90	67,74	45,52	
			0,343	8,70	74,42	50,01	
			0,374	9,50	81,08	54,48	
			0,406	10,30	87,71	58,94	
			0,437	11,10	94,30	63,37	
400	406,4	16	0,220	5,60	55,35	37,19	<b>10</b> <b>20</b> <b>STD</b> <b>30</b> <b>40</b> <b>XS</b> <b>60</b>
			0,248	6,30	62,16	41,77	
			0,280	7,10	69,91	46,98	
			0,311	7,90	77,63	52,17	
			0,343	8,70	85,32	57,33	
			0,374	9,50	92,98	62,48	
			0,406	10,30	100,61	67,61	
			0,437	11,10	108,20	72,71	
			0,469	11,90	115,77	77,79	
			0,500	12,70	123,30	82,85	
			0,563	14,30	138,27	92,91	
			0,657	16,70	160,49	107,84	
450	457,0	18	0,252	6,40	71,12	47,79	<b>10</b> <b>20</b> <b>STD</b> <b>30</b> <b>XS</b> <b>40</b> <b>60</b>
			0,280	7,10	78,77	52,93	
			0,311	7,90	87,49	58,79	
			0,343	8,70	96,18	64,63	
			0,374	9,50	104,84	70,45	
			0,406	10,30	113,46	76,24	
			0,437	11,10	122,05	82,02	
			0,469	11,90	130,62	87,77	
			0,500	12,70	139,15	93,50	
			0,563	14,30	156,11	104,90	
			0,579	14,70	160,33	107,74	
			0,626	15,90	172,95	116,22	
0,689	17,50	189,67	127,45				
0,752	19,10	206,25	138,60				
500	508,0	20	0,252	6,40	79,16	53,20	<b>10</b> <b>STD</b> <b>20</b> <b>XS</b> <b>30</b> <b>40</b>
			0,311	7,90	97,43	65,47	
			0,343	8,70	107,12	71,98	
			0,374	9,50	116,78	78,47	
			0,406	10,30	126,41	84,95	
			0,437	11,10	136,01	91,40	
			0,469	11,90	145,58	97,83	
			0,500	12,70	155,12	104,24	
			0,563	14,30	174,10	116,99	
			0,594	15,10	183,54	123,33	
			0,626	15,90	192,95	129,66	
			0,705	17,90	216,34	145,37	
0,752	19,10	230,27	154,74				
550	559,0	22	0,252	6,40	87,21	58,60	<b>10</b> <b>STD</b> <b>20</b> <b>XS</b> <b>30</b>
			0,280	7,10	96,63	64,93	
			0,311	7,90	107,36	72,14	
			0,343	8,70	118,06	79,33	
			0,374	9,50	128,73	86,50	
			0,406	10,30	139,37	93,65	
			0,437	11,10	149,97	100,78	
			0,469	11,90	160,55	107,88	
			0,500	12,70	171,09	114,97	
			0,563	14,30	192,08	129,07	
			0,626	15,90	212,95	143,09	
			0,689	17,50	233,68	157,03	
0,752	19,10	254,30	170,88				
0,811	20,60	273,51	183,79				
600	610,0	24	0,252	6,40	95,26	64,01	<b>10</b> <b>STD</b> <b>20</b> <b>XS</b> <b>30</b> <b>40</b>
			0,280	7,10	105,56	70,93	
			0,343	8,70	129,00	86,69	
			0,374	9,50	140,68	94,53	
			0,406	10,30	152,32	102,36	
			0,437	11,10	163,93	110,16	
			0,469	11,90	175,51	117,94	
			0,500	12,70	187,06	125,70	
			0,563	14,30	210,07	141,16	
			0,626	15,90	232,94	156,53	
			0,689	17,50	255,69	171,82	
			0,752	19,10	278,32	187,02	
0,811	20,60	299,41	201,20				

**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules				
ND	mm	Inch	Inch	mm	Kg/m	lb/ft					
600	610,0	24	0,874	22,20	321,79	216,23	<b>60</b>				
			0,969	24,60	355,12	238,63					
650	660,0	26	0,252	6,40	103,15	69,32	<b>10</b> <b>STD</b> <b>XS</b> <b>20</b>				
			0,280	7,10	114,31	76,82					
			0,311	7,90	127,04	85,37					
			0,343	8,70	139,73	93,90					
			0,374	9,50	152,39	102,40					
			0,406	10,30	165,02	110,89					
			0,437	11,10	177,62	119,36					
			0,469	11,90	190,19	127,80					
			0,500	12,70	202,72	136,22					
			0,563	14,30	227,70	153,01					
			0,626	15,90	252,55	169,70					
			0,689	17,50	277,27	186,32					
700	711,0	28	0,280	7,10	123,24	82,82	<b>10</b> <b>STD</b> <b>XS</b> <b>20</b> <b>30</b>				
			0,311	7,90	136,97	92,04					
			0,374	9,50	164,34	110,43					
			0,406	10,30	177,98	119,59					
			0,437	11,10	191,58	128,74					
			0,469	11,90	205,15	137,86					
			0,500	12,70	218,69	146,96					
			0,563	14,30	245,68	165,09					
			0,626	15,90	272,54	183,14					
			0,689	17,50	299,28	201,11					
			0,752	19,10	325,89	218,99					
			0,811	20,60	350,72	235,67					
750	762	30	0,311	7,90	146,91	98,72	<b>10</b> <b>STD</b>				
			0,343	8,70	161,61	108,60					
			0,374	9,50	176,29	118,46					
			0,406	10,30	190,93	128,30					
			0,437	11,10	205,54	138,12					
			0,469	11,90	220,12	147,91					
			750	914,0	36	0,311		7,90	176,52	118,62	<b>10</b>
						0,343		8,70	193,84	130,80	
						0,374		9,50	211,16	143,98	
						0,406		10,30	228,48	157,16	
						0,437		11,10	245,80	170,34	
						0,469		11,90	263,12	183,52	
0,500	12,70	280,44				196,70					
0,563	14,30	324,88				228,88					
0,626	15,90	369,32				261,06					
0,689	17,50	413,76				293,24					
0,752	19,10	458,20				325,42					
0,811	20,60	502,64				357,60					
800	813,0	32	0,280	7,10	141,10	94,82	<b>10</b> <b>STD</b> <b>XS</b> <b>20</b> <b>30</b> <b>40</b>				
			0,311	7,90	156,84	105,39					
			0,374	9,50	188,24	126,49					
			0,406	10,30	203,88	137,00					
			0,437	11,10	219,50	147,50					
			0,469	11,90	235,09	157,97					
			0,500	12,70	250,64	168,42					
			0,563	14,30	281,65	189,26					
			0,626	15,90	312,54	210,02					
			0,689	17,50	343,30	230,69					
			0,752	19,10	373,93	251,27					
			0,811	20,60	402,54	270,49					
850	864,0	34	0,311	7,90	166,78	112,07	<b>10</b> <b>STD</b> <b>XS</b> <b>20</b> <b>30</b> <b>40</b>				
			0,343	8,70	183,50	123,30					
			0,374	9,50	200,18	134,52					
			0,406	10,30	216,84	145,71					
			0,437	11,10	233,46	156,88					
			0,469	11,90	250,05	168,03					
			0,500	12,70	266,61	179,15					
			0,563	14,30	299,64	201,35					
			0,626	15,90	332,53	223,45					
			0,689	17,50	365,31	245,48					
			0,752	19,10	397,95	267,41					
			0,811	20,60	428,44	287,90					
900	914,0	36	0,311	7,90	176,52	118,62	<b>10</b>				
			0,343	8,70	193,84	130,80					
			0,374	9,50	211,16	143,98					
			0,406	10,30	228,48	157,16					
			0,437	11,10	245,80	170,34					
			0,469	11,90	263,12	183,52					
			0,500	12,70	280,44	196,70					
			0,563	14,30	324,88	228,88					
			0,626	15,90	369,32	261,06					
			0,689	17,50	413,76	293,24					
			0,752	19,10	458,20	325,42					
			0,811	20,60	502,64	357,60					



**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules	
ND	mm	Inch	Inch	mm	Kg/m	lb/ft		
900	914,0	36	0,343	8,70	194,22	130,51	<b>STD</b>	
			0,374	9,50	211,90	142,39		
			0,406	10,30	229,54	154,24		
			0,437	11,10	247,15	166,08		
			0,469	11,90	264,72	177,89	<b>XS</b>	<b>20</b>
			0,500	12,70	282,27	189,68		
			0,563	14,30	317,27	213,19		
			0,626	15,90	352,14	236,63	<b>30</b>	
			0,689	17,50	386,88	259,97		
			0,752	19,10	421,50	283,24	<b>40</b>	
			0,811	20,60	453,84	304,97		
			0,874	22,20	488,22	328,07		
			0,937	23,80	522,47	351,08		
			1000	1016	40	0,311	7,90	196,39
0,343	8,70	216,11				145,22		
0,374	9,50	235,79				158,45		
0,406	10,30	255,45				171,65		
0,437	11,10	275,07				184,84	<b>XS</b>	
0,469	11,90	294,66				198,00		
0,500	12,70	314,22				211,14		
0,563	14,30	353,24				237,36	<b>30</b>	
0,626	15,90	392,13				263,50		
0,689	17,50	430,90				289,55	<b>40</b>	
0,752	19,10	469,55				315,52		
0,811	20,60	505,66				339,79		
0,874	22,20	544,06				365,59		
0,937	23,80	582,33				391,31	<b>50</b>	
1,000	25,40	620,48	416,94					
1050	1.067,0	42	0,343	8,70	227,05	152,57	<b>STD</b>	
			0,374	9,50	247,74	166,47		
			0,406	10,30	268,40	180,36		
			0,437	11,10	289,03	194,22		
			0,469	11,90	309,62	208,06	<b>XS</b>	
			0,500	12,70	330,19	221,88		
			0,563	14,30	371,22	249,45		
			0,626	15,90	412,13	276,94	<b>30</b>	
			0,689	17,50	452,91	304,34		
			0,752	19,10	493,57	331,66	<b>40</b>	
			0,811	20,60	531,57	357,20		
			0,874	22,20	570,22	383,00		
			0,937	23,80	608,77	408,00		
			1100	1.118,0	44	0,343	8,70	237,99
0,374	9,50	259,69				174,50		
0,406	10,30	281,35				189,06		
0,469	11,90	324,59				218,11		
0,500	12,70	346,16				232,61	<b>XS</b>	
0,563	14,30	389,21				261,53		
0,626	15,90	432,13				290,38		
0,689	17,50	474,92				319,13	<b>30</b>	
0,752	19,10	517,59				347,80		
0,811	20,60	557,47				374,61	<b>40</b>	
0,874	22,20	599,90				403,11		
0,937	23,80	642,19				431,53		
1,000	25,40	684,37				459,87		
1150	1.168,0	46				0,343	8,70	248,72
			0,374	9,50	271,40	182,37		
			0,406	10,30	294,05	197,59		
			0,469	11,90	339,26	227,97		
			0,500	12,70	361,82	243,13	<b>XS</b>	
			0,563	14,30	406,84	273,38		
			0,626	15,90	451,73	303,55		
			0,689	17,50	496,50	333,63	<b>30</b>	
			0,748	19,00	538,35	361,76		
			0,811	20,60	582,87	391,67	<b>40</b>	
			0,874	22,20	627,27	421,51		
			0,937	23,80	671,54	451,25		
			1,000	25,40	715,68	480,92		
			1200	1.219,0	48	0,374	9,50	283,35
0,406	10,30	307,01				206,30		
0,469	11,90	354,23				238,03		
0,500	12,70	377,79				253,86		
0,563	14,30	424,82				285,47	<b>XS</b>	
0,626	15,90	471,73				316,99		
0,689	17,50	518,51				348,42		
0,748	19,00	562,25				377,81	<b>30</b>	
0,811	20,60	608,78				409,08		
0,874	22,20	655,19				440,27	<b>40</b>	
0,937	23,80	701,47				471,37		
0,937	23,80	701,47				471,37		
1,000	25,40	747,75				502,38		

**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules	
ND	mm	Inch	Inch	mm	Kg/m	lb/ft		
1200	1.219,0	48	1,000	25,40	747,63	502,38	<b>STD</b>	
			0,374	9,50	307,25	206,46		
			0,406	10,30	332,92	223,71		
			0,469	11,90	384,16	258,14		
			0,500	12,70	409,74	275,33	<b>XS</b>	
			0,563	14,30	460,79	309,64		
			0,626	15,90	511,72	343,86		
			0,689	17,50	562,53	378,00	<b>30</b>	
			0,752	19,10	613,20	412,05		
			0,811	20,60	660,60	443,90	<b>40</b>	
			0,874	22,20	711,03	477,79		
			0,937	23,80	761,34	511,59		
			1,000	25,40	811,52	545,31		
			1350	1.372,0	54	0,406	10,30	345,87
0,469	11,90	399,13				268,20		
0,500	12,70	425,71				286,06		
0,563	14,30	478,78				321,72		
0,626	15,90	531,72				357,30	<b>XS</b>	
0,689	17,50	584,53				392,79		
0,752	19,10	637,22				428,19		
0,811	20,60	686,51				461,31	<b>30</b>	
0,874	22,20	738,95				496,55		
0,937	23,80	791,27				531,71	<b>40</b>	
1,000	25,40	843,46				566,78		
0,437	11,10	386,20				259,51		<b>STD</b>
0,469	11,90	413,80				278,06		
0,500	12,70	441,37				296,59		
0,563	14,30	496,41	333,57					
0,626	15,90	551,32	370,47	<b>XS</b>				
0,689	17,50	606,11	407,29					
0,752	19,10	660,77	444,02					
0,811	20,60	711,91	478,38	<b>30</b>				
0,874	22,20	766,32	514,95					
0,937	23,80	820,61	551,43	<b>40</b>				
1,000	25,40	874,78	587,83					
0,469	11,90	443,73	298,17		<b>STD</b>			
0,500	12,70	473,31	318,05					
0,563	14,30	532,38	357,74					
0,626	15,90	591,32	397,35					
0,689	17,50	650,13	436,87	<b>30</b>				
0,752	19,10	709,00	476,20					
1500	1.524,0	60	0,752	19,10	708,82	476,30	<b>STD</b>	
			0,811	20,60	763,72	513,20		
			0,874	22,20	822,16	552,47		
			0,937	23,80	880,48	591,65		
			1,000	25,40	938,67	630,76	<b>XS</b>	
			0,469	11,90	458,70	308,23		<b>STD</b>
			0,500	12,70	489,28	328,78		
			0,563	14,30	550,36	369,83		
			0,626	15,90	611,31	410,78		
			0,689	17,50	672,14	451,66	<b>30</b>	
			0,752	19,10	732,84	492,44		
			0,811	20,60	789,63	530,61	<b>40</b>	
			0,874	22,20	850,08	571,23		
			0,937	23,80	910,41	611,77		
1,000	25,40	970,61	652,22					
1600	1.626,0	64	0,469	11,90	473,66	318,29	<b>STD</b>	
			0,500	12,70	505,26	339,52		
			0,563	14,30	568,35	381,91		
			0,626	15,90	631,31	424,22		
			0,689	17,50	694,15	466,45	<b>XS</b>	
			0,752	19,10	756,86	508,59		
			0,811	20,60	815,54	548,02		
			0,874	22,20	878,00	589,99	<b>30</b>	
			0,937	23,80	940,34	631,88		
			1,000	25,40	1002,56	673,69	<b>40</b>	
			0,500	12,70	520,92	350,04		<b>STD</b>
			0,563	14,30	585,98	393,76		
			0,626	15,90	650,92	437,39		
			0,689	17,50	715,73	480,95		
0,752	19,10	780,41	524,41	<b>30</b>				
0,811	20,60	840,94	565,08					
0,874	22,20	905,38	608,38	<b>40</b>				
0,937	23,80	969,69	651,60					
1,000	25,40	1033,88	694,73					
0,500	12,70	536,89	360,77		<b>STD</b>			
0,563	14,30	603,96	405,84					
0,626	15,90	670,91	450,83					
0,689	17,50	737,73	495,73					
0,752	19,10	804,43	540,55	<b>30</b>				
0,811	20,60	866,84	582,49					



**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules
ND	mm	Inch	Inch	mm	Kg/m	lb/ft	
1700	1.727,0	68	0,874	22,20	933,30	627,15	
			0,937	23,80	999,62	671,71	
			1,000	25,40	1065,82	716,20	
1750	1.778,0	70	0,500	12,70	552,86	371,50	
			0,563	14,30	621,95	417,93	
			0,626	15,90	690,91	464,27	
			0,689	17,50	759,74	510,52	
			0,752	19,10	828,45	556,69	
			0,811	20,60	892,75	599,90	
			0,874	22,20	961,22	645,91	
			0,937	23,80	1029,55	691,83	
1800	1.829,0	72	0,500	12,70	568,83	382,24	
			0,563	14,30	639,93	430,01	
			0,626	15,90	710,91	477,71	
			0,689	17,50	781,75	525,31	
			0,752	19,10	852,47	572,84	
			0,811	20,60	918,66	617,31	
			0,874	22,20	989,14	664,67	
			0,937	23,80	1059,49	711,94	
1850	1.880,0	74	0,500	12,70	584,80	392,97	
			0,563	14,30	657,92	442,10	
			0,626	15,90	730,90	491,14	
			0,689	17,50	803,76	540,10	
			0,752	19,10	876,50	588,98	
			0,811	20,60	944,57	634,72	
			0,874	22,20	1017,06	683,43	
			0,937	23,80	1089,42	732,06	
1900	1.930,0	76	0,500	12,70	600,46	403,49	
			0,563	14,30	675,55	453,95	
			0,626	15,90	750,51	504,32	
			0,689	17,50	825,34	554,60	
			0,752	19,10	900,05	604,80	
			0,811	20,60	969,97	651,79	
			0,874	22,20	1044,43	701,82	
			0,937	23,80	1118,76	751,77	
1950	1.981,0	78	0,500	12,70	616,44	414,23	
			0,563	14,30	693,53	466,03	

**DIMENSIONS AND WEIGHTS TABLE**

Nominal Outside Diameter			Wall Thickness		Weights		Schedules
ND	mm	Inch	Inch	mm	Kg/m	lb/ft	
2150	2.184,0	86	0,937	23,80	1267,84	851,95	
			1,000	25,40	1352,07	908,55	
2200	2.235,0	88	0,563	14,30	783,10	526,22	
			0,626	15,90	870,10	584,68	
			0,689	17,50	956,96	643,05	
			0,752	19,10	1043,70	701,34	
			0,811	20,60	1124,91	755,90	
			0,874	22,20	1211,40	814,02	
			0,937	23,80	1297,77	872,06	
			1,000	25,40	1384,01	930,01	
2250	2.286,0	90	0,563	14,30	801,09	538,31	
			0,626	15,90	890,09	598,11	
			0,689	17,50	978,97	657,84	
			0,752	19,10	1067,72	717,48	
			0,811	20,60	1150,81	773,31	
			0,874	22,20	1239,32	832,79	
			0,937	23,80	1327,70	892,18	
			1,000	25,40	1415,96	951,48	
2300	2.337,0	92	0,563	14,30	819,07	550,39	
			0,626	15,90	910,09	611,55	
			0,689	17,50	1000,98	672,63	
			0,752	19,10	1091,74	733,62	
			0,811	20,60	1176,72	790,72	
			0,874	22,20	1267,24	851,55	
			0,937	23,80	1357,64	912,29	
			1,000	25,40	1447,90	972,95	
2350	2.388,0	94	0,563	14,30	837,06	562,48	
			0,626	15,90	930,09	624,99	
			0,689	17,50	1022,99	687,42	
			0,752	19,10	1115,77	749,76	
			0,811	20,60	1202,63	808,13	
			0,874	22,20	1295,16	870,31	
			0,937	23,80	1387,57	932,40	
			1,000	25,40	1479,85	994,41	
2400	2.438,0	96	0,563	14,30	854,69	574,32	
			0,626	15,90	949,69	638,16	
			0,689	17,50	1044,57	701,92	
			0,752	19,10	1139,32	765,59	
			0,811	20,60	1228,03	825,20	
			0,874	22,20	1322,53	888,70	

**PIPE DIMENSIONS AND WEIGHTS  
(Metric System)**

**Weight in kg for meter (W)**

$$W = 0,0246 \times (D-t) \times t$$

where:

**D = external diameter in mm**

**t = wall thickness in mm**



## COATINGS

The internal and external coatings of the pipe protect it from corrosion and prevent chemical and mechanical interactions with the pipeline walls. The effectiveness and quality of the coating determines the quality and reliability of the pipe over time. We supply pipes for pipelines with the following protective coatings:

### EXTERNAL COATING

#### Temporary protective coating

Coating layer that protects the external surface of the pipe from oxidation with a duration, outdoors, of six months. The coating is executed by:

- Shot-blasting.
- Spraying.
- According to technical specifications.

#### Inorganic zinc coating

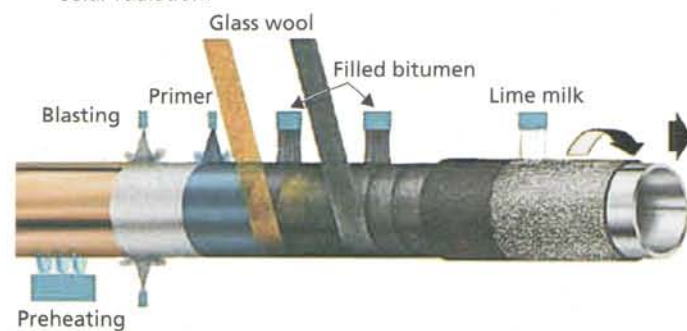
Long life anti oxidation coating suitable for aboveground pipelines. The coating is executed by:

- Shot-blasting Sa 2 1/2.
- Spraying.
- According to technical specifications and/or customer's requirements.

#### Bituminous coating UNI ISO 5256

It's the oldest kind of coating but commonly used today for water pipelines, gas distribution on the rough ground and underground waterlogged, corrosive and saline ambient. The coating is carried out as follows:

- Shot-blasting Sa 2 1/2.
- Spray application of bituminous primer and air-dried.
- Application of hot-bitumen filled up to 30% with inert mineral powder.
- Spiral wrapping with one or two fiberglass bands impregnated on both sides with the same bitumen mix.
- Sprinkling of lime hydrate film for protection against the solar radiation.



#### Polyethylene coating with cold tapes UNI 10190

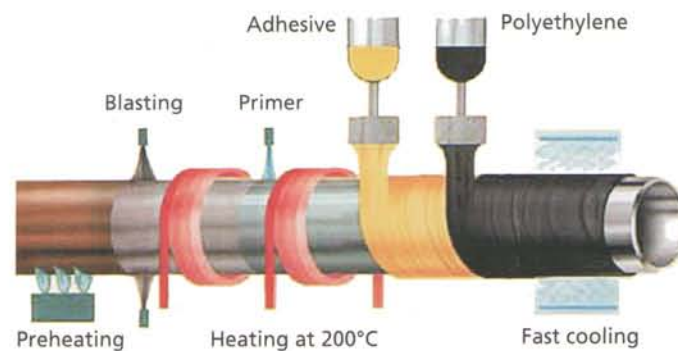
Typical coating for small quantities having the technical characteristics of high dielectric strength, high chemical resistance to acids and high resistance to cathode disbanding. The joints are easy to restore and it is used for underground pipelines for water, gas, petrol. Executed in accordance with UNI 10190, ASTM D 1000 or any other customer requests. The coating is executed by:

- Shot-blasting Sa 2 1/2.
- Application of adhesive primer.
- Application of inner tape (usually black) with overwrapping requested by the customer (i.e. 50%).
- Application of outer tape (usually black) with overwrapping requested by the customer (i.e. 50%).

#### Polyethylene coating with hot tapes or extruded UNI 9099 and/or DIN 30670

Most popular coating with a high resistance to knocks and abrasion, to chemical and atmospheric agents with high dielectric strength. Executed in accordance with UNI 9099 and/or DIN 30670 or any other customer request. The coating is executed by:

- Shot-blasting Sa 2 1/2.
- 1 lot application of the three layer of:
  - Epoxy resin primer.
  - Adhesive.
  - Polyethylene layer (extruded or sideband).



#### High thickness polyurethane coating EN 10290

Part of a family of new generation two-component coatings (base+catalyst), with high resistance to impact, abrasion, chemical and atmospheric agents, high dielectric strength and high resistance to thermal excursion.

- Executed according to EN 10290.
- If applied with thickness 500 ÷ 800 µm it is a valid alternative to bituminous coating.
- If applied with thickness 1000 ÷ 1800 µm it is a valid alternative to the most modern polyethylene coatings (Polypropylene, FBE epoxy powders).
- If applied with thickness 1200 µm it is an excellent substitute to triple-layer polyethylene.
- The wide range of available colors is ideal for pipelines with low environmental impact. It can also be used for underground lines and lines submerged in freshwater or seawater.
- Easy-to-repair (as it is a single-layer coating) using specific kits available on the market.
- Easy-to-coat joints with the same product used to coat the pipes or with thermo-retractable couplings.

The coating is executed as follows:

- Shot-blasting Sa 2 1/2.
- Application of the product in one or more layers with air-less spray to reach the minimum thickness required.

#### Gunite coating

- Used for underwater pipelines, it is applied according to customer requirements.
- Applied by concrete overweighting to 60 mm. thickness with interior steel wire reinforcement and anticorrosion protection.

#### Control and certificates

- All coating operations are monitored during the different stages of the production process as required by the reference standards and technical specifications of the products used.
- At the end of the production cycle and before shipment the certificates are issued bearing the result of the tests carried out and conformity of the coating/painting to the standards and/or customer requirements.

### INTERNAL COATINGS

#### Bituminous primer UNI 5256 CL. A

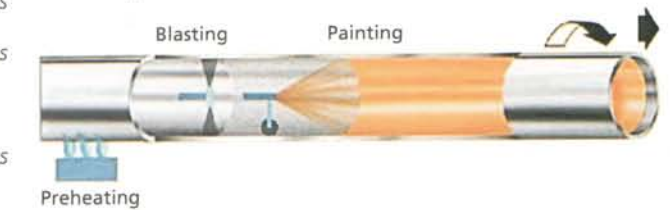
Protective bituminous anticorrosion primer, used primarily for internal surfaces of pipelines used to convey industrial sewage, acid and basic chemical fluids. Executed in accordance with UNI ISO 5256 and/or customer requirements as follows:

- Shot-blasting Sa 2 1/2.
- Primer spray application or sprinkling.

#### Epoxy coating for drinking water and liquid food

Painting with high thickness two-component epoxy resin, solvent-free, for pipelines used to convey drinking water and liquid food, in accordance with D.M. 174. Executed in accordance with customer requirements and technical specifications as follows:

- Shot-blasting Sa 2 1/2.
- Spray application of epoxy resin with one layer d.f.t. from 50 to 400 µm.



#### Epoxy antifriction coatings for gas transportation

Painting with low thickness two-component epoxy-resin for gas pipelines. Executed in accordance with customer requirements and technical specifications as follows:

- Shot-blasting Sa 2 1/2.
- Spray application of epoxy resin with one layer d.f.t. from 50 to 120 µm.

#### Control and certificates

- All coating operations are monitored during the different stages of the production process as required by the reference standards and technical specifications of the products used.
- At the end of the production cycle and before shipment the certificates are issued bearing the result of the tests carried out and conformity of the coating/painting to the standards and/or customer requirements.







**Ferrero S.p.A. thanks you**

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