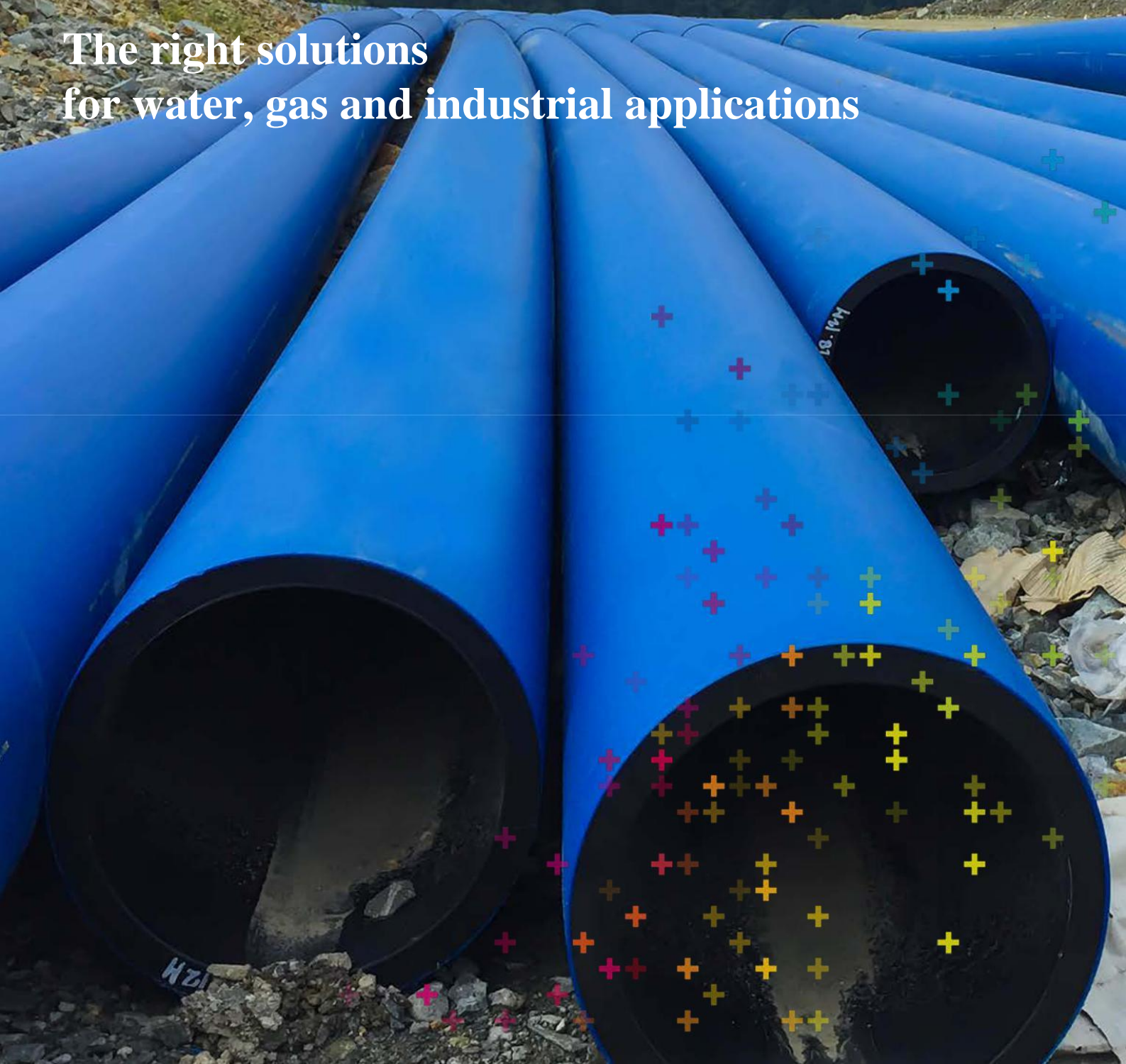


PE Product Range

# Utility Systems

The right solutions  
for water, gas and industrial applications



# System solutions and high - quality components

## +Part of a strong corporation

GF Piping Systems is one of three divisions of GF, a Corporation founded in 1802 and headquartered in Switzerland. The division is present in Europe, Asia, and the Americas. We support our customer in over 100 countries through 30 manufacturing sites, research and development centers, sales companies and representative office. Our extensive product portfolio includes pipes, fittings, valves and the corresponding automation and jointing technology for industry, building technology and utility markets.

In South East Asia, GF Piping Systems has been present in the market for over 20 years. We currently service SEA through 7 sales companies and 2 manufacturing plants with one locate in Malay-sia and Indonesia. GFPS has an extensive partner and distribution network in SEA which ensures our customer & technical support is maintained at a high level. Our service centers offer regular train-ing to ensure the highest quality is maintained from design through to installation. We ensure excellent customer support and technical on-site training.

In May 2016, GFPS aquired PT Eurapipe Solutions Indonesia (Formerly PT Tyco Eurapipe Indonesia) which has been rename to PT Georg Fischer Indonesia. GFI has more than 20 years experience and a strong reputation as a high-quality producer of Polyethylene (PE) pipes and fittings. The company which was founded in 1992 is located in Karawang, West Java, holds a leading position in the mining and other water related market segments.



## Polyethylene materials

Polyethylene (PE) is a well-known plastic which is found in many everyday applications. We are using HDPE (High density polyethylene) PE100+ compound / pre compound to manufacture piping systems. Piping systems manufactured from PE display outstanding properties which make PE the choice for many of the most demanding piping applications. PE provides a long term secure piping systems unmatched by most other plastic, metallic and composit piping systems and are engineered for a 100 year design life. PE has outstanding impact resistance, abrasion resistance and UV stability. While being strong & robust it is also flexible and forgiving compared to other brittle materials.



# Features

## Working pressure

The nominal pressure rating (PN) assigned to an AS/NZS 4130 PE pipe equates to performance at 20°C. In situations where the temperature of the pipe wall is greater than 20°C, the MAOP of the pipe is reduced. Therefore the PE pipe system will be derated as temperature increases.

## Installation

Pipe can be easily cut, prepared and installed by the following methods:

- Butt fusion
- ELGEF Plus Electrofusion system
- iJOINT Mechanical joints (compression fittings and flanges)
- IR Plus fusion
- Mechanical flange jointings
- WAGA Mechanical joint

## Typical fittings

- Fabricated
- Electrofusion
- Moulded butt weld
- Moulded socket weld
- Mechanical couplings
- Compression fittings

## Valves

- PE ball valve
- Metallic and thermoplastic butterfly valves

## Features

- Corrosion resistance
- Chemical resistance
- Smooth bore
- Abrasion resistance
- Weather resistance
- Light weight for easy installation
- Flexible
- High impact strength
- Long life
- Trenchless construction installation

## Product range

Size : 16mm–1200mm OD

Pressure rating : PN4–PN25

Pipe can be produced in solid colours, striped or with an outer coloured sheath (10% outer colour for security). The colours can be used to identify the service of the pipeline, e.g. red (fire main), blue (drinking water), yellow (gas), etc.



Solid



Stripe



Sheath

Pipe can be produced in Length

- 6m/length
- 12m/length



LENGTH PIPE (m)		
Size	6	12
16-63	✓	✓
75-110	✓	✓
125-1200	✓	✓

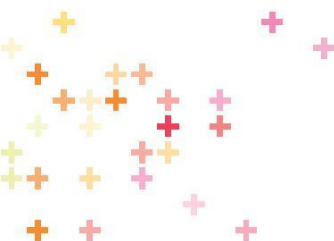
Pipe can be produced in coil

- 50m/coil
- 100m/coil
- 200m/coil



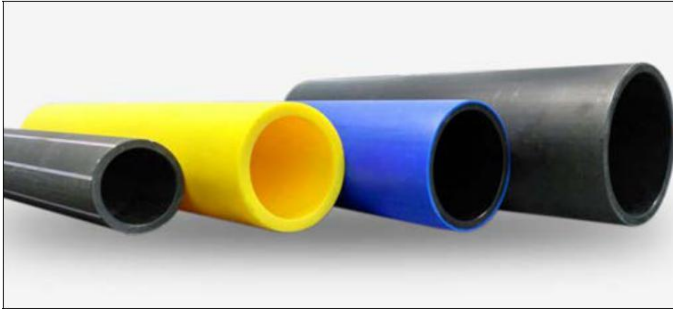
COIL PIPE (m)			
Size	50	100	200
16-63	✓	✓	✓
75-110	✓	✓	

Minimum coiled pipe class PN10



# Products

## PE pipes



High quality pipe with special properties designed for specific range of applications.

## Butt fusion fittings



Butt fusion technology for various water and gas applications.

## WAGA (Mechanical fittings for repair, transition and maintenance)



A wide range of products for water and gas installation and repair - under and above ground.

## Utility valves



Choose from the most comprehensive valve product range.

## ELGEF Plus (Electrofusion fittings)



Electrofusion technology for various water and gas applications.

## iJOINT (Mechanical compression fittings)



Mechanical compression fittings and saddles in plastic for water and gas installation.

## Mechanical flange jointings



View our range of flanges - ideal for demountable connections as well as transitions from plastic fittings to devices.

## Machines & tools



Proven Joining Technology suitable for all materials.

# Standards

## Certifications



## Quality control

- Melt flow index (MFR test)
- Universal testing machine (Tensile test)
- Differential scanning calorimeter (DSC test)
- Air oven (longitudinal reversion test)
- Dimensional check
- Pressure Unit (Hydro-pressure test)



Tensile test



Hydro pressure test-1200mm

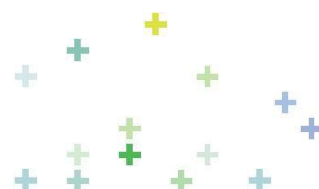


**PE100 compound (S1) pipe dimensions for pipes produced to AS/NZS 4130 (2009), ISO 4427 (2007) and SNI 4829.2:2012**

SDR			41				33			26		
PN for PE80			3.2 Bar				4 Bar			-		
PN for PE100			4 Bar				-			6.3 Bar		
Nominal outside diameter	Mean outside diameter $D_m$		Out of roundness	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass
DN	Min.	Max.	Max.	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m
16	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-	2.0	45.95	0.31
63	-	-	-	-	-	-	-	-	-	2.5	58.10	0.48
75	-	-	1.6	-	-	-	2.3	70.35	0.55	2.9	69.15	0.68
90	-	-	1.8	-	-	-	2.8	84.45	0.80	3.5	82.95	0.99
110	110.0	110.7	2.2	2.7	104.70	0.95	3.4	103.20	1.18	4.2	101.30	1.48
125	125.0	125.8	2.5	3.1	118.9	1.2	3.9	117.3	1.5	4.8	115.4	1.9
140	140.0	140.9	2.8	3.5	133.2	1.6	4.3	131.5	1.9	5.4	129.2	2.4
160	160.0	161.0	3.2	4.0	152.3	2.0	4.9	150.4	2.5	6.2	147.6	3.1
180	180.0	181.1	3.6	4.4	171.5	2.5	5.5	169.2	3.1	6.9	166.3	3.8
200	200.0	201.2	4.0	4.9	190.5	3.1	6.2	187.7	3.9	7.7	184.6	4.8
225	225.0	226.4	4.5	5.5	214.4	3.9	6.9	211.5	4.8	8.6	207.9	6.0
250	250.0	251.5	5.0	6.2	238.0	4.9	7.7	234.9	6.0	9.6	230.9	7.4
280	280.0	281.7	9.8	6.9	266.7	6.1	8.6	263.1	7.5	10.7	258.7	9.3
315	315.0	316.9	11.1	7.7	300.2	7.6	9.7	296.0	9.5	12.1	290.9	11.8
355	355.0	357.2	12.5	8.7	338.2	9.7	10.9	333.6	12.1	13.6	327.9	14.9
400	400.0	402.4	14.0	9.8	380.0	12.3	12.3	375.8	15.3	15.3	369.5	18.9
450	450.0	452.7	15.6	11.0	428.9	15.5	13.8	423.0	19.3	17.2	415.8	23.9
500	500.0	503.0	17.5	12.3	476.3	19.3	15.3	470.0	23.8	19.1	462.0	29.5
560	560.0	563.4	19.6	13.7	533.7	24.0	17.2	526.3	30.0	21.4	517.5	36.9
630	630.0	633.8	22.1	15.4	600.4	30.4	19.3	592.2	37.8	24.1	582.1	46.8
710	710.0	716.4	24.9	17.4	676.5	38.7	21.8	667.3	48.0	27.2	655.9	59.5
800	800.0	807.2	28.0	19.6	762.3	49.0	24.5	752.0	60.8	30.6	739.2	75.3
900	900.0	908.1	31.5	22.0	857.8	61.8	27.6	846.0	77.1	34.4	831.7	95.2
1000	1000.0	1009.0	35.0	24.5	952.9	76.6	30.6	940.1	94.9	38.2	924.1	117.5
1200	1200.0	1210.8	42.0	29.4	1143.1	110.2	36.7	1127.8	136.5	45.9	1108.5	169.2
1400*	1400.0	1412.6	49.0	34.3	1332.6	150.3	42.9	1314.8	185.9	53.5	1293.1	228.8
1600*	1600.0	1614.4	56.0	39.2	1522.3	195.8	49.0	1502.0	242.6	61.2	1476.1	301.0

Note: PN rating at 20<sup>o</sup> C, de-rating for high temperature required, all sizes (16mm-1200mm) are produced in Indonesian plant.

\* This size is not produced in Indonesian plant.



**PE100 compound (S1) pipe dimensions for pipes produced to AS/NZS 4130 (2009), ISO 4427 (2007) and SNI 4829.2:2012**

SDR			21				17			13.6		
PN for PE80			6.3 Bar				8 Bar			10 Bar		
PN for PE100			8 Bar				10 Bar			12.5 Bar		
Nominal outside diameter	Mean outside diameter $D_m$		Out of roundness	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass
DN	Min.	Max.	Max.	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m
16	-	-	-	-	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-	-	1.6	16.65	0.10
25	-	-	-	-	-	-	1.6	21.65	0.12	2.0	21.05	0.14
32	-	-	-	1.6	28.65	0.16	2.0	28.05	0.19	2.4	26.95	0.23
40	-	-	-	2.0	36.10	0.24	2.4	35.00	0.30	3.0	33.80	0.36
50	-	-	-	2.4	45.05	0.38	3.0	43.85	0.46	3.7	42.35	0.55
63	-	-	-	3.0	56.90	0.58	3.8	55.20	0.73	4.7	53.30	0.88
75	-	-	1.6	3.6	67.65	0.83	4.5	65.75	1.03	5.6	63.65	1.23
90	-	-	1.8	4.3	81.25	1.20	5.4	78.95	1.48	6.7	76.45	1.77
110	110.0	110.7	2.2	5.3	99.20	1.80	6.6	96.50	2.20	8.1	93.30	2.66
125	125.0	125.8	2.5	6.0	112.9	2.3	7.4	109.9	2.8	9.2	106.1	3.4
140	140.0	140.9	2.8	6.7	126.5	2.9	8.3	123.1	3.5	10.3	118.9	4.3
160	160.0	161.0	3.2	7.7	144.5	3.8	9.5	140.7	4.6	11.8	135.9	5.6
180	180.0	181.1	3.6	8.6	162.7	4.7	10.7	158.3	5.8	13.3	152.8	7.1
200	200.0	201.2	4.0	9.6	180.6	5.9	11.9	175.8	7.2	14.7	169.9	8.7
225	225.0	226.4	4.5	10.8	203.3	7.4	13.4	197.8	9.1	16.6	191.1	11.1
250	250.0	251.5	5.0	11.9	226.1	9.1	14.8	220.0	11.1	18.4	212.4	13.6
280	280.0	281.7	9.8	13.4	253.0	11.5	16.6	246.3	14.0	20.6	237.9	17.1
315	315.0	316.9	11.1	15.0	284.9	14.4	18.7	277.1	17.7	23.2	267.6	21.6
355	355.0	357.2	12.5	16.9	321.0	18.3	21.1	312.1	22.6	26.1	301.6	27.4
400	400.0	402.4	14.0	19.1	361.5	23.3	23.7	351.9	28.5	29.4	339.9	34.8
450	450.0	452.7	15.6	21.5	406.8	29.5	26.7	395.9	36.1	33.1	382.4	44.1
500	500.0	503.0	17.5	23.9	452.0	36.4	29.7	440.0	44.5	36.8	424.9	54.4
560	560.0	563.4	19.6	26.7	506.4	45.5	33.2	492.7	55.9	41.2	475.9	68.2
630	630.0	633.8	22.1	30.0	569.8	57.5	37.4	554.4	70.6	46.3	535.5	86.2
710	710.0	716.4	24.9	33.9	641.9	73.2	42.1	624.6	89.8	52.2	603.4	109.6
800	800.0	807.2	28.0	38.1	723.4	92.8	47.4	703.9	113.9	58.8	680.0	139.0
900	900.0	908.1	31.5	42.9	813.9	117.4	53.3	791.7	144.6	66.2	764.9	176.1
1000	1000.0	1009.0	35.0	47.7	904.2	145.1	59.3	879.8	178.1	72.5	852.1	214.5
1200	1200.0	1210.8	42.0	57.2	1084.7	208.8	67.9	1062.7	245.3	88.2	1020.0	312.7
1400*	1400.0	1412.6	49.0	66.7	1266.1	283.8	82.4	1233.1	346.3	102.9	1190.1	425.2
1600*	1600.0	1614.4	56.0	76.2	1447.0	370.6	94.1	1409.4	451.9	117.6	1360.1	555.3

Note: PN rating at 20<sup>o</sup> C, de-rating for high temperature required, all sizes (16mm-1200mm) are produced in Indonesian plant.

\* This size is not produced in Indonesian plant.



**PE100 compound (S1) pipe dimensions for pipes produced to AS/NZS 4130 (2009), ISO 4427 (2007) and SNI 4829.2:2012**

SDR			11				9			7.4		
PN for PE80			12.5 Bar				16 Bar			20 Bar		
PN for PE100			16 Bar				20 Bar			25 Bar		
Nominal outside diameter	Mean outside diameter $D_m$		Out of roundness	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass	Wall thickness $T$	Inside diameter $D_i$	Ave. mass
DN	Min.	Max.	Max.	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m	Min.	Mean ID	Kg/m
16	-	-	1.2	1.6	12.65	0.08	2.0	12.25	0.08	2.3	11.35	0.10
20	-	-	1.2	2.0	16.05	0.11	2.3	15.15	0.13	3.0	14.15	0.16
25	-	-	1.2	2.3	20.15	0.17	3.0	19.15	0.20	3.5	17.65	0.24
32	-	-	1.3	3.0	25.95	0.27	3.6	24.45	0.33	4.4	22.75	0.39
40	-	-	1.4	3.7	32.30	0.43	4.5	30.60	0.52	5.5	28.50	0.61
50	-	-	1.4	4.6	40.40	0.67	5.6	38.35	0.80	6.9	35.65	0.95
63	-	-	1.5	5.8	51.00	1.07	7.1	48.20	1.28	8.6	45.10	1.50
75	-	-	1.6	6.8	60.95	1.49	8.4	57.55	1.79	10.3	53.55	2.13
90	-	-	1.8	8.2	73.05	2.16	10.1	69.05	2.59	12.3	64.45	3.05
110	110.0	110.7	2.2	10.0	89.40	3.20	12.3	84.50	3.84	15.1	78.60	4.57
125	125.0	125.8	2.5	11.4	101.5	4.2	14.0	96.1	5.0	17.1	89.5	5.9
140	140.0	140.9	2.8	12.7	113.9	5.2	15.7	107.6	6.2	19.2	100.2	7.4
160	160.0	161.0	3.2	14.6	130.0	6.8	17.9	123.1	8.1	21.9	114.7	9.6
180	180.0	181.1	3.6	16.4	146.3	8.6	20.1	138.5	10.3	24.6	129.1	12.2
200	200.0	201.2	4.0	18.2	162.5	10.6	22.4	153.7	12.7	27.4	143.4	15.0
225	225.0	226.4	4.5	20.5	182.9	13.4	25.2	173.2	16.0	30.8	161.3	19.0
250	250.0	251.5	5.0	22.7	203.4	16.5	27.9	192.5	19.7	34.2	179.2	23.5
280	280.0	281.7	9.8	25.4	227.8	20.6	31.3	215.4	24.8	38.3	200.7	29.4
315	315.0	316.9	11.1	28.6	256.3	26.1	35.2	242.4	31.4	43.1	226.1	37.2
355	355.0	357.2	12.5	32.2	288.8	33.2	39.7	273.3	39.8	48.5	254.6	47.3
400	400.0	402.4	14.0	36.3	325.4	42.1	44.7	307.8	50.6	54.7	287.0	59.9
450	450.0	452.7	15.6	40.9	366.1	53.3	50.3	346.5	63.9	61.5	322.8	75.9
500	500.0	503.0	17.5	45.4	406.8	65.8	55.8	385.0	78.9	-	-	-
560	560.0	563.4	19.6	50.8	455.8	82.4	62.5	430.3	98.9	-	-	-
630	630.0	633.8	22.1	57.2	512.6	104.4	70.3	484.1	125.1	-	-	-
710	710.0	716.4	24.9	64.5	577.6	132.7	79.3	546.5	159.2	-	-	-
800	800.0	807.2	28.0	72.6	651.0	168.1	89.3	615.9	201.9	-	-	-
900	900.0	908.1	31.5	81.7	732.4	213.0	-	-	-	-	-	-
1000	1000.0	1009.0	35.0	90.2	814.9	261.5	-	-	-	-	-	-
1200	1200.0	1210.8	42.0	-	-	-	-	-	-	-	-	-
1400*	1400.0	1412.6	49.0	-	-	-	-	-	-	-	-	-
1600*	1600.0	1614.4	56.0	-	-	-	-	-	-	-	-	-

Note: PN rating at 20<sup>0</sup> C, de-rating for high temperature required, all sizes (16mm-1200mm) are produced in Indonesian plant.

\* This size is not produced in Indonesian plant.



Services

# We Serve Your Business

GF Piping Systems is aware of the fact that our promised performance does not end with a products' purchase or installation. For us, it is a matter of course to provide individual support and application-oriented services along the entire lifecycle of your installation..



# Projects Galery

## Newmont Nusatenggara



(315mm pipe, water distribution)

## Newmont Nusatenggara



(1000mm pipe, dewatering systems project)

## Sacna Nusantara



(1200mm pipe, siphon water project)

## Stargold



(250mm pipe, Fishery Karamba project)

## Swing Indonesia



(710mm pipe, water treatment for modern industrial estate)

## Pipa Transmisi SEI Tabuk – Pematang Panjang



DN 1200 & DN 1000 PDAM Bandarmasih

## Soekarno Hatta International Airport



(HDPE Red layer PN 20 Hydrat pipeline.)

## PAM Lyonnaise Jaya



(ELGEF Electrofusion Coupler 1000mm for water treatment project)

