CHRYSSAFIDIS

1.1 ERW WATER PIPES

Scope and Field of Application
Transmission of liquids

Sizes
- Outside Diameter
  21.3 mm-323.9 mm
- Wall Thickness
  2 mm-12.7 mm
- Length
  OD 21.3 mm-101.6 mm; max. 7.50 m
  OD 114.3 mm-323.9 mm; max. 18.30 m

Finishing Operations
Plain end (square cut or bevelled)
Threaded and coupled
Grooved

Mill Test Certificates
Issued upon request according to
EN 10204 2.1; 2.2; 3.1; 3.2

Tests Performed
Leak tightness testing: Hydrostatic Test, Eddy Current Test
Destructive Tests: Flattening, Bending
Chemical Analysis
Others as required by the standards
Ultrasonic weld seam test for gas pipes

Surface Protection
Outside protective coating (oil, varnish, epoxy)
Hot dip galvanizing
Polyethylene Coating

Production Standards
- 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 Standart 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 used up to 25 bar operating pressure for water.
- Quality Certificates
  FM approved
  NSF (National Safety Foundation) certified
  DVGW Certified
  UL/CUL Certified
- NDT Standards
  E/C (EN 10246-1), E/C (ASTM E309)

Material Quality

DIN 17100	St 37, St 44, St 52
EN 10025	S 195, S 235, S 275, S 355
	Gr A, Gr B

EN 10255 Heavy & Medium Series

Specifed outside diameter[a]	Thread size[a]	OD		H Heavy Series			M Medium Series		
		Max	Min	Wall thickness	Mass per unit of bare tube		Wall thickness	Mass per unit of bare tube	
D	R			T	P.E	Socketed	T	P.E	Socketed
(mm)	-	(mm)	(mm)	(mm)	(kg/m)	(kg/m)	(mm)	(kg/m)	(kg/m)
21.3	1/2	21.8	21.0	3.2	1.44	1.45	2.6	1.21	1.22
26.9	3/4	27.3	26.5	3.2	1.87	1.88	2.6	1.56	1.57
33.7	1	34.2	33.3	4.0	2.93	2.95	3.2	2.41	2.43
42.4	1 1/4	42.9	42.0	4.0	3.79	3.82	3.2	3.10	3.13
48.3	1 1/2	48.8	47.9	4.0	4.37	4.41	3.2	3.56	3.60
60.3	2	60.8	59.7	4.5	6.19	6.26	3.6	5.03	5.10
76.1	2 1/2	76.6	75.3	4.5	7.93	8.05	3.6	6.42	6.54
88.9	3	89.5	88.0	5.0	10.3	10.5	4.0	8.36	8.53
114.3	4	115.0	113.1	5.4	14.5	14.8	4.5	12.2	12.5
139.7	5	140.8	138.5	5.4	17.9	18.4	5.0	16.6	17.1
165.1	6	166.5	163.9	5.4	21.3	21.9	5.0	19.8	20.4

Light 1 & Light 2 Series For Type L Pipes

Specifed outside diameter[a]	Thread size[a]	OD		Wall thickness	Mass per unit of bare tube	
D	R	Max	Min	T	P.E	Socketed
(mm)	-	(mm)	(mm)	(mm)	(kg/m)	(kg/m)
21.3	1/2	21.7	21.0	2.3	1.08	1.09
26.9	3/4	27.1	26.4	2.3	1.39	1.40
33.7	1	34.0	33.2	2.9	2.20	2.22
42.4	1 1/4	42.7	41.9	2.9	2.82	2.85
48.3	1 1/2	48.6	47.8	2.9	3.24	3.28
60.3	2	60.7	59.6	3.2	4.49	4.56
76.1	2 1/2	76.3	75.2	3.2	5.73	5.85
88.9	3	89.4	87.9	3.6	7.55	7.72
114.3	4	114.9	113.0	4.0	10.8	11.1

[a] For relationship between specified outside diameter (D), thread size (R) and nominal diameter (DN), see annex A.

1.1.1 GROOVED PIPE

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Scope and Field of Application

Fire installations (sprinklers), automotive, chemistry, installation systems, air conditioning, dredging, mining, ship building, textile, irrigation and sewage systems

Production Standards

ASTM A 53
ASTM A 795
EN 10255

Material Quality

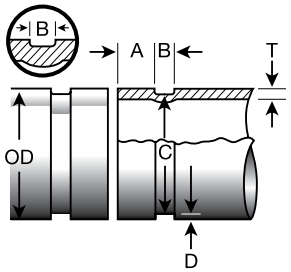
Gr A, Gr B
Gr A, Gr B
S 195

Delivery Conditions

Grooved

Tests Performed

Visual and Dimensional Inspection
Mechanical Tests:
Tensile Test, Flattening Test, Flaring Test, Expanding Test
Metallographic Examination
Chemical Analysis
Hydrostatic Test
Non Destructive Inspection:
On-Line Eddy Current



Exaggerated for Clarity

Mill Test Certificates

Acc. to EN 10204 2.1; 2.2; 3.1; 3.2

Surface Conditions

Black self colored/uncoated
Surface protective coating (black/red varnished) (Other colors are available upon request.)
Galvanized

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Grooved Dimensions

Nominal Pipe Size Inches / mm	Dimensions - Inches/milimeters									
	Pipe Outside Diameter (OD)			Gasket Seat (A) ± 0.03 ± 0.76	Groove Width (B) ± 0.03 ± 0.76	Groove Diameter (c)		Groove Depth (D) (ref.)	Min Allow Wall Thickness (T)	Max. Allow Flare Diameter
	Basic	Tolerance +	Tolerance -			Basic	Tol. +0.000 +0.00			
3/4 20	1.050 26.9	0.010 0.25	0.010 0.25	0.625 15.88	0.281 7.14	0.938 23.83	-0.015 -0.38	0.056 1.42	0.083 2.11	1.15 29.2
1 25	1.315 33.7	0.013 0.33	0.013 0.33	0.625 15.88	0.281 7.14	1.190 30.23	-0.015 -0.38	0.063 1.60	0.083 2.11	1.43 36.3
1 1/4 32	1.660 42.4	0.016 0.41	0.016 0.41	0.625 15.88	0.281 7.14	1.535 38.99	-0.015 -0.38	0.063 1.60	0.083 2.11	1.77 45.0
1 1/2 40	1.900 48.3	0.019 0.48	0.019 0.48	0.625 15.88	0.281 7.14	1.775 45.09	-0.015 -0.38	0.063 1.60	0.083 2.11	2.01 51.1
2 50	2.375 60.3	0.024 0.61	0.024 0.61	0.625 15.88	0.344 8.74	2.250 57.15	-0.015 -0.38	0.063 1.60	0.083 2.11	2.48 63.0
2 1/2 65	2.875 73.0	0.029 0.74	0.029 0.74	0.625 15.88	0.344 8.74	2.720 69.09	-0.018 -0.46	0.078 1.98	0.083 2.11	2.98 75.7
76.1 mm	3.000 76.1	0.030 0.76	0.030 0.76	0.625 15.88	0.344 8.74	2.845 72.26	-0.018 -0.46	0.078 1.98	0.083 2.11	3.10 78.7
3 80	3.500 88.9	0.035 0.89	0.031 0.79	0.625 15.88	0.344 8.74	3.344 84.94	-0.018 -0.46	0.078 1.98	0.083 2.11	3.60 91.4
3 1/2 90	4.000 101.6	0.040 1.02	0.031 0.79	0.625 15.88	0.344 8.74	3.834 97.38	-0.020 -0.51	0.083 2.11	0.083 2.11	4.10 104.1
4 100	4.500 114.3	0.045 1.14	0.031 0.79	0.625 15.88	0.344 8.74	4.334 110.08	-0.020 -0.51	0.083 2.11	0.083 2.11	4.60 116.8
4 1/2 120	5.000 127.0	0.050 1.27	0.031 0.79	0.625 15.88	0.344 8.74	4.834 122.78	-0.020 -0.51	0.083 2.11	0.095 2.41	5.10 129.5
133.0 mm	5.250 133.0	0.053 1.35	0.031 0.79	0.625 15.88	0.344 8.74	5.084 129.13	-0.020 -0.51	0.083 2.11	0.109 2.77	5.35 135.9
139.7 mm	5.500 139.7	0.056 1.42	0.031 0.79	0.625 15.88	0.344 8.74	5.334 135.48	-0.020 -0.51	0.083 2.11	0.109 2.77	5.60 142.2
5 125	5.563 141.3	0.056 1.42	0.031 0.79	0.625 15.88	0.344 8.74	5.395 137.03	-0.022 -0.56	0.084 2.13	0.109 2.77	5.66 143.8
159.0 mm	6.250 159.0	0.063 1.60	0.031 0.79	0.625 15.88	0.344 8.74	6.032 153.21	-0.030 -0.76	0.085 2.16	0.109 2.77	6.35 161.3
165.1 mm	6.500 165.1	0.063 1.60	0.031 0.79	0.625 15.88	0.344 8.74	6.330 160.78	-0.022 -0.56	0.085 2.16	0.109 2.77	6.60 142.2
6 150	6.625 168.3	0.063 1.60	0.031 0.79	0.625 15.88	0.344 8.74	6.455 163.96	-0.022 -0.56	0.085 2.16	0.109 2.77	6.73 170.9
8 200	8.625 219.1	0.063 1.60	0.031 0.79	0.750 19.05	0.469 11.91	8.441 214.40	-0.025 -0.64	0.092 2.34	0.109 2.77	8.80 223.5
10 250	10.750 273.0	0.063 1.60	0.031 0.79	0.750 19.05	0.469 11.91	10.562 268.28	-0.027 -0.69	0.094 2.39	0.134 3.40	10.92 277.4
12 300	12.750 323.9	0.063 1.60	0.031 0.79	0.750 19.05	0.469 11.91	12.531 318.29	-0.030 -0.76	0.109 2.77	0.156 3.96	12.92 328.2