LUNAPLAST

Content

Dear Customer, our family company LUNA PLAST was established in 1994. We started our activity on the Czech market with the production of protective PE pipes for cables and optical cables. We have come a long way since then.

Currently, we focus on processing of plastics by extrusion and injection moulding, we produce various types of high density and low density PE pipes for:

pressurised drinking water supply

pressurised and depressurised sewer system

irrigation systems

gas

protective piping

surface pre-insulated pipe; modified by corona discharge treatment

PE pipe threads for non-pressure applications

heat pumps

We have added PE and electrical fittings to our product range.

Responding to the diversity of the current market, we are also able to produce bespoke pipes at the customer's request. The priority of our company is product quality and reliable service with an emphasis on the environment.

Do not hesitate to contact us whatever your requirements.

Petr Novotný
Company CEO

History

Polyethylene – discovery, development

1869
first references in the literature to liquid ethylene polymerization products (ethylene oligomers)

1933
discovery of radical polymerization of ethylene – Eric W. Fawcett and Reginald O. Gibson (Imperial Chemical Industries Ltd., UK)

1936
the first patent for the radical polymerization process of ethylene

1939
production of low-density PE (LDPE) by radical polymerization (high-pressure process) started by the company ICI

World War II
development of PE production and applications

1950
Karl Ziegler synthesizes alpha-olefines from ethylene on trialkylaluminum

1953
discovery of catalyzed complex-coordination polymerization of ethylene – Ziegler, Mülheim an der Ruhr

1955
production of high density PE (HDPE) started – low pressure process, catalyst

The 1950s
parallel development of CrO3-based catalysts in the USA at Phillips Petroleum

1960
HDPE production using the Phillips process

The 1970s
development of new types of Ziegler catalysts for the production of PE with short side branches (MDPE, LLDPE)

1977
LLDPE production introduced by Union Carbide Corp.

1979
LLDPE production introduced by Dow Chemical Co.

The 1980s
development of metallocene catalysts (Walter Kaminsky, Hans Britzinger)

1991
Exxon starts production of metallocene types of PE

1993
Dow starts production of metallocene types of PE

The 1990s
the birth of PE100 materials

2005
the birth of PE100RC materials

Our company

1994
establishment of the LUNA PLAST firm – production of PE protectors

1996
start of production of up to 125 mm PE pressure pipes for drinking water, reconstruction of hall 1

1998
a. s. type of company established

2000
production of PE-MD in multilayer up to 63 mm

2002
the company was hit by serious floods

2005
laboratory for determining the properties of manufactured PE pipes

2006
hall no. 2 – technology for production of multilayer PE-HD PE100 pipe up to 500 mm

2012
laboratory in accordance with the requirements of AO according to 3.1 certification

2014
new production line for three-layer PE-HD PE100 pipe up to 110 mm

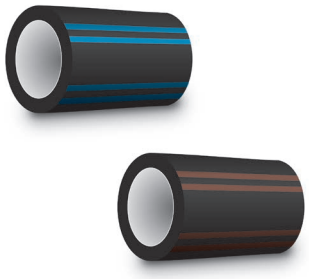
2016
renovation of the production line to a three-layer design up to 63 mm

2018
new storage hall for fittings

2022
outdoor storage area of 7500 m^2

2023
hall no. 3 – modern production technology 315 – 1200 mm

PE-MD; PE-LLD



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-MD, PE-LLD

Description: double-layer pipe with stripes according to application

Pipe structure: double-layer black pipe with four doublestripes according to application
outer black layer with stripes according to application
inner white layer

Pressure rating: PN 10; PN 12.5

Dimensions: 20 – 63 mm

Packaging: roll of 25/50/100/200/500 m
rods 6 m

Application: pressurised drinking water supply systems (W), general purpose sewer connections, pressurised and depressurised sewer network applications (P), irrigation systems

Pipe installation: PE-MD, PE- LLD pipes can be connected with mechanical couplings

Laying: laying in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: LN 12200, Declaration of Conformity, Decree 409/2005 Coll.

Certification: Leak tests – Institute of Public Health Ostrava

Dimension series

PE-MD – water, drainage

	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 12.5		
●	20 × 3.0	12.5	0.153	200
●	25 × 3.5	12.5	0.235	200
●	32 × 4.4	12.5	0.378	6/100
● ●	40 × 5.5	12.5	0.587	6/100
● ●	50 × 6.9	12.5	0.915	6/50/100
● ●	63 × 8.6	12.5	1.438	6/50

PE-LLD, PE63 – water

	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 10		
●	25 × 2.3	10.0	0.170	200
●	32 × 3.0	10.0	0.277	100
●	40 × 3.7	10.0	0.428	100
●	50 × 4.6	10.0	0.662	50/100
●	63 × 5.8	10.0	1.050	50

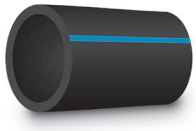
SPECIAL ROLLS

PE-MD – water

	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 12.5		
● ●	20 × 3.0	12.5	0.153	25/50/100
●	25 × 3.5	12.5	0.235	25/50/100
●	32 × 4.4	12.5	0.378	25/50
●	40 × 5.5	12.5	0.587	25/50

● water
● drainage
● custom-made

PE-HD PE80



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-HD PE80

Description: single-layer pipe made of PE80 with blue stripes

Pipe structure: single-layer pipe made of PE80, black, with blue stripes

Pressure rating: PN 7.5; PN 12.5

Dimensions: 25 – 110 mm (PN 7.5)
25 – 63 mm (PN 12.5)

Packaging: roll of 100/200 m

Application: pressurised drinking water supply (W)

Pipe installation: PE-HD PE80 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: laying in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: ČSN EN 12201-2, ISO 4427

Certification: ITC a.s. Zlín, DVGW, SKZ

Dimension series

PE-HD, PE80 – water

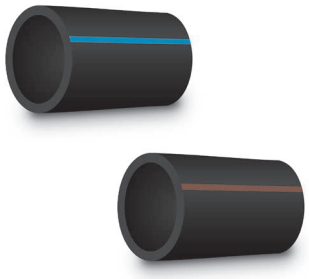
dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 7.5			
25 × 1.8	7.5	0.137	200
32 × 2.0	7.5	0.194	100
40 × 2.4	7.5	0.293	100
50 × 3.0	7.5	0.452	100
63 × 3.8	7.5	0.720	100
75 × 4.5	7.5	1.016	100
90 × 5.4	7.5	1.461	100
110 × 6.6	7.5	2.174	100
PN 12.5			
25 × 2.3	12.5	0.170	200
32 × 3.0	12.5	0.278	100
40 × 3.7	12.5	0.429	100
50 × 4.6	12.5	0.666	100
63 × 5.8	12.5	1.054	100

SPECIAL ROLLS

PE-HD, PE80 – water

dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 12.5			
25 × 2.3	12.5	0.170	25/50/100
32 × 3.0	12.5	0.278	25/50
40 × 3.7	12.5	0.429	25/50

water



PE-HD PE100

Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-HD PE100

Description: single-layer pipe made of PE100 with stripes according to application

Pipe structure: single-layer pipe made of PE100, black, with stripes according to application

Pressure rating: PN 10; PN 16 (PN 6 – PN 25 on request)

Dimensions: 25 – 75 mm

Packaging: roll of 100/200
m rods 6/12 m

Application: pressurised drinking water supply systems (W), general purpose sewer connections, pressurised and depressurised sewer network applications (P)

Pipe installation: PE-HD PE100 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: laying in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: ČSN EN 12201-2, ISO 4427

Certification: ITC a.s. Zlín, DVGW, SKZ

Dimension series

PE-HD PE100 – water, drainage

	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 10		
●	25 × 1.8	10.0	0.137	200
●	32 × 2.0	10.0	0.194	100
● ●	40 × 2.4	10.0	0.293	100
● ●	50 × 3.0	10.0	0.452	100
● ●	63 × 3.8	10.0	0.720	100
● ●	75 × 4.5	10.0	1.016	100
		PN 16		
●	25 × 2.3	16.0	0.170	200
●	32 × 3.0	16.0	0.278	100
● ●	40 × 3.7	16.0	0.429	100
● ●	50 × 4.6	16.0	0.666	100
● ●	63 × 5.8	16.0	1.054	100
● ●	75 × 6.8	16.0	1.472	100

SPECIAL ROLLS

PE-HD, PE100 – water

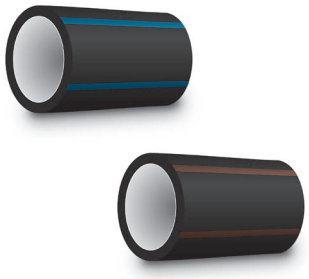
	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 10		
●	32 × 2.0	10.0	0.194	25/50
●	40 × 2.4	10.0	0.293	25/50

PE-HD, PE100 – water

	dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
		PN 16		
●	25 × 2.3	16.0	0.170	25/50/100
●	32 × 3.0	16.0	0.278	25/50
●	40 × 3.7	16.0	0.429	25/50

● water
● drainage

PE-HD PE100RC



Manufacturer:	LUNA PLAST a.s., Mělník
Trade name:	PE-HD PE100RC
Description:	double-layer pipe made of PE100RC with stripes according to application

Pipe structure:	single-layer pipe made of PE100RC, black, with stripes according to application outer layer – PE100RC black inner layer up to 10 % – PE100RC white
Pressure rating:	PN 10; PN 16 (PN 6 – PN 25 on request)
Dimensions:	50 – 1200 mm (PN 10) 32 – 1200 mm (PN 16)
Packaging:	roll of 100/200 m rods 6/12 m
Application:	pressurised drinking water supply systems (W), general purpose sewer connections, pressurised and depressurised sewer network applications (P)
Pipe installation:	PE-HD PE100RC piping can be connected by standard methods – mechanical couplings, butt welding or electric welding
Laying:	trenchless laying and remediation, open laying without sand bed, relining, milling, ploughing, controlled drilling, burstlining, the mining class is determined by the standard ČSN 73 6133 – class I. – IV.
Classification acc. to PAS1075:	TYPE 2
Standard:	ČSN EN 12201-2, ISO 4427
Certification:	ITC a.s. Zlín, DVGW, SKZ

Dimension series

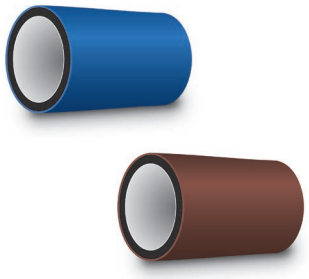
PE-HD PE100 RC – water, drainage

dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
50 × 3.0	10.0	0.452	6/100
63 × 3.8	10.0	0.720	6/100
75 × 4.5	10.0	1.016	6/100
90 × 5.4	10.0	1.461	6/12/100
110 × 6.6	10.0	2.174	6/12/100
125 × 7.4	10.0	2.774	6/12
140 × 8.3	10.0	3.482	6/12
160 × 9.5	10.0	4.545	6/12
180 × 10.7	10.0	5.749	6/12
200 × 11.9	10.0	7.095	6/12
225 × 13.4	10.0	8.998	6/12
250 × 14.8	10.0	11.028	6/12
280 × 16.6	10.0	13.854	6/12
315 × 18.7	10.0	17.545	6/12
355 × 21.1	10.0	22.329	6/12
400 × 23.7	10.0	28.222	6/12
450 × 26.7	10.0	35.755	6/12
500 × 29.7	10.0	44.179	6/12
PN 16			
32 × 3.0	16.0	0.278	100
40 × 3.7	16.0	0.429	6/100
50 × 4.6	16.0	0.666	6/100
63 × 5.8	16.0	1.054	6/100
75 × 6.8	16.0	1.472	6/100
90 × 8.2	16.0	2.133	6/12/100 50
110 × 10.0	16.0	3.164	6/12/100 50
125 × 11.4	16.0	4.106	6/12
140 × 12.7	16.0	5.116	6/12
160 × 14.6	16.0	6.716	6/12
180 × 16.4	16.0	8.489	6/12
200 × 18.2	16.0	10.469	6/12
225 × 20.5	16.0	13.250	6/12
250 × 22.7	16.0	16.297	6/12
280 × 25.4	16.0	20.431	6/12
315 × 28.6	16.0	25.863	6/12
355 × 32.2	16.0	32.829	6/12
400 × 36.3	16.0	41.682	6/12
450 × 40.9	16.0	52.782	6/12
500 × 45.4	16.0	65.129	6/12

water

drainage

Note: See page 32 for a table of large dimensions.



EXTRA COAT EC108010

Manufacturer:	LUNA PLAST a.s., Mělník
Trade name:	EXTRA COAT EC108010
Description:	co-extruded three-layer PE100 pipe with outer and inner protective layer made of PE100RC

Pipe structure:	outer layer – 10 % PE100RC (blue, brown) middle layer – 80 % PE100 (black) inner layer – 10 % PE100RC (white)
Pressure rating:	PN 10; PN 16 (PN 6 – PN 25 on request)
Dimensions:	32 – 1200 mm
Packaging:	roll of 100/200 m rods 6/12 m
Application:	pressurised drinking water supply systems (W), general purpose sewer connections, pressurised and depressurised sewer network applications (P)
Pipe installation:	EXTRA COAT EC108010 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding
Laying:	trenchless laying and remediation, open laying without sand bed, relining, milling, ploughing, controlled drilling, burstlining, the mining class is determined by the standard ČSN 73 6133 – class I. – IV.
Classification acc. to PAS1075:	TYPE 2
Standard:	ČSN EN 12201-2, ISO 4427
Certification:	ITC a.s. Zlín, DVGW, SKZ

Dimension series

EXTRA COAT EC108010 – water, drainage

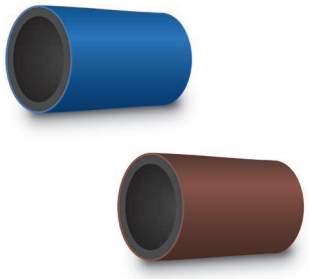
dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
32 × 2.0	10.0	0.194	100
40 × 2.4	10.0	0.293	100
50 × 3.0	10.0	0.452	100
63 × 3.8	10.0	0.720	100
75 × 4.5	10.0	1.016	100
90 × 5.4	10.0	1.461	6/12/100
110 × 6.6	10.0	2.174	6/12/100
125 × 7.4	10.0	2.774	6/12
140 × 8.3	10.0	3.482	6/12
160 × 9.5	10.0	4.545	6/12
180 × 10.7	10.0	5.749	6/12
200 × 11.9	10.0	7.095	6/12
225 × 13.4	10.0	8.998	6/12
250 × 14.8	10.0	11.028	6/12
280 × 16.6	10.0	13.854	6/12
315 × 18.7	10.0	17.545	6/12
355 × 21.1	10.0	22.329	6/12
400 × 23.7	10.0	28.222	6/12
450 × 26.7	10.0	35.755	6/12
500 × 29.7	10.0	44.179	6/12
PN 16			
32 × 3.0	16.0	0.278	100
40 × 3.7	16.0	0.429	100
50 × 4.6	16.0	0.666	100
63 × 5.8	16.0	1.054	100
75 × 6.8	16.0	1.472	100
90 × 8.2	16.0	2.133	6/12/100 50
110 × 10.0	16.0	3.164	6/12/100 50
125 × 11.4	16.0	4.106	6/12
140 × 12.7	16.0	5.116	6/12
160 × 14.6	16.0	6.716	6/12
180 × 16.4	16.0	8.489	6/12
200 × 18.2	16.0	10.469	6/12
225 × 20.5	16.0	13.250	6/12
250 × 22.7	16.0	16.297	6/12
280 × 25.4	16.0	20.431	6/12
315 × 28.6	16.0	25.863	6/12
355 × 32.2	16.0	32.829	6/12
400 × 36.3	16.0	41.682	6/12
450 × 40.9	16.0	52.782	6/12
500 × 45.4	16.0	65.129	6/12

water

drainage

Note: See page 32 for a table of large dimensions.

EC1090



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: EC1090 acc. to PAS1075

Description: double-layer pipe made of PE100RC in colour according to application

Pipe structure: double-layer pipe made of PE100RC with black inner layer, blue or brown
outer layer – 10 % PE100RC (blue, brown)
inner layer – 90 % PE100RC (black)

Pressure rating: PN 10; PN 16

Dimensions: 32 – 1200 mm

Packaging: roll of 100 m
rods 6/12 m

Application: pressurised drinking water supply systems (W), general purpose sewer connections, pressurised and depressurised sewer network applications (P)

Pipe installation: EC1090 acc. to PAS1075 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: trenchless laying and remediation, open laying without sand bed,
relining, milling, ploughing, controlled drilling, burstlining,
the mining class is determined by the standard ČSN 73 6133 – class I. – IV.

Classification acc. to PAS1075: TYPE 2

Standard: ČSN EN 12201-2, ISO 4427, DIN 8074-75

Certification: ITC a.s. Zlín, DIN CERTCO BERLIN

Dimension series

EC1090 – water, drainage

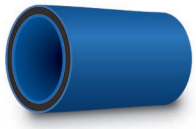
dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
32 × 2.0	10.0	0.194	100
40 × 2.4	10.0	0.293	100
50 × 3.0	10.0	0.452	100
63 × 3.8	10.0	0.720	100
75 × 4.5	10.0	1.016	100
90 × 5.4	10.0	1.461	6/12/100
110 × 6.6	10.0	2.174	6/12/100
125 × 7.4	10.0	2.774	6/12
140 × 8.3	10.0	3.482	6/12
160 × 9.5	10.0	4.545	6/12
180 × 10.7	10.0	5.749	6/12
200 × 11.9	10.0	7.095	6/12
225 × 13.4	10.0	8.998	6/12
250 × 14.8	10.0	11.028	6/12
280 × 16.6	10.0	13.854	6/12
315 × 18.7	10.0	17.545	6/12
355 × 21.1	10.0	22.329	6/12
400 × 23.7	10.0	28.222	6/12
450 × 26.7	10.0	35.755	6/12
500 × 29.7	10.0	44.179	6/12
PN 16			
32 × 3.0	16.0	0.278	6/100
40 × 3.7	16.0	0.429	6/100
50 × 4.6	16.0	0.666	6/100
63 × 5.8	16.0	1.054	6/100
75 × 6.8	16.0	1.472	6/100
90 × 8.2	16.0	2.133	6/12/100 50
110 × 10.0	16.0	3.164	6/12/100 50
125 × 11.4	16.0	4.106	6/12
140 × 12.7	16.0	5.116	6/12
160 × 14.6	16.0	6.716	6/12
180 × 16.4	16.0	8.489	6/12
200 × 18.2	16.0	10.469	6/12
225 × 20.5	16.0	13.250	6/12
250 × 22.7	16.0	16.297	6/12
280 × 25.4	16.0	20.431	6/12
315 × 28.6	16.0	25.863	6/12
355 × 32.2	16.0	32.829	6/12
400 × 36.3	16.0	41.682	6/12
450 × 40.9	16.0	52.782	6/12
500 × 45.4	16.0	65.129	6/12

water

drainage

Note: See page 32 for a table of large dimensions.

EC PAS1075



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: EC PAS1075

Description: co-extruded three-layer pipe made of PE100RC with outer and inner protective layer

Pipe structure: outer layer – PE100RC (blue)
middle layer – PE100RC (black)
inner layer – min. 3 mm PE100 RC (blue)

Pressure rating: PN 10; PN 16

Dimensions: 140 – 1200 mm (PN 10)
90 – 1200 mm (PN 16)

Packaging: roll of 100 m
rods 6/12 m

Application: pressurised drinking water supply (W)

Pipe installation: EC PAS1075 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: trenchless laying and remediation, open laying without sand bed, relining, milling, ploughing, controlled drilling, burstlining,
the mining class is determined by the standard ČSN 73 6133 – soils of all classes of extractability

Classification acc. to PAS1075: TYPE 2

Standard: ČSN EN 12201-2, ISO 4427

Certification: ITC a.s. Zlín, DIN CERTCO BERLIN,
PAS1075 certificate no. P1R0606, P1R0607

Dimension series

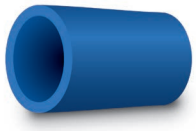
EC PAS1075 – water

dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
140 × 8.3	10.0	3.482	6/12
160 × 9.5	10.0	4.545	6/12
180 × 10.7	10.0	5.749	6/12
200 × 11.9	10.0	7.095	6/12
225 × 13.4	10.0	8.998	6/12
250 × 14.8	10.0	11.028	6/12
280 × 16.6	10.0	13.854	6/12
315 × 18.7	10.0	17.545	6/12
355 × 21.1	10.0	22.329	6/12
400 × 23.7	10.0	28.222	6/12
450 × 26.7	10.0	35.755	6/12
500 × 29.7	10.0	44.179	6/12
PN 16			
90 × 8.2	16.0	2.133	6/12/50/100
110 × 10.0	16.0	3.164	6/12/50/100
125 × 11.4	16.0	4.106	6/12
140 × 12.7	16.0	5.116	6/12
160 × 14.6	16.0	6.716	6/12
180 × 16.4	16.0	8.489	6/12
200 × 18.2	16.0	10.469	6/12
225 × 20.5	16.0	13.250	6/12
250 × 22.7	16.0	16.297	6/12
280 × 25.4	16.0	20.431	6/12
315 × 28.6	16.0	25.863	6/12
355 × 32.2	16.0	32.829	6/12
400 × 36.3	16.0	41.682	6/12
450 × 40.9	16.0	52.782	6/12
500 × 45.4	16.0	65.129	6/12

● water

Note: See page 32 for a table of large dimensions.

RC-H PAS1075



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: RC-H PAS1075

Description: single-layer pipe made of PE100RC

Pipe structure: single-layer pipe made of PE100RC, blue

Pressure rating: PN 10; PN 16

Dimensions: 50 – 125 mm (PN 10)
32 – 75 mm (PN 16)

Packaging: roll of 100 m
rods 6/12 m

Application: pressurised drinking water supply (W)

Pipe installation: RC-H PAS1075 piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: trenchless laying and remediation, open laying without sand bed, relining, milling, ploughing, controlled drilling, burstlining,
the mining class is determined by the standard ČSN 73 6133 – soils of all classes of extractability

Classification acc. to PAS1075: TYPE 1

Standard: ČSN EN 12201-2, ISO 4427

Certification: ITC a.s. Zlín, DIN CERTCO BERLIN,
PAS1075 certificate no. P1R0605, P1R0604

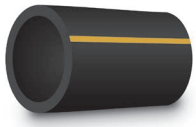
Dimension series

RC-H PAS1075 – water

dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
50 × 3.0	10.0	0.452	6/100
63 × 3.8	10.0	0.720	6/100
75 × 4.5	10.0	1.016	6/100
90 × 5.4	10.0	1.461	6/12/100
110 × 6.6	10.0	2.174	6/12/100
125 × 7.4	10.0	2.774	6/12
PN 16			
32 × 3.0	16.0	0.278	6/100
40 × 3.7	16.0	0.429	6/100
50 × 4.6	16.0	0.666	6/100
63 × 5.8	16.0	1.054	6/100
75 × 6.8	16.0	1.472	6/100

- water
- custom-made

PE-HD PE100
GAS



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-HD PE100 – gas

Description: single-layer pipe made of PE100

Pipe structure: single-layer pipe made of PE100. black with yellow stripe

Pressure rating: SDR 17; SDR 11 (SDR 17.6 on request)

Dimensions: 32 – 500 mm

Packaging: roll of 100/200 m
rods 6/12 m

Application: pressurised gas supply (natural gas, biogas, gas-phase propane)

Pipe installation: PE-HD PE100 GAS piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: laying in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: ČSN EN 1555, ISO 4437

Certification: ITC a.s. Zlín, DVGW, SKZ

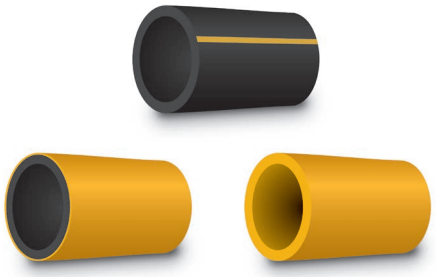
Dimension series

PEHD PE100 – gas

	dimension (mm)	SDR	weight kg/1 m	manufactured lengths in lm
	SDR 17			
	32 × 2.0	17	0.194	100
	40 × 2.4	17	0.293	100
	50 × 3.0	17	0.452	100
	63 × 3.8	17	0.720	100
●	75 × 4.5	17	1.016	100
●	90 × 5.4	17	1.461	6/12/100
●	110 × 6.6	17	2.174	6/12/100
●	125 × 7.4	17	2.774	6/12
●	140 × 8.3	17	3.482	6/12
●	160 × 9.5	17	4.545	6/12
●	180 × 10.7	17	5.749	6/12
●	200 × 11.9	17	7.095	6/12
●	225 × 13.4	17	8.998	6/12
●	250 × 14.8	17	11.028	6/12
●	280 × 16.6	17	13.854	6/12
●	315 × 18.7	17	17.545	6/12
●	355 × 21.1	17	22.329	6/12
●	400 × 23.7	17	28.222	6/12
●	450 × 26.7	17	35.755	6/12
●	500 × 29.7	17	44.179	6/12
	SDR 11			
	32 × 3.0	11	0.278	100
	40 × 3.7	11	0.429	100
	50 × 4.6	11	0.666	100
	63 × 5.8	11	1.054	100
●	75 × 6.8	11	1.472	100

● custom-made

PE-HD PE100RC
GAS



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-HD PE100RC – gas

Description: single-layer pipe made of PE100RC

Pipe structure: single-layer pipe made of PE100RC, black with orange stripe or orange without stripe
two-layer pipe made of PE100RC
outer layer – 10 % PE100RC orange
inner layer – 90 % PE100RC black

Pressure rating: SDR 17; SDR 11 (SDR 17.6 on request)

Dimensions: 32 – 500 mm

Packaging: roll of 100/200
m rods 6/12 m

Application: pressurised gas supply (natural gas, biogas, gas-phase propane)

Pipe installation: PE-HD PE100RC GAS piping can be connected by standard methods – mechanical couplings, butt welding or electric welding

Laying: trenchless laying and remediation, open laying without sand bed,
relining, milling, ploughing, controlled drilling, burstlining,
the mining class is determined by the standard ČSN 73 6133 – class I. – IV.

Standard: ČSN EN 1555, ISO 4437

Certification: ITC a.s. Zlín

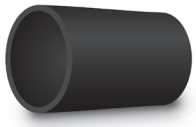
Dimension series

PE-HD PE100RC – gas

	dimension (mm)	SDR	weight kg/1 m	manufactured lengths in lm
	SDR 17			
	32 × 2.0	17	0.194	100
	40 × 2.4	17	0.293	6/100
	50 × 3.0	17	0.452	6/100
	63 × 3.8	17	0.720	6/100
●	75 × 4.5	17	1.016	6/12/100
●	90 × 5.4	17	1.461	6/12/100
●	110 × 6.6	17	2.174	6/12/100
●	125 × 7.4	17	2.774	6/12
●	140 × 8.3	17	3.482	6/12
●	160 × 9.5	17	4.545	6/12
●	180 × 10.7	17	5.749	6/12
●	200 × 11.9	17	7.095	6/12
●	225 × 13.4	17	8.998	6/12
●	250 × 14.8	17	11.028	6/12
●	280 × 16.6	17	13.854	6/12
●	315 × 18.7	17	17.545	6/12
●	355 × 21.1	17	22.329	6/12
●	400 × 23.7	17	28.222	6/12
●	450 × 26.7	17	35.755	6/12
●	500 × 29.7	17	44.179	6/12
	SDR 11			
	32 × 3.0	11	0.278	6/100
	40 × 3.7	11	0.429	6/100
	50 × 4.6	11	0.666	6/100
	63 × 5.8	11	1.054	6/100
●	75 × 6.8	11	1.472	6/100

● custom-made

PE-OT
PROTECTIVE PIPES



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-OT – protective pipe

Description: single-layer protective pipe made of PE-HD

Pipe structure: single-layer protective pipe made of PE-HD material, smooth, non-wiring, black

Dimensions: 32 – 315 mm

Packaging: roll of 100 m
rods 6 m

Application: cable protector, fibre optic network protector, protective pipe

Pipe installation: piping can be joined by butt welding, electric welding, joining by pull-over couplings or mechanical couplings

Laying: in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: ČSN EN 61386-24

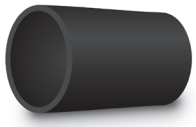
Dimension series

PE-OT – protective pipe

	dimension (mm)	weight kg/1 m	manufactured lengths in lm
●	32 × 2.0	0.186	6
●	32 × 3.0	0.277	6
●	40 × 2.8	0.284	6
●	40 × 3.5	0.428	6
●	50 × 2.9	0.438	6
	63 × 3.6	0.684	6
	75 × 4.3	0.971	6
	90 × 3.5	0.972	6
	90 × 5.1	1.380	6
	110 × 3.5	1.200	6
	110 × 5.5	1.780	6
	110 × 6.3	2.070	6
	125 × 3.9	1.510	6
	125 × 7.1	2.650	6
	160 × 5.0	2.460	6
	160 × 6.2	3.030	6
	160 × 9.1	4.330	6
	225 × 12.8	8.510	6
	315 × 12.1	11.660	6

● custom-made

PE-OT CORONA
PROTECTIVE PIPES



Manufacturer: LUNA PLAST a.s., Mělník

Trade name: PE-OT CORONA – protective pipe

Description: single-layer protective pipe made of PE80/PE100

Pipe structure: single-layer protective pipe for pre-insulated pipes, non-corrugated, black
inner layer corona-treated for better adhesion of PU foam

Dimensions: 90 – 1200 mm

Packaging: rods 12 m or on request

Application: pre-insulated piping systems

Pipe installation: acc. to ČSN EN 253

Laying: in sand bed,
the mining class is determined by the standard ČSN 73 6133 – class I.

Standard: ČSN EN 253

Dimension series

PE-OT CORONA – protective pipe

dimensions acc. to standard		
dimension (mm)	weight kg/1 m	pcs per pallet
90 × 3.0	0.88	46
110 × 3.0	1.07	33
125 × 3.0	1.20	23
140 × 3.0	1.34	30
160 × 3.0	1.53	26
180 × 3.0	1.71	22
200 × 3.2	2.01	15
225 × 3.4	2.41	14
250 × 3.6	2.81	12
280 × 3.9	3.43	7
315 × 4.1	4.05	6
355 × 4.5	4.97	5
400 × 4.8	5.96	5
450 × 5.2	7.28	20
500 × 5.6	8.68	16
560 × 6.0	10.44	1
630 × 6.6	12.93	1
710 × 7.2	15.76	1
800 × 7.9	18.67	1
900 × 8.7	24.36	1
1000 × 9.4	28.23	1
1100 × 10.2	35.01	1
1200 × 11.0	41.03	1

manufactured projected dimensions		
dimension (mm)	wall strength	internal diameter
91.8	4.5	82.8
112.2	4.5	103.2
127.7	4.5	118.7
143.1	4.5	134.1
162.2	4.4	153.4
181.6	5.2	171.2
202.1	4.9	192.3
228.4	4.7	218.0
253.5	4.8	243.9
284.2	5.5	273.2
318.7	6.1	307.5
360.2	7.1	346.0
406.0	8.4	388.2
456.8	8.7	437.4
507.5	11.2	485.1

Note: Pipe length on customer's request.

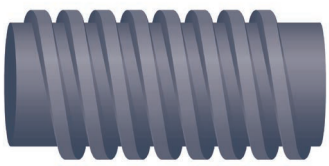
PE-HD PE100RC
THREADED RODS

Manufacturer: LUNA PLAST a.s., Mělník

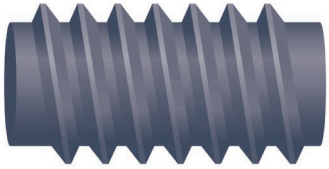
Trade name: PE-HD PE100RC – threaded rods

Description: trapezoidal thread, tapered – for PE-HD PE100RC pipe

Pipe structure: double-layer pipe made of PE-HD PE100RC with stripes according to application
outer layer: PE100RC black
inner layer up to 10 %: PE100RC white, blue, brown



trapezoidal thread



tapered thread

Pressure rating: PN 10; PN 16

Thread operating pressure: non-pressure application

Dimensions: 90 – 400 mm

Packaging: rods 3/6 m
or according to customer requirements (custom production)

Application: drilling rigs; non-pressure application rigs

Standard: ČSN EN 12201-2

Certification: ITC a.s. Zlín, VÚSAPL a.s. Nitra

thread	tapered		trapezoidal	
dimension (mm)	PN 10	PN 16	PN 10	PN 16
90	✓	✓		
110	✓	✓		✓
125	✓	✓		✓
140	✓	✓		✓
160	✓	✓	✓	✓
180	✓		✓	
200	✓		✓	
225	✓		✓	
250	✓		✓	
280	✓		✓	
315	✓		✓	
355	✓		✓	
400	✓		✓	

PIPES FOR **HEAT PUMPS**

Manufacturer:	LUNA PLAST a.s., Mělník
Trade name:	Heat pump borehole drilling equipment – gvs borehole probes
Description:	PE-MD, PE-HD PE100, PE-HD PE100RC

Pipe structure:	according to type
Material variants:	PE-MD PE-HD PE100 PE-HD PE100RC
Pressure rating:	PN 12.5; PN 16
Application:	borehole drilling equipment
Dimensions:	32 – 125 mm
Standard:	**PE-MD:** LN 12200. Declaration of Conformity, Decree 409/2005 Coll. **PE-HD PE100:** ČSN EN 12201-2 **PE-HD PE100RC:** ČSN EN 12201-2
Certification:	**PE-MD:** Leak tests – Institute of Public Health Ostrava **PE-HD PE100:** ITC a.s. Zlín, DVGW, SKZ **PE-HD PE100RC:** ITC a.s. Zlín, DVGW, SKZ

manufactured lengths in lm	item number
PE-HD PE100 32 × 3.0 16	
150	PL32150
200	PL32200
PE-HD PE100RC 32 × 3.0 PN 16	
50	PLR3250
60	PLR3260
70	PLR3270
80	PLR3280
90	PLR3290
100	PLR32100
112	PLR32112
125	PLR32125
137	PLR32137
150	PLR32150
162	PLR32162
200	PLR32200

in stock

custom-made

manufactured lengths in lm	item number
PE-HD PE100 40 × 3.0 PN 12.5	
200	PL40200
250	PL40250
300	PL40300
PE-HD PE100RC 40 × 3.0 PN 12.5	
50	PLR4050
60	PLR4060
70	PLR4070
80	PLR4080
90	PLR4090
102	PLR40102
112	PLR40112
127	PLR40127
140	PLR40140
152	PLR40152
165	PLR40165
175	PLR40175
185	PLR40185
200	PLR40200
215	PLR40215
225	PLR40225
240	PLR40240
250	PLR40250
265	PLR40265
275	PLR40275
290	PLR40290
300	PLR40300

Table of large dimensions

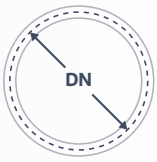
PE-HD PE100RC, EXTRA COAT EC108010, EC1090, EC PAS1075

dimension (mm)	PN	weight kg/1 m	manufactured lengths in lm
PN 10			
560 × 33.2	10.0	55.344	6/12
630 × 37.4	10.0	70.096	6/12
710 × 42.1	10.0	88.981	6/12
800 × 47.4	10.0	112.781	6/12
900 × 53.3	10.0	142.664	6/12
1000 × 59.3	10.0	176.451	6/12
1200 × 71.1	10.0	253.678	6/12
PN 16			
560 × 50.8	16.0	81.588	6/12
630 × 57.2	16.0	103.375	6/12
710 × 64.5	16.0	131.404	6/12
800 × 72.5	16.0	168.110	6/12
900 × 81.7	16.0	212.910	6/12
1000 × 90.3	16.0	261.400	6/12
1200 × 109.4	16.0	398.500	6/12

● custom-made

Glossary of abbreviations

PE	polyethylene
PE-LLD	low density (linear) polyethylene
PE-LD	low density (branched) polyethylene
PE-MD	medium density (branched) polyethylene
PE-HD	high density (linear) polyethylene
LD	low density
MD	medium density
HD	high density
MRS	minimum required strength
SDR	the dimensional relationship between the outside diameter of the pipe and the wall thickness (standard dimension ratio)
PN	nominal pressure
SN	expression of the circular stiffness of thermoplastic PVC pipes in kN/m^2 acc. to ČSN EN 9969 (stiffness)
d	actual outer diameter of PE pipe in mm
DN	nominal pipe clearance is a value indicating the approximate inner diameter of the pipe in mm; primarily denotes thin-walled pipes that have a thin wall compared to the inner diameter (nominal diameter)
RC	this material prevents the slow propagation of stress-induced cracks (resistant to cracking)
EC	trade name of the firm LUNA PLAST for multilayer pipes made of RC and PE100 (extra coat)



Information and application

Polyethylene pipes LUNA PLAST, a.s. are designed (depending on the type) for drinking water, utility water, waste water, gas, bulk materials and coolants. It is manufactured in accordance with ČSN EN 12201-2; DIN 8074 for the following applications:

- Drinking water or cold water distribution systems, irrigation, pressurised and depressurised sewage systems for the temperature range +5 °C to +40 °C.
- Coolant piping – depending on the type of coolant, the piping can be used down to -40 °C.
- Cable protectors, cable ducts for the protection of standard (metallic) cables and optical cables (the inner surface of the duct can be smooth or fitted with longitudinal grooves).

Flammability – according to ČSN 720823 corresponds to flammability C3

Ecology – environmentally friendly and fully recyclable

Processing – easy to process due to the low weight and softness of the material, use in operating environments from +5 °C to +40 °C

Durability – against surface corrosion, no need to paint and no deposits form

Thermal expansion – a temperature change of 10 °C shortens/extends 100 m of standard loose pipe by approx. 20 cm

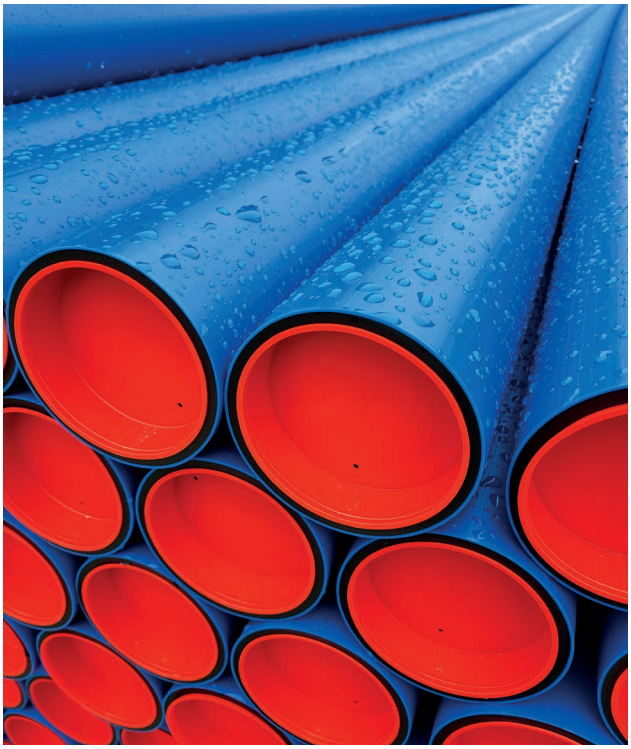
Lifetime and warranty – The PE pipe has a service life of 100 years and is guaranteed for 24 months according to the current standard ČSN EN 12201-2

Certification – ITC a.s. Zlín, DVGW, DIN CERTCO, FM GLOBAL

Welding

LUNA PLAST guarantees the weldability of pipe types as follows:

- The two medium density types PE-MD and PE-LLD can be polyfusion welded, butt welded or connected with mechanical couplings.
- PE-MD cannot be welded with PE-HD, we recommend mechanical couplings.
- PE-HD PE80 and PE-HD PE100 can be butt welded or electrically welded.

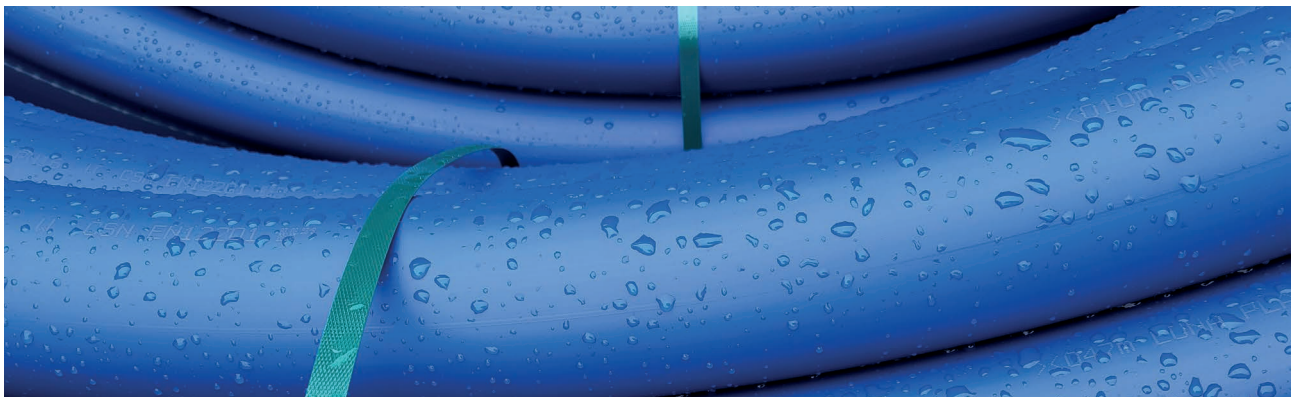


General info about PE

The basic general knowledge about polyethylene can be summarised in a few practical rules and advice for users:

- The properties and shape of PE pipes and fittings can change during storage, especially if they are exposed to higher temperatures for long periods of time.
- Ultraviolet light causes degradation of PE products, so pipes and fittings stored outdoors should be protected with a reflex or opaque film.
- Loading long-term in an environment of detergents, soaps and some hydrocarbons causes stress corrosion in polyethylene.
- Permanent local overloading must be avoided when installing pipework or cable ducts.
- Polyethylene cannot be bonded with conventional adhesives, but joints between parts can be permanently sealed with rubber or asphalt-based sealants.
- Properly laid polyethylene pipe covered with sand and soil will maintain operational reliability for decades.
- Polyethylene waste and end-of-life products are valuable raw materials. Polyethylene for secondary processing must not contain foreign impurities or material that has been exposed to sunlight for a long time.
- Polyethylene is a C3 grade flammable substance (ČSN 730823). Waste that cannot be recycled can be incinerated in a suitable way to recover energy. No harmful fumes are produced when polyethylene burns. However, this does not apply to other plastics.
- Polyethylene is environmentally friendly, certain types of stabilisers must be excluded for food applications.
- PE piping is able to withstand short-term overloading and dynamic loads better than rigid piping. However, for piping installed directly downstream of the compressor or at the discharge of pumps that operate in frequent switching mode, it is recommended to use PE piping in a higher pressure series, see attached table.

operating temperature	PN 7.5 bar at 20 °C	PN 10 bar at 20 °C	PN 16 bar at 20 °C
Below 20 °C	6	10	16
20 – 30 °C	3.2	8	13
30 – 40 °C	2	6	11
40 – 50 °C	1.6	4	8
50 – 60 °C	1	3.2	6



Prohibitions:

!

Expose the PE pipe to ultraviolet (solar) radiation for a long time and use it for solar collectors. However, cable protectors that contain effective light stabilization may be exposed to normal weather conditions.

!

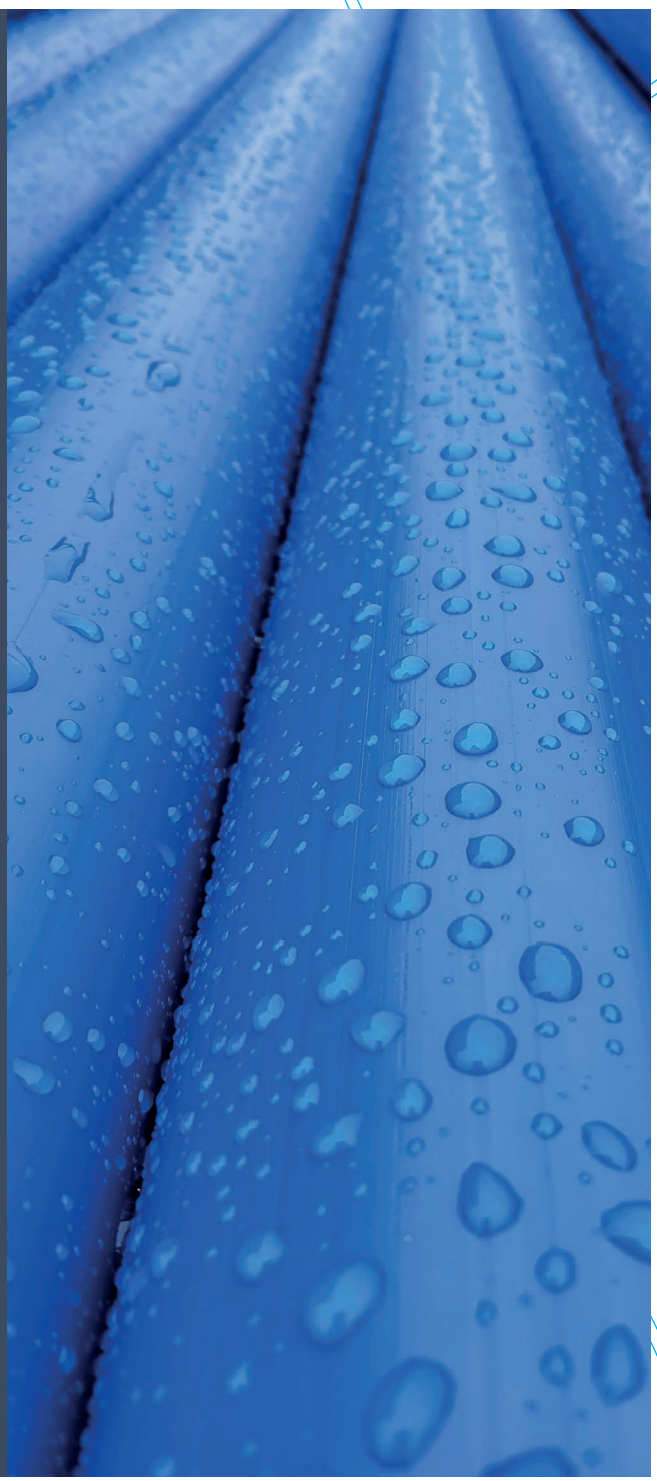
Use PE piping for piping outside the recommended temperature range of +5 °C to +40 °C for PE-MD, PE-LLD and +5 °C to +65 °C for PE-HD.

!

Mutual welding of PE pipes or fittings with different densities (we recommend consulting our experts).

!

Use PE pipes for internal water distribution and for underfloor heating.



Packaging, handling and storage

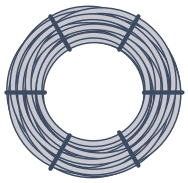
The manufactured pipe is either wound into rolls or cut into rods. The rolls are tightened with tape so that they do not unravel during handling due to material memory. The rods are pulled together into bundles and secured with tape. The ends of the pipe are secured against the ingress of dirt by a plastic cap.

The pipe must be handled in such a way that it is not damaged during transport, loading and storage. It must not be dragged on the ground. Allowable damage is max. 10 % of wall thickness (grooves, scratches).

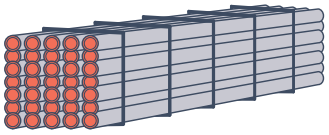
The rolls are stored flat on a suitable support (pallet).

The rods are stored in bundles, the individual layers must be offset from each other, stack height max. 1.5 m.

roll



bundle



Packaging table:

dimension (mm)	roll (lm)	PE-MD rod 6 m pcs per package	PE-HD rod 6 m pcs per package	PE-HD rod 12 m pcs per package	lm per package 6 m / 12 m	PE-OT rod 6 m pcs per package	roll diameter (m)	roll width (cm)
20	200						1	25
25	200						0.95	30
32	100	20	20			20	1.2	25
40	100	10	10			10	1.3	25
50	100/50	10	150		900	150	1.5	30
63	50	5	100		600	100	1.5	40
75	100		64		384	64	2.5 – 2.6	30
90	100/50		46	46	276/552	81	2.7	50 – 74
110	100/50		33	33	198/396	57	3	45
125			23	23	138/276	43		
140			30	30	180/360			
160			26	26	156/312	26		
180			22	22	132/264			
200			15	15	90/180			
225			14	14	84/168	84		
250			12	12	72/144			
280			7	7	42/84			
315			6	6	36/72	36		
355			5	5	30/60			
400			5	5	30/60			
450			1	1				
500			1	1				

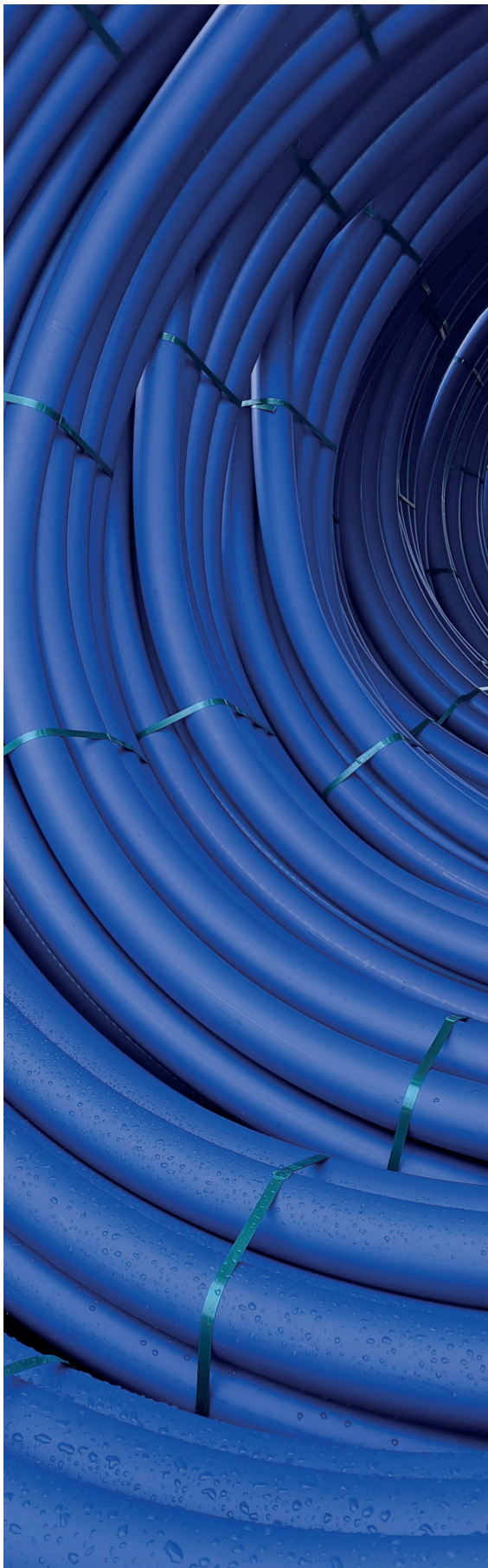
Laboratory LUNA PLAST, a. s.

LUNA PLAST, a. s. has a state-of-the-art laboratory for determining the properties of manufactured PE pipes. The laboratory is located directly on the company's production premises, where all parameters and values are continuously monitored during production according to the relevant standards.

Our company offers you the possibility to perform tests according to your requirements within the given standards (ČSN EN 12201-7, EN 10204 – 3.1) and according to customer requirements.

Laboratory equipment:

- pressurized bath IPT 32 – 160 mm – determination of internal pressure resistance,
- Netzsch 200PC – determination of thermo-oxidative stability – OIT,
- Tinius Olsen H25K – max. force 25 kN/610 mm – determination of tensile properties,
- Tinius Olsen MP600 – weights 2.16 kg; 5 kg; 10 kg – determination of melt flow index – MFI,
- Heraeus oven – determination of longitudinal shrinkage,
- CNC – milling of plastics.



Services offered

Determination of internal pressure resistance according to ČSN EN ISO 1167

Determination of thermo-oxidative stability – OIT according to ČSN EN ISO 11357- 6

Determination of tensile properties according to ČSN EN ISO 6259

Determination of melt flow index – MFI according to ČSN EN ISO 1133

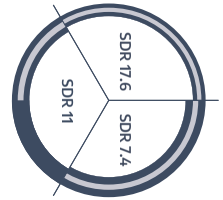
Determination of longitudinal shrinkage according to ČSN EN ISO 2505

Milling of plastics

Table SDR 7.4 – SDR 51

SDR	SDR	7.4	SDR	9	SDR	11	SDR	13.6	SDR	17	SDR	21	SDR	22	SDR	26	SDR	33	SDR	41	SDR	51	SDR
PE100	PN	25	PN	20	PN	16	PN	12.5	PN	10	PN	8	PN	7.5	PN	6.3	PN	5.0	PN	4.0	PN	3.2	PE100
PE80	PN	20.00	PN	16.00	PN	12.50	PN	10.00	PN	7.50	PN	6.50	PN	6.00	PN	5.00	PN	4.00	PN	3.20	PN	2.50	PE80
d mm	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/m	s	kg/ m	s	kg/m	d mm
20	3.0	0.162	2.3	0.132	2.0	0.116																	20
25	3.5	0.240	2.8	0.199	2.3	0.170	2.0	0.148	1.8	0.137													25
32	4.4	0.387	3.6	0.327	3.0	0.278	2.4	0.231	2.0	0.194													32
40	5.5	0.603	4.5	0.510	3.7	0.429	3.0	0.355	2.4	0.293	2.0	0.245	1.9	0.235	1.8	0.224							40
50	6.9	0.940	5.6	0.790	4.6	0.666	3.7	0.549	3.0	0.452	2.4	0.372	2.3	0.358	2.0	0.310	1.8	0.283					50
63	8.6	1.479	7.1	1.263	5.8	1.054	4.7	0.875	3.8	0.720	3.0	0.577	2.9	0.560	2.5	0.491	2.0	0.395	1.8	0.359			63
75	10.3	2.107	8.4	1.774	6.8	1.472	5.6	1.239	4.5	1.016	3.6	0.826	3.5	0.806	2.9	0.672	2.3	0.547	1.9	0.451	1.8	0.430	75
90	12.3	3.019	10.1	2.559	8.2	2.133	6.7	1.775	5.4	1.461	4.3	1.185	4.1	1.136	3.5	0.975	2.8	0.787	2.2	0.634	1.8	0.518	90
100	15.1	4.524	12.3	3.803	10.0	3.164	8.1	2.630	6.6	2.174	5.3	1.778	5.0	1.674	4.2	1.432	3.4	1.171	2.7	0.937	2.2	0.779	110
125	17.1	5.822	14.0	4.904	11.4	4.106	8.2	3.389	7.4	2.774	6.0	2.272	5.7	2.170	4.8	1.844	3.9	1.513	3.1	1.229	2.5	0.996	125
140	18.2	7.313	15.7	6.162	12.7	5.116	10.3	4.244	8.3	3.482	6.7	2.846	6.4	2.732	5.4	2.328	4.3	1.878	3.5	1.541	2.8	1.240	140
160	21.9	8.520	17.9	8.024	14.6	6.716	11.8	5.540	8.5	4.545	7.7	3.732	7.3	3.559	6.2	3.053	4.9	2.428	4.0	1.996	3.2	1.629	160
180	24.6	12.037	20.1	10.153	16.4	8.489	13.3	7.032	10.7	5.749	8.6	4.690	8.2	4.495	6.9	3.802	5.5	3.073	4.4	2.485	3.6	2.045	180
200	27.4	14.892	22.4	12.555	18.2	10.469	14.7	8.625	11.9	7.095	8.6	5.812	8.1	5.540	7.7	4.716	6.2	3.850	4.9	3.055	3.9	2.451	200
225	30.8	18.820	25.2	15.890	20.5	13.250	16.6	10.952	13.4	8.998	10.8	7.344	10.3	7.038	8.6	5.925	6.9	4.793	5.5	3.867	4.4	3.123	225
250	34.2	23.235	27.9	18.531	22.7	16.297	18.4	13.492	14.8	11.028	11.9	8.987	11.4	8.648	8.6	7.342	7.7	5.945	6.2	4.845	4.9	3.839	250
280	38.3	28.134	31.3	24.551	25.4	20.431	20.6	16.905	16.6	13.854	13.4	11.345	12.8	10.851	10.7	8.157	8.6	7.435	6.9	6.004	5.5	4.837	280
315	43.1	36.881	35.2	31.058	28.6	25.863	23.2	21.425	18.7	17.545	15.0	14.257	14.4	13.743	12.1	11.666	8.7	8.421	7.7	7.542	6.2	6.139	315
355	48.5	46.759	38.7	38.443	32.2	32.829	26.1	27.162	21.1	22.329	16.9	18.102	16.2	17.426	13.6	14.743	10.9	11.914	8.7	8.595	7.0	7.809	355
400	54.7	58.395	44.7	50.037	36.3	41.682	28.4	34.448	23.7	28.222	18.1	23.084	18.2	22.051	15.3	18.696	12.3	15.173	8.8	12.163	7.9	8.863	400
450	61.5	75.039	50.3	63.354	40.9	52.782	33.1	43.634	26.7	35.755	21.5	28.193	20.5	27.908	17.2	23.639	13.8	18.108	11.0	15.337	8.8	12.361	450
500	68.3	92.778	55.8	78.068	45.4	65.129	36.8	53.841	28.7	44.179	23.9	36.018	22.8	34.454	18.1	28.161	15.3	23.567	12.3	18.094	8.8	15.284	500
560			62.5	98.008	50.8	81.588	41.2	67.547	33.2	55.344	26.7	45.077	25.5	43.173	21.4	36.552	17.2	28.660	13.7	23.775	11.0	18.186	560
630			70.3	125.220	57.2	103.375	46.3	85.379	37.4	70.096	30.0	56.944	28.7	54.630	24.1	46.315	18.3	37.417	15.4	30.079	12.3	24.191	630
710			78.3	158.130	64.5	131.404	52.2	108.468	42.1	88.981	33.9	72.505	32.3	68.318	27.2	58.873	21.8	47.555	17.4	38.277	13.9	30.518	710
800			88.3	201.900	72.5	168.110	58.8	137.691	47.4	112.781	38.1	91.901	36.4	87.984	30.6	74.563	24.5	60.241	18.6	48.537	15.7	38.105	800
900					81.7	212.910	66.2	174.193	53.3	142.664	42.9	116.282	41.0	111.385	34.4	94.307	27.6	76.306	22.0	61.221	17.6	48.313	900
1000					90.3	261.400	72.5	214.410	58.3	176.451	47.7	143.664	45.5	137.407	38.2	116.366	30.6	93.986	24.5	75.803	18.6	60.993	1000
1200					108.4	398.500	88.2	312.640	71.1	253.678	57.2	206.778	54.6	197.800	45.9	167.601	36.7	135.204	28.4	108.123	23.5	87.726	1200

Note: The weight kg/m is only indicative with regard to the specific gravity of PE.



Hanging PE pipes
acc. to ČSN EN 12236

Pipe diameter (mm) PN 10 / SDR 17											
Media temperature difference °C	125	160	200	250	315	355	400	450	500	560	630
	Pipe support interval in cm										
0	255	260	265	275	280	285	295	305	315	325	330
20	185	190	200	205	210	215	230	240	255	270	280
30	175	180	190	195	200	205	220	230	245	260	275
40	170	175	180	190	190	195	210	225	235	250	265
50	160	165	175	180	185	190	200	215	230	240	255
60	150	155	165	170	175	180	185	200	215	230	240
70	140	145	155	160	170	175	180	190	205	220	230

Pipe diameter (mm) PN 16 / SDR 11																	
Media temperature difference °C	20	25	32	40	50	63	75	90	110	125	160	200	250	315	355	400	450
	Pipe support interval in cm																
0	110	130	150	170	195	220	235	250	275	280	285	290	300	310	315	325	325
20	80	95	110	125	145	165	175	185	200	205	210	220	225	230	235	250	265
30	80	95	110	125	145	165	175	185	190	195	200	210	215	220	225	240	255
40	75	85	100	115	135	155	165	175	180	185	190	200	210	210	215	230	245
50	75	85	100	115	135	155	160	170	170	175	180	190	200	205	205	220	235
60	70	80	95	110	125	145	150	160	160	165	170	180	185	190	195	205	220
70	60	70	85	100	120	135	140	145	150	155	160	170	175	185	190	195	210

Pipe pressure conversions

acc. to ČSN EN 12201-2+A1

Pipe rigidity for depressurised systems

After calculating the initial pipe deformation for depressurised waste systems, the initial circular stiffness must be subtracted from the table:

Initial circular pipe stiffness				
SDR	Pipe series S	E – module (Mpa)		
		800	1000	1200
		Initial circular stiffness (Scalc) (kN/m^2)		
41	20	1.0	1.3	1.6
33	16	2.0	2.5	3.1
26	12.5	4.3	5.3	6.4
21	10	8.3	10.4	12.5
17	8	16.3	20.3	24.4
13.6	6.3	33.3	41.7	50.0
11	5	66.7	83.3	100.0
9	4	130.2	162.8	195.3
7.4	3.2	254.3	317.9	381.5
6	2.5	533.3	668.7	800.0

Initial circular stiffness S_{calc} according to the table is calculated using the equation:

$$S_{calc} = \frac{E \times I}{(d_n - e_n)^3} = \frac{E}{96S^3}$$

where:

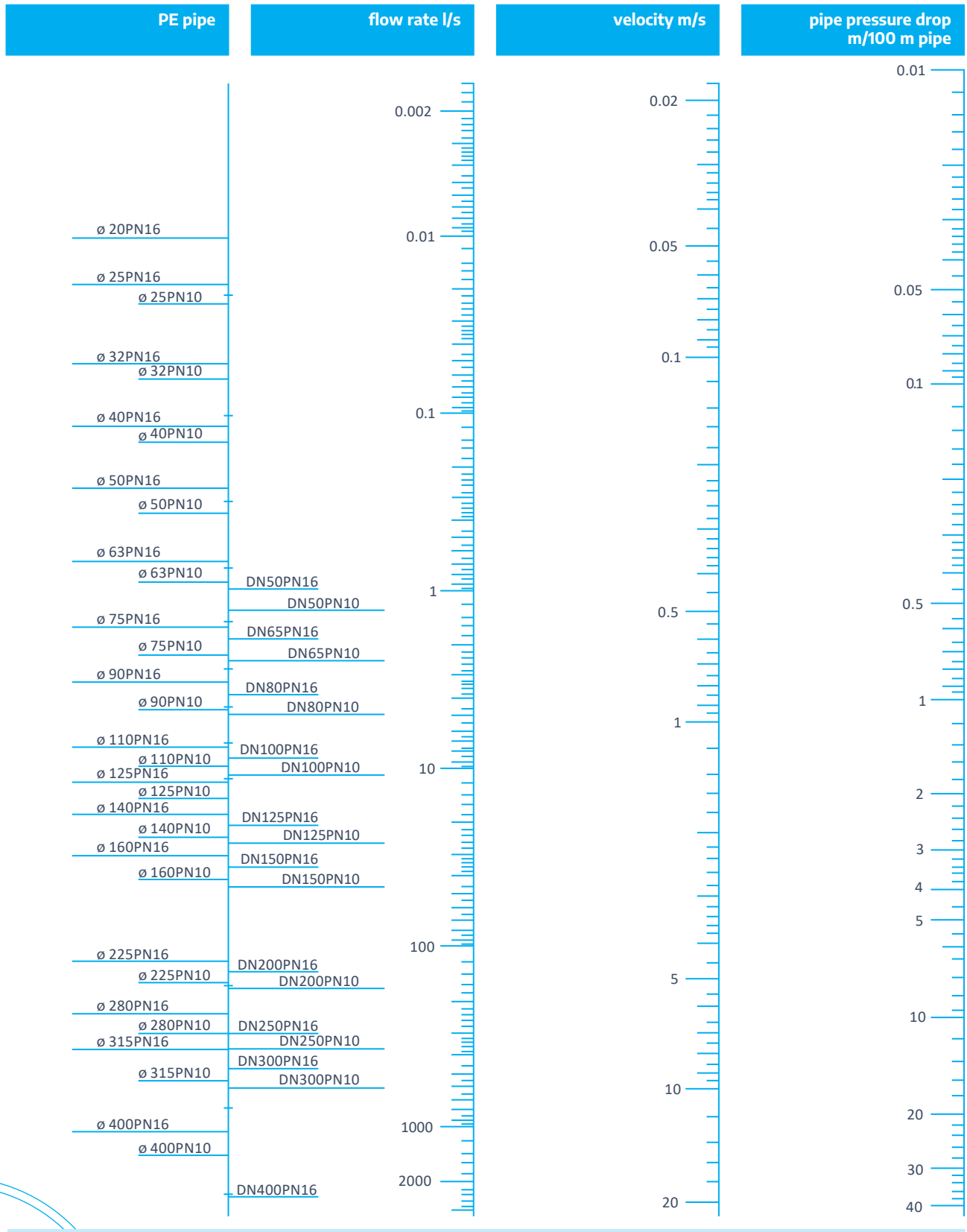
S_{calc} calculated initial circular stiffness, in kN/m^2
E modulus of elasticity in bending (according to EN ISO 178:2003) (MPa)
I moment of inertia, in m^3

$\frac{1 \times e_n^{\ 3}}{12}$ for 1 m length

d_n nominal outer diameter, in mm
e_n nominal wall thickness, in mm
S pipe series

Note: In practice, the initial circular stiffness is always higher than the calculated one because the average wall thickness is greater than the nominal one used for the calculation. If a pipe with initial circular stiffness $S_{calc} < 4$ is laid in the ground, excessive flattening must be avoided.

Approximate pressure losses



Pressure drop in straight pipe Δdiam:
Pressure drop in the fitting Δpf:

$$\Delta pf = \frac{(\zeta \times y \times v^2)}{2\,g}$$

Δp_r = in mm water column

Resistance coefficient ζ: for small dimensions is between 0.5 and 1.5. For larger dimensions, the coefficient decreases on a simple arc. The exact calculation can be found in specialist literature or manufacturer documentation.

y = specific weight of the flowing medium

v = mean flow velocity in m/s

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