

TPLAST[®] S.A.



Product Catalogue

CASING PIPES FOR ELECTRICAL INSTALLATIONS,
ENERGETICS AND TELECOMMUNICATIONS



ELECTRICAL INSTALLATIONS



ENERGETICS



TELECOMMUNICATIONS

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The TT PLAST S.A. company is a Polish manufacturer of plastic pipes and accessories as well as PVC granulates, with over 20 years of experience.

Our products are used in the following sectors:



ELECTRICAL INSTALLATION



ENERGETICS



TELECOMMUNICATIONS



AGRICULTURE



INDUSTRIAL



WATER AND SEWAGE SYSTEM



GAS



VENTILATION AND RECUPERATION



RENEWABLE ENERGY SOURCES

BRANCHES / MANUFACTURING PLANTS

Headquarters:
Targowisko 476 32-015 Kłaj



Plant in Kłaj
Kłaj 400



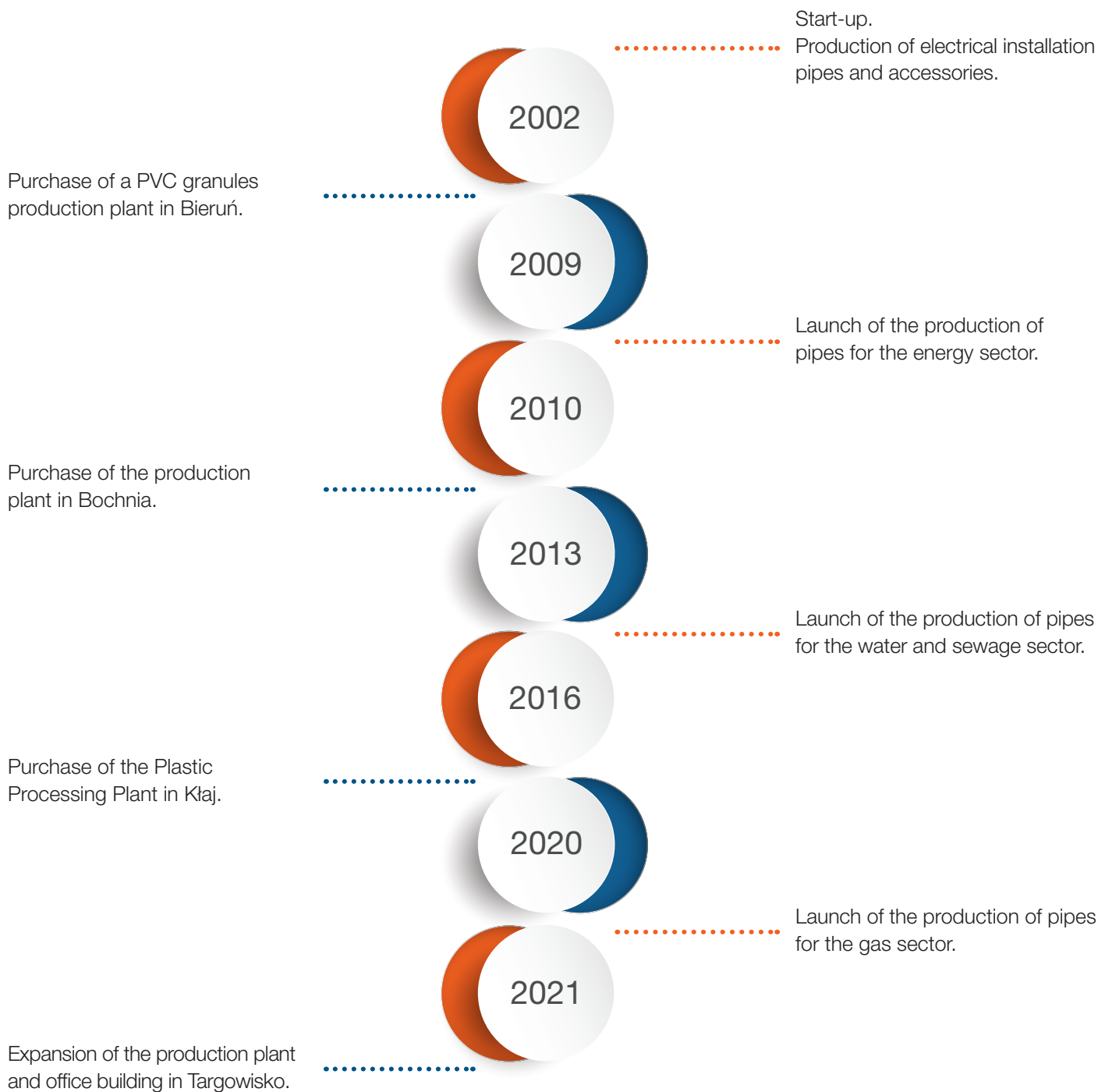
Plant in Bieruń
ul. Chemików 133



Plant in Bochnia
ul. Gazowa 6



HISTORY:





ELECTRICAL INSTALLATIONS

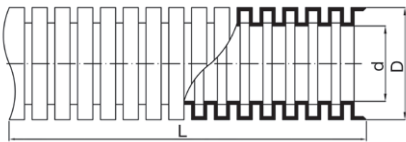
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Corrugated wiring pipe PP - RKLF

	Reference documents:	PN-EN 61386-22
	Characteristics:	Corrugated pipe, flexible, flammable
	Application:	Protection of electrical wires in concealed installations against mechanical damage.
	Material:	PP
	Compressive strength:	Up to 320N
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Half – transparent
	Ø External diameter [mm]:	14; 16*; 18*; 20*; 23*; 25*; 28*; 32*; 36; 40; 43; 50
	Length of coils [m]:	25; 50; 100
	NOTES:	Possibility of producing pipe in a different colour on request

* innovative pipe

The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.













Symbol	Ø D / d [mm]	L [m]		
		25	50	100
		index	index	index
RKLF 14/9	14/9	10034		
RKLF 16/12	16/12	10040	10041	
RKLF 18/13,5	18/13,5	10043	10044	10045
RKLF 20/16	20/16	10046	10047	10048
RKLF 23/18	23/18	10052	10053	10054
RKLF 25/20	25/20	10055	10056	
RKLF 28/23	28/23	10058	10059	
RKLF 32/26	32/26	10060	10061	
RKLF 36/29	36/29	10062	10063	
RKLF 40/34	40/34	10070		
RKLF 43/36	43/36	10066		
RKLF 50/43	50/43	10069		

Corrugated electrical installation pipe for special applications PP: type 7 and type 10 (on request)

Symbol	index	Ø d / D [mm]	L [m]
RKLF-typ 7*	12537	7/10	100
RKLF-typ 10*	12538	10/13	100

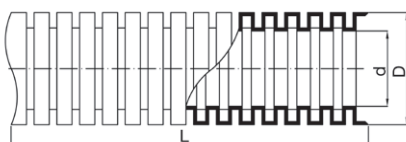
* innovative pipe

Corrugated wiring pipe PVC 320N - RKLS, RKLSP




	Reference documents:	PN-EN 61386-22
	Characteristics:	<ul style="list-style-type: none"> Corrugated pipe, flexible, self-extinguishing Flammability class: UL94: V-0, Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 RKLSP pipe equipped with a metal wire
	Application:	Protection of electrical installations in construction and industry sector against mechanical factors, changes of temperature and moisture. Used in places with increased fire hazard public utility buildings, wooden structure buildings, and attics. Pipes can be laid and poured with concrete.
	Material:	PVC
	Compressive strength:	320N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	Gray
	Ø External diameter [mm]:	16*; 18*; 20*; 23*; 25*; 28*; 32*; 36; 40; 43; 50
	Length of coils [m]:	25; 50; 100
	NOTES:	Possibility of producing pipe in a different colour on request

* innovative pipe


 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



* product available on request at the minimum production requirement










	Symbol	Ø D / d [mm]	L [m]		
			25	50	100
			 index	 index	 index
Without wire	RKLS 16/12	16/12	10004	10005	
	RKLS 18/13,5	18/13,5	10007	10008	10009
	RKLS 20/16	20/16	10010	10011	10012
	RKLS 23/18	23/18	10013	10014	10015
	RKLS 25/20	25/20	10016	10017	10018
	RKLS 28/23	28/23	10019	10020	
	RKLS 32/26	32/26	10021	10022	
	RKLS 36/29	36/29	10023	10024	
	RKLS 40/34	40/34	10025	10026**	
	RKLS 43/36	43/36	10027	10028**	
With wire	RKLS 50/43	50/43	10029		
	RKLSP 16/12	16/12	10274	10275	
	RKLSP 18/13,5	18/13,5	10277	10278	10279
	RKLSP 20/16	20/16	10280	10281	10282
	RKLSP 23/18	23/18	10283	10284	10285
	RKLSP 25/20	25/20	10286	10287	10288
	RKLSP 28/23	28/23	10289	10290	
	RKLSP 32/26	32/26	10291	10292	
	RKLSP 36/29	36/29	10293	10294	
	RKLSP 40/34	40/34	10295	10296**	
RKLSP 43/36	43/36	10297	10298**		
RKLSP 50/43	50/43	10299			

Corrugated wiring pipes for special applications PP: type 7 and type 10 (on request)

Symbol	 index	Ø d / D [mm]	L [m]
RKLS-typ 7*	12539	7/10	100
RKLS-typ 10*	12540	10/13	100

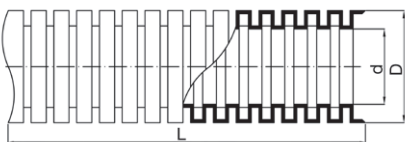
* innovative pipe

Corrugated wiring pipe PVC 750N - RKSS, RKSSP

	Reference documents:	PN-EN 61386-22
	Characteristics:	<ul style="list-style-type: none"> • Corrugated pipe, flexible, self-extinguishing • Flammability class: UL94: V-0, • Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 • RKSSP pipe equipped with a metal wire
	Application:	Protection of electrical installations in construction and industry sector against mechanical factors, changes of temperature and moisture. Used in places with increased fire hazard public utility buildings, wooden structure buildings and attics. Pipes can be laid and poured with concrete (vibrated concrete).
	Material:	PVC
	Compressive strength:	750N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	Gray
	Ø External diameter [mm]:	16*; 18*; 20*; 23*; 25*; 28*; 32*; 36; 40; 43; 50
	Length of coils [m]:	25; 50; 100

* innovative pipe











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



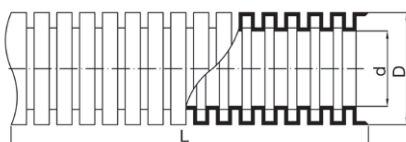
	Symbol	Ø D / d [mm]	L [m]		
			25	50	100
			 index	 index	 index
Without wire	RKSS 16/12	16/12	10304	10305	
	RKSS 18/13,5	18/13,5	10307	10308	10309
	RKSS 20/16	20/16	10310	10311	10312
	RKSS 23/18	23/18	10313	10314	10315
	RKSS 25/20	25/20	10316	10317	10318
	RKSS 28/23	28/23	10319	10320	
	RKSS 32/26	32/26	10321	10322	
	RKSS 36/29	36/29	10323	10324	
	RKSS 40/34	40/34	10325	10326**	
	RKSS 43/36	43/36	10327	10328**	
	RKSS 50/43	50/43	10329		
With wire	RKSSP 16/12	16/12	10334	10335	
	RKSSP 18/13,5	18/13,5	10337	10338	10339
	RKSSP 20/16	20/16	10340	10341	10342
	RKSSP 23/18	23/18	10343	10344	10345
	RKSSP 25/20	25/20	10346	10347	10348
	RKSSP 28/23	28/23	10349	10350	
	RKSSP 32/26	32/26	10351	10352	
	RKSSP 36/29	36/29	10353	10354	
	RKSSP 40/34	40/34	10355	10356**	
	RKSSP 43/36	43/36	10357	10358**	
	RKSSP 50/43	50/43	10359		



* product available on request at the minimum production requirement

Corrugated halogen - free wiring pipe 320N - RKLSHF, RKLSHFP

	Reference documents:	PN-EN 61386-22
	Characteristics:	<ul style="list-style-type: none"> Corrugated, flexible, flame retardant, self - extinguishing, halogen-free pipe (fulfils requirements concerning quantity of toxic chemical compounds released during combustion) Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0 RKSSHFP pipe equipped with a metal wire
	Application:	Protection of electric wires in flush - mounted and wall mounted installations. Recommended in places with increased fire hazard and in places concerning the stricter requirements for toxic chemical produced by a fire (halogen-free product).
	Material:	PP modified
	Compressive strength:	320N
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Milky
	Ø External diameter [mm]:	16; 20; 25; 32; 40; 50
	Length of coils [m]:	25; 50
	NOTES:	Possibility of producing pipe in a different colour on request











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



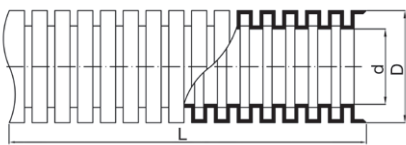
	Symbol	Ø D / d [mm]	L [m]	
			25	50
			 index	 index
Without wire	RKLSHF 16/12	16/12		10078
	RKLSHF 20/16	20/16		10079
	RKLSHF 25/20	25/20		10090
	RKLSHF 32/26	32/26		10091
	RKLSHF 40/34	40/34		10088*
	RKLSHF 50/43	50/43	10097*	
With wire	RKLSHFP 16/12	16/12		11056
	RKLSHFP 20/16	20/16		10073
	RKLSHFP 25/20	25/20		11644
	RKLSHFP 32/26	32/26		11645
	RKLSHFP 40/34	40/34		11646*
	RKLSHFP 50/43	50/43	11547*	



* product available on request at the minimum production requirement

Corrugated halogen - free wiring pipe 750N - RKSSHF, RKSSHFP

	Reference documents:	PN-EN 61386-22
	Characteristics:	<ul style="list-style-type: none"> • Corrugated, flexible, flame retardant, self-extinguishing, halogen-free pipe (fulfills requirements concerning quantity of toxic chemical compounds released during combustion) • Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0 • RKSSHFP pipe equipped with a metal wire
	Application:	Protection of electric wires in flush - mounted and wall mounted installations. Recommended in places with increased fire hazard and in places concerning the stricter requirements for toxic chemical produced by a fire (halogen-free product).
	Material:	PP modified
	Compressive strength:	750N
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Milky
	Ø External diameter [mm]:	16; 20; 25; 32; 40; 50
	Length of coils [m]:	25; 50
	NOTES:	Possibility of producing pipe in a different colour on request










 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



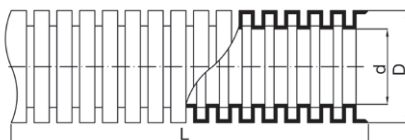
	Symbol	Ø D / d [mm]	L [m]	
			25	50
			 index	 index
Without wire	RKSSHF 16/12	16/12		10071
	RKSSHF 20/16	20/16		10074
	RKSSHF 25/20	25/20		10077
	RKSSHF 32/26	32/26		10080
	RKSSHF 40/34	40/34		10082
	RKSSHF 50/43	50/43	10089	
With wire	RKSSHFP 16/12	16/12		11648
	RKSSHFP 20/16	20/16		11055
	RKSSHFP 25/20	25/20		11649
	RKSSHFP 32/26	32/26		11650
	RKSSHFP 40/34	40/34		11651
	RKSSHFP 50/43	50/43	11652	

* product available on request at the minimum production requirement

Corrugated wiring UV - resistant pipe - RKSSUV, RKSSUVP

	Reference documents:	PN-EN 61386-22
	Characteristics:	<ul style="list-style-type: none"> • Corrugated, flexible, UV resistant ,self-extinguishing pipe • Flammability class: UL94: V-0, • Fire reaction class: PN-EN 13501-1:2019-2: B-s2, d0 • RKSSUVP pipe equipped with a metal wire
	Application:	Protection of electrical wires against mechanical factors, temperature, UV radiation, moisture in flush-mounted and wall mounted installations (inside or outside the building) in moderate climate.
	Material:	PVC with UV stabilizer
	Compressive strength:	750 N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	Black
	Ø External diameter [mm]:	16; 20; 25; 32; 40
	Length of coils [m]:	50

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.

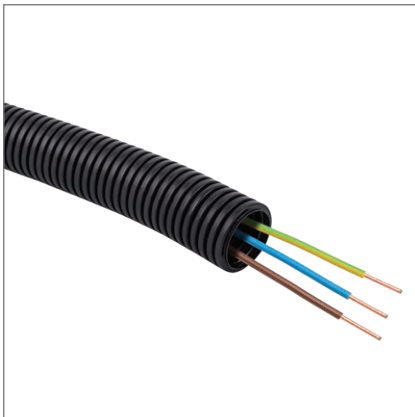


	Symbol	Ø D / d [mm]	△ L [m]
			50
			☐ index
Without wire	RKSSUV 16/12	16/12	12458
	RKSSUV 20/16	20/16	12460
	RKSSUV 25/20	25/20	12462
	RKSSUV 32/26	32/26	12464
	RKSSUV 40/34	40/34	12465
With wire	RKSSUVP 16/12	16/12	12466
	RKSSUVP 20/16	20/16	12468
	RKSSUVP 25/20	25/20	12470
	RKSSUVP 32/26	32/26	12472
	RKSSUVP 40/34	40/34	12473

Corrugated wiring PVC pipe RKLS, RKSS with cables

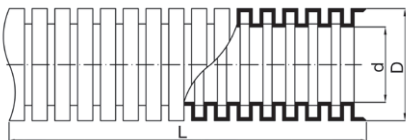
	Characteristics:	PIPE: <ul style="list-style-type: none"> Reference documents: PN EN 61386-22 Corrugated pipe, flexible, self-extinguishing Flammability class: UL94: V-0, Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 Material: PVC Colour: gray CABLES: <ul style="list-style-type: none"> H07V-U (other on request) Colours: brown, blue, yellow-green Fire reaction class: CPR Eca
		Application:
	Compressive strength:	320N, 750N
	Scope of temperatures:	-15°C ÷ 60°C
	Ø External diameter [mm]:	16; 20
	Length of coils [m]:	50; 100
	NOTES:	<ul style="list-style-type: none"> Possibility of producing pipe in a different length of coils Possibility of producing pipe with cables of different parameters

The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Symbol	Ø D / d [mm]	Compressive strength	L [m]	
			50	100
			index	index
RKLS 16/12 + H07V-U 3x1,5	16/12	320N	12614*	12795*
RKSS 16/12 + H07V-U 3x 1,5	16/12	750N	12616*	12796*
RKLS 20/16 + H07V-U 3x 2,5	20/16	320N	12626*	12797*
RKSS 20/16 + H07V-U 3x 2,5	20/16	750N	12628*	12798*











* product available on request at the minimum production requirement



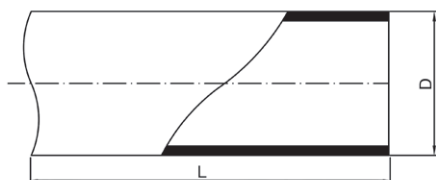
Cables classification - Fire reaction class CPR

Aca	B1ca	B2ca	Cca	Dca	Eca	Fca
Non-flammable	Very low flammability Very low heat emission	Slightly flammable Poor heat emission	Reduced flammability reaction Reduced heat emission	Improved flammability reaction Improved heat emission	Basic flammability reaction Unspreadability of fire	Fails class E requirements, Unknown criteria

Rigid wiring pipe PVC 320N - RL

	Reference documents:	PN-EN 61386-21
	Characteristics:	<ul style="list-style-type: none"> Rigid pipe, flammability class V-0, self-extinguishing Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 Characterised by increased durability and colour stability even in conditions of continuous exposure to UV radiation
	Application:	Distribution and protection of electric wires in wall installations outside and inside the building.
	Material:	PVC
	Compressive strength:	320N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White, Gray (RAL 7012)
	Ø External diameter [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 40; 47; 50
	Length of bars [m]:	2; 3
	NOTES:	Possibility of producing pipe in a different colour on request











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



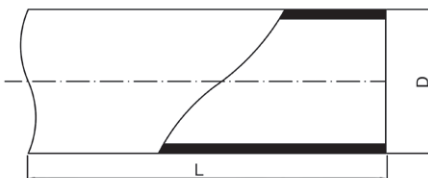
Ø D [mm]	L: 3m				L: 2m		Item / pack
	Gray		Gray		White		
	Symbol	index	Symbol	index	Symbol	index	
13	RL 13	10092	RL 13 SZ	10104	RL 13-2	33400	40
16	RL 16	10093	RL 16 SZ	10105	RL 16-2	33410	20
18	RL 18	10094	RL 18 SZ	10106	RL 18-2	33420	20
20	RL 20	10095	RL 20 SZ	10107	RL 20-2	33430	20
22	RL 22	10096	RL 22 SZ	10108	RL 22-2	33450	20
25	RL 25	10220	RL 25 SZ	10223	RL 25-2	11861*	20
28	RL 28	10098	RL 28 SZ	10110	RL 28-2	33460	20
32	RL 32	10099	RL 32 SZ	10111*	RL 32-2	11862*	10
37	RL 37	10100	RL 37 SZ	10112	RL 37-2	33470	10
40	RL 40	10101*	RL 40 SZ	10113*	RL 40-2	11845*	10
47	RL 47	10102	RL 47 SZ	10114	RL 47-2	33480	10
50	RL 50	10103*	RL 50 SZ	10115*	RL 50-2	11863*	10

* product available on request at the minimum production requirement

Rigid wiring pipe PVC 750N - RS

	Reference documents:	PN-EN 61386-21
	Characteristics:	<ul style="list-style-type: none"> Rigid pipe, flammability class V-0, self-extinguishing Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 Characterised by increased durability and colour stability even in conditions of continuous exposure to UV radiation
	Application:	Distribution and protection of electric wires in wall installations outside and inside the building.
	Material:	PVC
	Compressive strength:	750N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White, Gray (RAL 7012)
	Ø External diameter [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 40; 47; 50
	Length of bars [m]:	3
	NOTES:	Possibility of producing pipe in a different colour on request











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



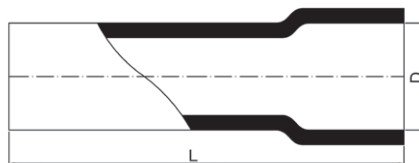
Ø D [mm]	L: 3m				Item / pack
	White		Gray		
	Symbol	index	Symbol	index	
13	RS 13	10766*	RS 13 SZ	10848*	40
16	RS 16	10767*	RS 16 SZ	10849*	20
18	RS 18	10768*	RS 18 SZ	10850*	20
20	RS 20	10769*	RS 20 SZ	10851*	20
22	RS 22	10770*	RS 22 SZ	10852*	20
25	RS 25	10771*	RS 25 SZ	10853*	20
28	RS 28	10772*	RS 28 SZ	10854*	20
32	RS 32	10773*	RS 32 SZ	10855*	10
37	RS 37	10774*	RS 37 SZ	10856*	10
40	RS 40	10775*	RS 40 SZ	10857*	10
47	RS 47	10776*	RS 47 SZ	10858*	10
50	RS 50	10777*	RS 50 SZ	10859*	10

* product available on request at the minimum production requirement

Rigid wiring pipe with a socket PVC 320N - RL-M

	Reference documents:	PN-EN 61386-21
	Characteristics:	<ul style="list-style-type: none"> Rigid pipe ended with a socket, flammability class V-0, self-extinguishing Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 Characterised by increased durability and colour stability even in conditions of continuous exposure to UV radiation
	Application:	Distribution and protection of electric wiring pipe in pre-wall installations outside and inside the building.
	Material:	PVC
	Compressive strength:	320N
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White
	Ø External diameter [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 40; 47; 50
	Length of bars [m]:	2; 3
	NOTES:	Possibility of producing pipe in a different colour on request










 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



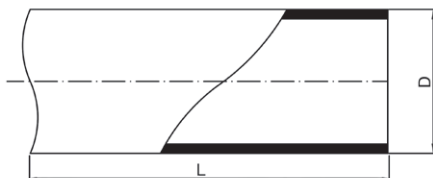
Ø D [mm]	L: 3m		L: 2m		Item / pack
	White		White		
	Symbol	index	Symbol	index	
13	RL-M 13	12728*	RL-M 13-2	12740*	40
16	RL-M 16	12729	RL-M 16-2	12741	20
18	RL-M 18	12730	RL-M 18-2	12742	20
20	RL-M 20	12731	RL-M 20-2	12743	20
22	RL-M 22	12732	RL-M 22-2	12744	20
25	RL-M 25	12733*	RL-M 25-2	12745*	20
28	RL-M 28	12734	RL-M 28-2	12746	20
32	RL-M 32	12735*	RL-M 32-2	12747*	10
37	RL-M 37	12736	RL-M 37-2	12748	10
40	RL-M 40	12737*	RL-M 40-2	12749*	10
47	RL-M 47	12738	RL-M 47-2	12750	10
50	RL-M 50	12739*	RL-M 50-2	12751*	10

* product available on request at the minimum production requirement

Rigid wiring halogen-free pipe 320N - RLHF

	Reference documents:	PN-EN 61386-21
	Characteristics:	<ul style="list-style-type: none"> Rigid pipe, flame retardant, self-extinguishing, halogen-free (fulfills requirements regarding the amount of toxic chemical compounds released during combustion) Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0
	Application:	Distribution and protection of electric wires in wall installations, flush-mounted installations, plaster walls, wooden surfaces. Recommended in places with a special degree of fire protection and in places with stricter requirements for toxic chemicals (halogen-free product).
	Material:	PP modified
	Compressive strength:	320N
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Gray
	Ø External diameter [mm]:	16; 18; 20; 22; 25; 28; 32; 37; 47
	Length of bars [m]:	3










 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



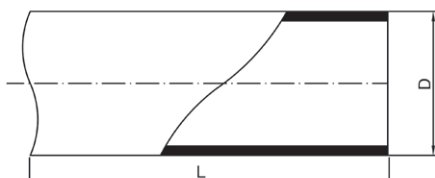
Ø D [mm]	L: 3m		Item / pack
	Gray		
	Symbol	index	
16	RLHF 16	10406	20
18	RLHF 18	11053	20
20	RLHF 20	10408	20
22	RLHF 22	10410	20
25	RLHF 25	11653	20
28	RLHF 28	10412	20
32	RLHF 32	11654	10
37	RLHF 37	10414	10
47	RLHF 47	10416*	10

* product available on request at the minimum production requirement

Rigid wiring halogen-free pipe 750N - RSHF

	Reference documents:	PN-EN 61386-21
	Characteristics:	<ul style="list-style-type: none"> Rigid, flame – retardant, self-extinguishing, halogen-free pipe (fulfils requirements regarding the amount of toxic chemical compounds released during combustion) Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0
	Application:	Distribution and protection of electric wires in wall installations, flush-mounted installations, plaster walls, wooden surfaces. Recommended in places with a special degree of fire protection and in places with stricter requirements for toxic chemicals (halogen-free product).
	Material:	PP modified
	Compressive strength:	750N
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Gray
	Ø External diameter [mm]:	16; 20; 22; 28; 37; 47
	Length of bars [m]:	3









 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Ø D [mm]	L: 3m		Item / pack
	Gray		
	Symbol	index	
16	RSHF 16	10760*	20
20	RSHF 20	10761*	20
22	RSHF 22	10762*	20
28	RSHF 28	10763*	20
37	RSHF 37	10764*	10
47	RSHF 47	10765*	10

* product available on request at the minimum production requirement

Closing handle - UZ

	Reference documents:	PN-EN 61386-25
	Characteristics:	Closing handle, flammable
	Application:	Fixing system for rigid and corrugated pipes in (internal) wall installations, flush-mounted installations and plaster walls.
	Material:	PP
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	White, Gray (RAL 7012)
	Size [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 40; 47; 50
	NOTES:	Possibility of producing closing handle in a different colour on request








 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Size [mm]	White		Gray		Item / pack
	Symbol	 index	Symbol	 index	
13	UZ 13	10180	UZ 13 SZ	10188	100
16	UZ 16	10181	UZ 16 SZ	10189	100
18	UZ 18	10182	UZ 18 SZ	10190	100
20	UZ 20	10183	UZ 20 SZ	10191	100
22	UZ 22	10184	UZ 22 SZ	10192	100
25	UZ 25	10221	UZ 25 SZ	10224	100
28	UZ 28	10185	UZ 28 SZ	10193	100
32	UZ 32	10501	UZ 32 SZ	10504	100
37	UZ 37	10186	UZ 37 SZ	10194	100
40	UZ 40	10502*	UZ 40 SZ	10505*	100
47	UZ 47	10187	UZ 47 SZ	10195	100
50	UZ 50	10503*	UZ 50 SZ	10506*	100



* product available on request at the minimum production requirement

Closing handle halogen-free - UZHF

	Reference documents:	PN-EN 61386-25
	Characteristics:	<ul style="list-style-type: none"> Closing handle, flame retardant, self-extinguishing, halogen-free (fulfils requirements concerning quantity of toxic chemical compounds released during combustion) Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0
	Application:	Fixing system for rigid halogen-free and corrugated pipes in (internal) wall installations, flush-mounted installations and plaster walls.
	Material:	PP modified
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Gray
	Size [mm]:	16; 18; 20; 22; 25; 28; 32; 37; 47








 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Size [mm]	Gray		 Item / pack
	Symbol	 index	
16	UZHF 16	10860	100
18	UZHF 18	11035	100
20	UZHF 20	10861	100
22	UZHF 22	10862	100
25	UZHF 25	11658	100
28	UZHF 28	10863	100
32	UZHF 32	11659	100
37	UZHF 37	10864	100
47	UZHF 47	10865*	100

* product available on request at the minimum production requirement

Hooks









	Reference documents:	PN-EN 61386-25
	Characteristics:	<ul style="list-style-type: none"> • Double hook, flammable • Single hook, flammable
	Application:	Fixing system for rigid and corrugated pipes in wall installations, flush-mounted installations and plaster walls.
	Material:	PP
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	White
	Size [mm]:	48; 77; 100

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.

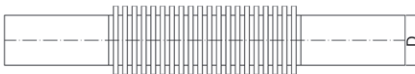




	Symbol	Size [mm]	Internal [mm]	index	Number of pieces in the package
single	H48/1	48	25	10251	100
	H77/1	77	25	10252	100
	H100/1	100	25	10253	100
double	H48/2	48	21	10254	100
	H77/2	77	21	10255	100
	H100/2	100	25	10266	100

Compensation connector PP - ZCLF

	Reference documents:	PN-EN 61386-25
	Characteristics:	Compensation connector, flexible, flammable
	Application:	Fixing system for rigid and corrugated pipes in wall installations, flush-mounted installations and plaster walls.
	Material:	PP
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	White, gray (RAL 7012)
	Size [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 47
	NOTES:	Possibility of producing connector in a different colour on request








 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



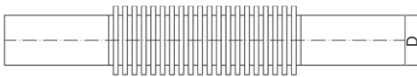
Size D [mm]	White		Gray		Number of pieces in the package
	Symbol	 index	Symbol	 index	
13	ZCLF 13	10164	ZCLF 13 SZ	10172	100
16	ZCLF 16	10165	ZCLF 16 SZ	10173	100
18	ZCLF 18	10166	ZCLF 18 SZ	10174	100
20	ZCLF 20	10167	ZCLF 20 SZ	10175	100
22	ZCLF 22	10168	ZCLF 22 SZ	10176	100
25	ZCLF 25	11661	ZCLF 25 SZ	11026	100
28	ZCLF 28	10169	ZCLF 28 SZ	10177	100
32	ZCLF 32	11660	ZCLF 32 SZ	11662*	50
37	ZCLF 37	10170	ZCLF 37 SZ	10178	50
47	ZCLF 47	10171	ZCLF 47 SZ	10179	50


* product available on request at the minimum production requirement

Compensation halogen-free connector - ZCLFHF

	Reference documents:	PN-EN 61386-25
	Characteristics:	<ul style="list-style-type: none"> • Compensation connector, flexible, flame retardant, self-extinguishing, halogen-free (fulfils requirements regarding the amount of toxic chemical compounds released during combustion) • Fire reaction class: PN-EN 13501-1:2019-02: C-s3, d0
	Application:	Fixing system for rigid halogen-free pipes in wall installations, flush-mounted installations and plaster walls.
	Material:	PP modified
	Scope of temperatures:	-5°C ÷ 90°C
	Colour:	Gray
	Size [mm]:	16; 18; 20; 22; 25; 28; 32; 37; 47









 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Size [mm]	Gray		Number of pieces in the package
	Symbol	 index	
16	ZCLFHF 16	10866	100
18	ZCLFHF 18	11024	100
20	ZCLFHF 20	10867	100
22	ZCLFHF 22	10868	100
25	ZCLFHF 25	11663	100
28	ZCLFHF 28	10869	100
32	ZCLFHF 32	11664	50
37	ZCLFHF 37	10870	50
47	ZCLFHF 47	10871*	50


* product available on request at the minimum production requirement

Compensation connector PVC - ZCL

	Reference documents:	PN-EN 61386-25
	Characteristics:	<ul style="list-style-type: none"> • Compensation connector, flexible flammability class: V-0, self-extinguishing • Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 • Characterised by increased durability and colour stability even in conditions of continuous exposure to UV radiation
	Application:	Fixing system for rigid pipes in wall installations, flush-mounted installations and plaster walls.
	Material:	PVC
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White, gray (RAL 7012)
	Size [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 40; 47
	NOTES:	Possibility of producing elbow connector in a different colour on request








 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Size [mm]	White		Gray		Number of pieces in the package
	Symbol	 index	Symbol	 index	
13	ZCL PVC 13	10116	ZCL PVC 13 SZ	10124	100
16	ZCL PVC 16	10117	ZCL PVC 16 SZ	10125	100
18	ZCL PVC 18	10118	ZCL PVC 18 SZ	10126	100
20	ZCL PVC 20	10119	ZCL PVC 20 SZ	10127	100
22	ZCL PVC 22	10120	ZCL PVC 22 SZ	10128	100
25	ZCL PVC 25	10634	ZCL PVC 25 SZ	10140*	100
28	ZCL PVC 28	10121	ZCL PVC 28 SZ	10129	100
32	ZCL PVC 32	10635	ZCL PVC 32 SZ	10664*	50
37	ZCL PVC 37	10122	ZCL PVC 37 SZ	10130	50
47	ZCL PVC 47	10123	ZCL PVC 47 SZ	10131	50



* product available on request at the minimum production requirement

Elbow connector PVC - ZKL

	Reference documents:	PN-EN 61386-25
	Characteristics:	<ul style="list-style-type: none"> • Elbow connector, rigid • Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0
	Application:	Fixing system for rigid pipes in wall installations, flush-mounted installations and plaster walls.
	Material:	PVC
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White
	Size [mm]:	13; 16; 18; 20; 22; 25; 28; 32; 37; 47








 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Size [mm]	White		 Number of pieces in the package
	Symbol	 index	
13	ZKL 13	10148*	100
16	ZKL 16	10149	100
18	ZKL 18	10150	100
20	ZKL 20	10151	100
22	ZKL 22	10152	100
25	ZKL 25	10639*	100
28	ZKL 28	10153	100
32	ZKL 32	10640*	50
37	ZKL 37	10154	50
47	ZKL 47	10155	20



* product available on request at the minimum production requirement

Straight connector PVC - ZPL

	Reference documents:	PN-EN 61386-25
	Characteristics:	Straight connector, rigid
	Application:	Fixing system for rigid pipes in wall installations, flush - mounted installations and plaster walls.
	Material:	PVC
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White
	Size [mm]:	13; 16; 18; 20; 22; 25; 28; 37; 47









 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



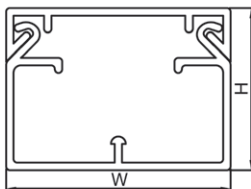
Size [mm]	White		 Number of pieces in the package
	Symbol	 index	
13	ZPL 13	10132*	100
16	ZPL 16	10133	100
18	ZPL 18	10134	100
20	ZPL 20	10135	100
22	ZPL 22	10136	100
25	ZPL 25	33720	100
28	ZPL 28	10137	100
37	ZPL 37	10138	50
47	ZPL 47	10139	50

* product available on request at the minimum production requirement

Wiring trunking - KK

	Reference documents:	PN-EN 50085
	Characteristics:	<ul style="list-style-type: none"> • Wiring trunking, flammability class V-0, self-extinguishing • With perforated bottom • Trunking lid is covered by protective foil • Fire reaction class: PN-EN 13501-1:2019-02: B-s2, d0 • Characterised by increased durability and constancy of colour even in conditions of continuous exposure to UV radiation
	Application:	Protection of electrical wires in wall mounted installations against mechanical damage and moisture.
	Material:	PVC
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	White
	Size [mm]:	16x10; 17x15; 20x11; 20x18; 25x15; 32x15; 32x30; 40x25; 40x40; 50x18:2; 60x40; 60x60; 90x40; 90x60; 130x60
	Length of bars [m]	2





 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.

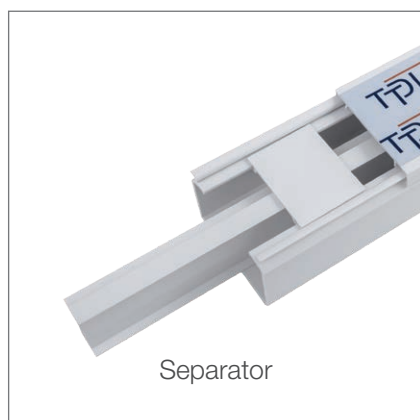
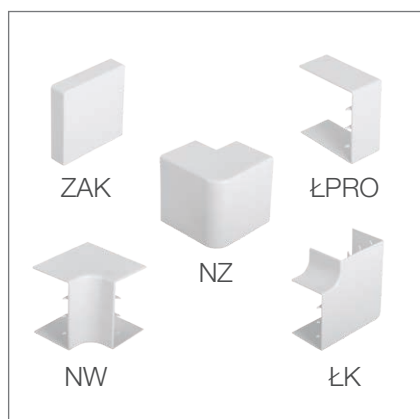








Symbol	W x H [mm]	 index	 Number of pieces in the package
KK 16X10-40	16 x 10	10257	40
KK 17X15-40	17 x 15	10258	40
KK 20X11-40	20 x 11	10259	40
KK 20X18-40	20 x 18	10260	40
KK 25X15-30	25 x 15	10261	30
KK 32X15-30	32 x 15	10263	30
KK 32X30-28	32 x 30	10264	28
KK 40X25-24	40 x 25	10265	24
KK 40X40-20	40 x 40	10268	20
KK 50X18:2-30	50 x 18	10269	30
KK 60X40-15*	60 x 40	10270	15
KK 60X60-12*	60 x 60	10331	12
KK 90X40-10*	90 x 40	10332	10
KK 90X60-8*	90 x 60	10333	8
KK 130x60-4*	130 x 60	10262	4

* possibility to order a separator

Accessories for wiring trunking - KK

	Reference documents:	PN-EN 50085
	Characteristics:	<ul style="list-style-type: none"> • Accessories for wiring trunking KK • Straight connector, elbow connector • External and internal connectors • Endings • Separators
	Application:	Fastening and masking system for wiring trunking.
	Colour:	White



Wiring trunking size [mm]	ŁPRO Straight connector	ŁK Elbow connector	NW Internal corner	NZ External corner	ZAK Endings	Separator
	 index	 index	 index	 index	 index	 index
17 x 15		10844*	10830*	10819*	10809*	
20 x 11		10843*	10829*	10817*	10808*	
20 x 18		10842*	10828*	10816*	10808*	
25 x 15		10841*	10827*	10815*	10807*	
32 x 15		10840*	10826*	10814*	10806*	
32 x 30					10805*	
40 x 25		10839*	10825*	10813*	10804*	
40 x 40		10838*	10824*	10812*	10804*	
50 x 18		10837*	10822*	10847*	10803*	
60 x 40	10833*	10836*	10821*	10811*	10802*	11800
60 x 60	10833*				10802*	11665
90 x 40	10832*	10835*	10846*	10845*	10801*	11800
90 x 60	10832*	10834*	10820*	10810*	10801*	11665
130 x 60	11163*	11162*	11095*	11164*	11096*	11665

* product available on request at the minimum production requirement



ENERGETICS

Pipes for open trenches

Corrugated double - wall pipe in coils - RODK	34
Corrugated double - wall pipe in bars - RODO	35
Corrugated double - wall pipe in bars, strengthened - RODOH	36
Protective smooth rigid pipe with a socket - ROS-M	37
Protective rigid thin - walled pipe with a socket - ROSc-M	38
Smooth casing pipe with connectors - ROS-Zf	39
Smooth casing pipe with a socket - ROS-Zf-M	40
Rigid split casing pipe - colour in coils - ROS-D	41











Pipes for trenchless installations / non pressure pipes

Dimensions and pipes performance comply to EN 12201-2 SDR 11 and SDR 17	43
Pipes for trenchless installations / non pressure pipes	44-45
Cable protective non pressure pipes - ROS-Z	46
Cable protective non pressure pipes - colour in coils - ROS-Z	47
Cable protective non pressure pipes - colour - ROS-Zk	48
Cable protective non pressure pipes - colour in coils - ROS-Zk	50

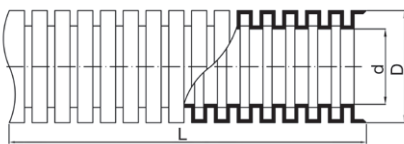
Pipes for open spaces

Rigid lightning protection pipe - GROM	51
Rigid connection UV resistant pipe with a socket - RPS-UV-M	52
Rigid connection UV pipe with a compensation socket - MOST - RPS-UV-M*	53
Rigid connection UV resistant pipe - RPS-UV	54
Corrugated double - wall UV resistant pipe in coils - RODK-UV	55

Corrugated double-wall pipe in coils - RODK

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Double-wall, flexible pipe with corrugated external and internal wall • Equipped with pulling wire • ZRD connector included • Possibility to order URD gasket to ensure connection tightness
	Application:	Protection of cables in open trenches. Used in places with low mechanical loads (pavements, green areas).
	Material:	HDPE
	Compressive strength:	450N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: red or blue Internal: black
	Ø External diameter [mm]:	40; 50; 63; 75; 90; 110; 125; 160
	Length of coils [m]:	25; 50
	NOTES:	Possibility of producing pipe in a different colour











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



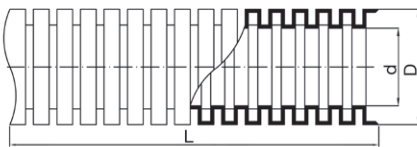
Symbol	Ø D / d [mm]	Compressive strength	L [m]	Colour	
				blue / black	red / black
				 index	 index
RODK 40/32	40/32	450N	25	11188	12677*
RODK 40/32	40/32	450N	50	10599	12676*
RODK 50/40	50/40	450N	25	10619	10618*
RODK 50/40	50/40	450N	50	10601	10600*
RODK 63/52	63/52	450N	25	11851*	11849*
RODK 63/52	63/52	450N	50	11852*	11850*
RODK 75/60	75/60	450N	25	10621	10620*
RODK 75/60	75/60	450N	50	10603	10602*
RODK 90/76	90/76	450N	25	11352*	11354*
RODK 90/76	90/76	450N	50	11351*	11353*
RODK 110/92	110/92	450N	25	10617	10616*
RODK 110/92	110/92	450N	50	10605	10604
RODK 125/105	125/105	450N	25	12959*	12960*
RODK 160/134	160/134	450N	25	10607	10606

* product available on request at the minimum production requirement

Corrugated double-wall pipe in bars - RODO

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Double - wall pipe with corrugated external wall and smooth internal wall, rigid • ZRD connector included • Possibility to order URD gasket to ensure connection tightness
	Application:	Construction of cable ducts in open trenches. Used in the construction culverts, under communication routes (roads, tracks, streets).
	Material:	HDPE
	Compressive strength:	450N, 750N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: red, blue or black Internal: black
	Ø External diameter [mm]:	50; 63; 75; 90; 110; 125; 160; 232
	Length of coils [m]:	6
	NOTES:	Possibility of producing pipe in a different colour and length of bars











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



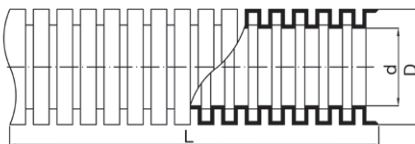
Symbol	Ø D / d [mm]	Com-pressive strength	L [m]	Colour			Item / pack
				blue / black	red / black	black / black	
				 index	 index	 index	
RODO 50/40	50/40	450N	6	10612	10608*		237
RODO 63/52	63/52	450N	6	11854*	11853*		149
RODO 75/60	75/60	450N	6	10613	10609*		131
RODO 90/76	90/76	450N	6	11374*	11373*		69
RODO 110/92	110/92	450N	6	10614	10610*	11695	48
RODO 125/105	125/105	450N	6	12965	12966*	12967*	38
RODO 160/134	160/134	450N	6	10615	10611	11794*	33
RODO 232/200	232/200	750 N	6	11369*	11370		11



* product available on request at the minimum production requirement

Corrugated double-wall pipe in bars, strengthened - RODOH

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Double – wall pipe with corrugated external wall and smooth internal wall, rigid, strengthened • ZRD connector included • Possibility to order URD gasket to ensure connection tightness
	Application:	Construction of cable ducts in open trenches. Used in the construction of culverts, under communication routes (roads, tracks, streets).
	Material:	HDPE
	Compressive strength:	750N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: Red / black Internal: Black
	Ø External diameter [mm]:	50; 63; 75; 90; 110; 125; 160
	Length of coils [m]:	6
	NOTES:	Possibility of producing pipe in a different colour and length of bars











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



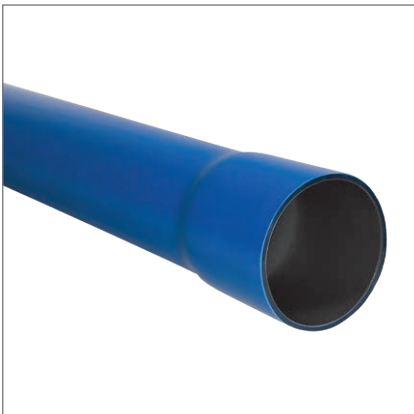
Symbol	Ø D / d [mm]	Compressive strength	L [m]	Colour		Item / pack
				black	red / black	
				 index	 index	
RODOH 50/40	50/40	750N	6	11976*	11978*	237
RODOH 63/52	63/52	750N	6	12972*	12973*	
RODOH 75/60	75/60	750N	6	11975*	11979*	131
RODOH 90/76	90/76	750N	6	12974*	12975*	69
RODOH 110/92	110/92	750N	6	11670*	11790*	48
RODOH 125/105	125/105	750N	6	12970*	12969*	38
RODOH 160/134	160/134	750N	6	11671*	11793*	33




* product available on request at the minimum production requirement

Protective smooth rigid pipe with a socket - ROS-M

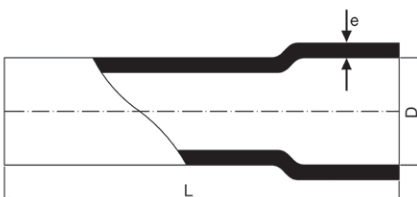
	Reference documents:	PN-EN 61386-24
	Characteristics:	Smooth, rigid pipe ended with a socket
	Application:	Protection of cables in open trenches. Used in difficult field conditions with maximum mechanical loads (culverts under communication routes, roads, tracks, streets). Suitable for ramming and drilling up to 12 m.
	Material:	HDPE
	Compressive strength:	750N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: red, blue, black Internal: black
	Ø External diameter [mm]:	50; 75; 110; 160
	Length of bars [m]:	6
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in a different colour • Possibility of producing pipe in other strength parameters

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.













Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]	Colour			Item / pack
					blue / black	red / black	black / black	
					 index	 index	 index	
ROS-M 50/3,5	50	3,5	750N	6	10671	10670*		220
ROS-M 75/4,5	75	4,5	750N	6	10673	10672*		60
ROS-M 110/5,5	110	5,5	750N	6	10675	10674	11799	50
ROS-M 160/8	160	8	750N	6	10677	10676	11039*	35

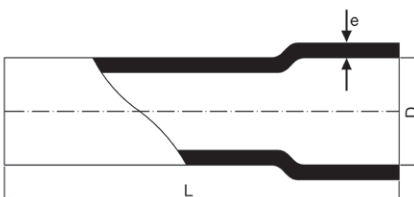
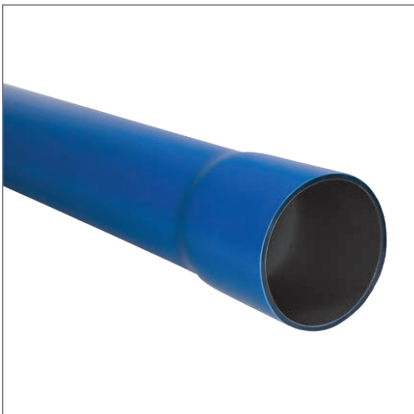
* product available on request at the minimum production requirement



Protective rigid thin-walled pipe with a socket - ROsc-M

	Reference documents:	PN-EN 61386-24
	Characteristics:	Smooth, rigid pipe ended with a socket
	Application:	Protection of cables in open trenches. Used in conditions with minimum mechanical loads (pavements, green areas).
	Material:	HDPE
	Compressive strength:	250N, 450N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External : red or blue Internal : black
	Ø External diameter [mm]:	50; 75; 110; 160
	Length of bars [m]:	6
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in a different colour • Possibility of producing pipe in other strength parameters











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



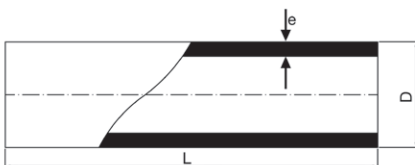
Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]	Colour		Item / pack
					blue / black	red / black	
					index	index	
ROsc-M 50/2,5	50	2,5	250N	6	10960*	10961*	220
ROsc-M 75/3	75	3	250N	6	10963*	10962*	60
ROsc-M 110/4	110	4	450N	6	10965	10964*	50
ROsc-M 160/5	160	5	250N	6	10967	10966	35
ROsc-M 160/6	160	6	450N	6	12993*	12994*	35

* product available on request at the minimum production requirement

Smooth casing pipe with connectors - ROS-Zt

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> Smooth, rigid pipe Connected by connectors ZROS, ZSROS
	Application:	Protection of cables in open trenches.
	Material:	HDPE
	Compressive strength:	250N, 450N, 750N, 1250N, 4000N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	110; 125; 160
	Length of bars [m]:	6; 12
	NOTES:	<ul style="list-style-type: none"> Possibility of producing pipe in a different colour Possibility of producing pipe in other strength parameters


 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



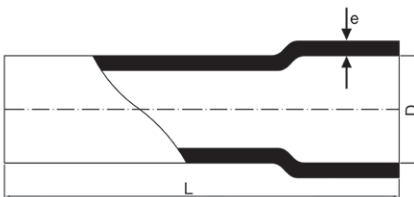
Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]		Item / pack
				6	12	
				 index	 index	
ROS-Zt 110/3,7	110	3,7	250N	10970	10975*	48
ROS-Zt 110/5	110	5	450N	10971*	10976*	48
ROS-Zt 110/6,3	110	6,3	750N	10972	10977*	48
ROS-Zt 110/10	110	10	1250N	11158*	11159*	48
ROS-Zt 125/7,1	125	7,1	1250N	11004	11005*	38
ROS-Zt 125/11,4	125	11,4	4000N	11152*	11153*	38
ROS-Zt 160/9,1	160	9,1	1250N	10973*	10978*	33
ROS-Zt 160/14,6	160	14,6	4000N	10974*	10979*	20


* product available on request at the minimum production requirement

Smooth casing pipe with a socket - ROS-ZI-M

	Reference documents:	PN-EN 61386-24
	Characteristics:	Smooth, rigid pipe ended with a socket
	Application:	Protection of cables in open trenches.
	Material:	HDPE
	Compressive strength:	250N, 450N, 750N, 1250N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	110; 125; 160
	Length of bars [m]:	6
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in a different colour • Possibility of producing pipe in other strength parameters











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Symbol	Ø D [mm]	e [mm]	Compressive strength	 index	 Item / pack
ROS-ZI-M 110/3,7	110	3,7	250N	11181*	50
ROS-ZI-M 110/5	110	5	450N	11182*	50
ROS-ZI-M 110/6,3	110	6,3	750N	11184	50
ROS-ZI-M 110/10	110	10	1250N	11847*	50
ROS-ZI-M 125/7,1	125	7,1	1250N	12475*	40
ROS-ZI-M 160/9,1	160	9,1	1250N	11822*	35




* product available on request at the minimum production requirement

Rigid split casing pipe - colour in coils - ROS-D

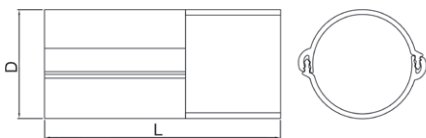
	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> Rigid split casing pipe Installation by closing the top and bottom pipe together
	Application:	Used to protect existing cables or to repair damaged cable ducts, also in open trenches under the roads, tracks and streets.
	Material:	HDPE
	Compressive strength:	250N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External : red or blue Internal : black
	Ø External diameter [mm]:	110; 160; 170
	Length of bars [m]:	3
	NOTES:	<ul style="list-style-type: none"> Possibility of producing pipe in a different colour Possibility of producing UV resistant pipe in black colour

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.









Symbol	Ø D [mm]	L [m]	Colour		 Number of pieces in the package
			red	blue	
			 index	 index	
ROS-D 110	110	3	11063	11062	43
ROS-D 160	160	3	11065	11064	28
ROS-D 170	170	3	11689*	11690*	28

* product available on request at the minimum production requirement







Trenchless pipes / Non pressure pipes

1. General information

	Standard:	EN 61386-24
	Supplied:	In coils (up to diameter 110) or as bars
	Application:	Directional drilling. Cable protection in difficult terrain conditions. Applied as culverts under communication routes (roads, trackway, streets) and passing through water obstacles. Requirements for horizontal drilling.
	Marking:	Manufactures name, address, dimensions, number of the national declaration of performance standards EN 61386; date-can be customized by ordering.
	Environmental considerations:	TT PLAST pipes can be disposed by recycling.
	Exposure:	The pipe shall be UV stabilised to withstand daylight exposure period of at least 12 months. However, the manufacturer recommends stored it for no longer than 6 months if outdoors.

2. Raw materials

	Type of material:	HDPE High Density Polyethylene
	Used raw material:	Mixture of raw materials (not regrind)
	Density polyethylene:	>0,95 g/cm ³
	Mass flow rate of polyethylene (5kg 190°C):	0,4-1,2 g/10 min

3. Dimensions and pipes performance

3.1. Dimensions are comply to EN 12201-2 SDR 11 and SDR 17

Outside diameter [mm]	SDR 17		SDR 11	
	Wall thickness [mm]	Installation tension [kN] *	Wall thickness [mm]	Installation tension [kN]
32	2,0	1,9	3,0	2,7
40	2,4	2,8	3,7	4,2
50	3,0	4,4	4,6	6,6
63	3,8	7,1	5,8	10,4
75	4,5	10,0	6,8	14,6
90	5,4	14,4	8,2	21,1
110	6,6	21,4	10,0	31,4
125	7,4	27,3	11,4	40,7
140	8,3	34,3	12,7	50,8
160	9,5	44,9	14,6	66,7
180	10,7	56,9	16,4	84,3
200	11,9	70,3	18,2	103,9
225	13,4	89,1	20,5	131,7
250	14,8	109,4	22,7	162,1
280	16,6	137,4	25,4	203,2
315	18,7	174,1	28,6	257,3
355	21,1	221,3	32,2	326,5
400	23,7	280,2	36,3	414,8
450	26,7	355,1	40,9	525,7
500	29,7	438,8	45,4	648,4
560	33,2	549,5	50,8	812,6
630	37,4	696,3	57,2	1029,3

* Installation tension determined for a safety factor of 2 not taking into account ambient temperature and terrain conditions

3.2. Physical properties

Test	Standard	Result
Hydrostatic test 100h 20°C 7MPa	DIN 16874	Ok
Impact test 5kg	DS EN 61386	Ok
Compression	DS EN 61386	≥750N
Elongation of break	EN ISO 6259	>350%
Yield stress	EN ISO 6259	>20 MPa
Ring stiffness	EN ISO 9969	≥8 kN/m ²
Longitudinal reversion	EN ISO 2505	<3%
OIT ≥20 min	ISO 11357	Ok
Tensile strength of a but weld	ISO 13953	Ductile failure mode

Pipes for trenchless installations / non pressure pipes

Table 1
Wall thickness according PE-EN 12201-2+A1:2013-12











Nominal size DN / OD	Pipe series											
	SDR 6 S 2,5		SDR 7,4 S 3,2		SDR 9 S 4		SDR 11 S 5		SDR 13,6 S 6,3		SDR 17 S 8	
	Pipe wall thickness ^b											
	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}
16	3,0 ^c	3,4	2,3 ^c	2,7	2,0 ^c	2,3	-	-	-	-	-	-
20	3,4	3,9	3,0 ^c	3,4	2,3	2,7	2,0 ^c	2,3	-	-	-	-
25	4,2	4,8	3,5	4,0	3,0 ^c	3,4	2,3	2,7	2,0 ^c	2,3	-	-
32	5,4	6,1	4,4	5,0	3,6	4,1	3,0 ^c	3,4	2,4	2,8	2,0 ^c	2,3
40	6,7	7,5	5,5	6,2	4,5	5,1	3,7	4,2	3,0	3,5	2,4	2,8
50	8,3	9,3	6,9	7,7	5,6	6,3	4,6	5,2	3,7	4,2	3,0	3,4
63	10,5	11,7	8,6	9,6	7,1	8,0	5,8	6,5	4,7	5,3	3,8	4,3
75	12,5	13,9	10,3	11,5	8,4	9,4	6,8	7,6	5,6	6,3	4,5	5,1
90	15,0	16,7	12,3	13,7	10,1	11,3	8,2	9,2	6,7	7,5	5,4	6,1
110	18,3	20,3	15,1	16,8	12,3	13,7	10	11,1	8,1	9,1	6,6	7,4
125	20,8	23,0	17,1	19,0	14,0	15,6	11,4	12,7	9,2	10,3	7,4	8,3
140	23,3	25,8	19,2	21,3	15,7	17,4	12,7	14,1	10,3	11,5	8,3	9,3
160	26,6	29,4	21,9	24,2	17,9	19,8	14,6	16,2	11,8	13,1	9,5	10,6
180	29,9	33,0	24,6	27,2	20,1	22,3	16,4	18,2	13,3	14,8	10,7	11,9
200	33,2	36,7	27,4	30,3	22,4	24,8	18,2	20,2	14,7	16,3	11,9	13,2
225	37,4	41,3	30,8	34,0	25,2	27,9	20,5	22,7	16,6	18,4	13,4	14,9
250	41,5	45,8	34,2	37,8	27,9	30,8	22,7	25,1	18,4	20,4	14,8	16,4
280	46,5	51,3	38,3	42,3	31,3	34,6	25,4	28,1	20,6	22,8	16,6	18,4
315	52,3	57,7	43,1	47,6	35,2	38,9	28,6	31,6	23,2	25,7	18,7	20,7
355	59,0	65,0	48,5	53,5	39,7	43,8	32,2	35,6	26,1	28,9	21,1	23,4
400	---	---	54,7	60,3	44,7	49,3	36,3	40,1	29,4	32,5	23,7	26,2
450	---	---	61,5	67,8	50,3	55,5	40,9	45,1	33,1	36,6	26,7	29,5
500	---	---	---	---	55,8	61,5	45,4	50,1	36,8	40,6	29,7	32,8
560	---	---	---	---	62,5	68,9	50,8	56,0	41,2	45,5	33,2	36,7
630	---	---	---	---	70,3	77,5	57,2	63,1	46,3	51,1	37,4	41,3

Pipes for trenchless installations / non pressure pipes

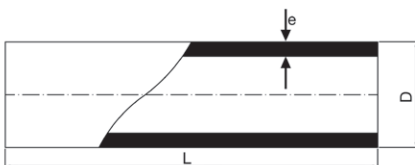
Table 2
Wall thickness according PE-EN 12201-2+A1:2013-12



Nominal size DN / OD	Pipe series							
	SDR 21 S 10		SDR 26 S 12,5		SDR 33 S 16		SDR 41 S 20	
	Pipe wall thickness ^b							
	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}	e _{min}	e _{max}
16	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	-
32	-	-	-	-	-	-	-	-
40	2,0 ^c	2,3	-	-	-	-	-	-
50	2,4	2,8	2,0	2,3	-	-	-	-
63	3,0	3,4	2,5	2,9	-	-	-	-
75	3,6	4,1	2,9	3,3	-	-	-	-
90	4,3	4,9	3,5	4,0	-	-	-	-
110	5,3	6,0	4,2	4,8	-	-	-	-
125	6,0	6,7	4,8	5,4	-	-	-	-
140	6,7	7,5	5,4	6,1	-	-	-	-
160	7,7	8,6	6,2	7,0	-	-	-	-
180	8,6	9,6	6,9	7,7	-	-	-	-
200	9,6	10,7	7,7	8,6	-	-	-	-
225	10,8	12,0	8,6	9,6	-	-	-	-
250	11,9	13,2	9,6	10,7	-	-	-	-
280	13,4	14,9	10,7	11,9	---	---	---	---
315	15,0	16,6	12,1	13,5	9,7	10,8	7,7	8,6
355	16,9	18,7	13,6	15,1	10,9	12,1	8,7	9,7
400	19,1	21,2	15,3	17,0	12,3	13,7	9,8	10,9
450	21,5	23,8	17,2	19,1	13,8	15,3	11,0x	12,2
500	23,9	26,4	19,1	21,2	15,3	17,0	12,3	13,7
560	26,7	29,5	21,4	23,7	17,2	19,1	13,7	15,2
630	30,0	33,1	24,1	26,7	19,3	21,4	15,4	17,1

Cable protective non pressure pipe - ROS-Z

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid, smooth pipe • Connected by welding or by means of ZROS, ZSROS connectors • Ramming and drilling
	Application:	Protection of pipes in difficult conditions. Used as culverts under communication routes with maximum transport loads and as passages through water obstacles trenchless installation.
	Material:	HDPE
	Compressive strength:	750N, 1250N, 4000N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	110; 125; 140; 160; 200; 225; 250
	Length of bars [m]:	6; 12
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in other strength parameters • Possibility of producing pipe in sizes: 280, 315, 350, 400, 450, 560, 630











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



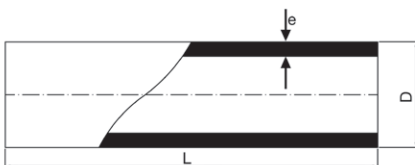
Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]		Item / pack
				6	12	
				 index	 index	
ROS-Z 110/6,3	110	6,3	750N	10712	10713*	48
ROS-Z 110/10	110	10	1250N	10710*	10711*	48
ROS-Z 125/7,1	125	7,1	1250N	10880	10881*	38
ROS-Z 125/11,4	125	11,4	4000N	10882*	10883*	38
ROS-Z 140/8	140	8	1250N	11127*	11139*	38
ROS-Z 140/12,7	140	12,7	1250N	11128*	11140*	38
ROS-Z 160/9,1	160	9,1	1250N	10716	10717*	33
ROS-Z 160/9,4	160	9,4	1250N	11012*	11013*	33
ROS-Z 160/14,6	160	14,6	4000N	10714*	10715*	20
ROS-Z 200/11,4	200	11,4	1250N	11357	11358*	14
ROS-Z 200/18,2	200	18,2	1250N	11359*	11360*	14
ROS-Z 225/12,8	225	12,8	1250N	11361*	11362*	11
ROS-Z 225/20,5	225	20,5	1250N	11363*	11364*	11
ROS-Z 250/14,2	250	14,2	1250N	11365*	11366*	11
ROS-Z 250/22,7	250	22,7	1250N	11367*	11368*	11

* product available on request at the minimum production requirement

Cable protective non pressure pipes - in coils - ROS-Z

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid, smooth pipe • Connected by welding or by means of ZROS, ZSROS connectors • Ramming and drilling
	Application:	Protection of pipes in difficult conditions. Used as culverts under communication routes with maximum transport loads and as passages through water obstacles trenchless installation.
	Material:	HDPE
	Compressive strength:	750N, 1250N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	32, 40, 50, 63, 75, 90, 110
	Length of bars [m]:	50, 100
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in other strength parameters











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



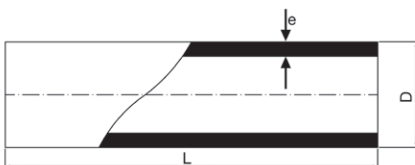
Symbol	Ø D [mm]	e [mm]	Compressive strength	index	L [m]
ROS-Z 110/6,6 SDR 17	110	6,6	1250N	12850*	50
ROS-Z 110/10 SDR 11	110	10	1250N	12851*	50
ROS-Z 32/2,0 SDR 17	32	2	750N	13002*	100
ROS-Z 40/2,4 SDR 17	40	2,4	1250N	13003*	100
ROS-Z 40/3,7 SDR 11	40	3,7	1250N	13004*	100
ROS-Z 50/3,0 SDR 17	50	3	750N	13005*	100
ROS-Z 63/3,8 SDR 17	63	3,8	1250N	13006*	100
ROS-Z 75/4,5 SDR 17	75	4,5	1250N	13007*	100
ROS-Z 90/5,4 SDR 17	90	5,4	1250N	13008*	100
ROS-Z 110/6,6 SDR 17	110	6,6	1250N	13009*	100
ROS-Z 110/10 SDR 11	110	10	1250N	13011*	100

* product available on request at the minimum production requirement

Cable protective non pressure pipe - colour - ROS-Zk

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> Rigid, smooth pipe Connected by welding or by means of ZROS, ZSROS connectors
	Application:	Protection of cables in difficult conditions. Used as culverts under communication routes with maximum transport loads and as passages through water obstacles.
	Material:	HDPE
	Compressive strength:	750N, 1250N, 4000N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: red or blue Internal: black
	Ø External diameter [mm]:	110; 125; 140; 160; 180; 200; 225; 250; 280; 315; 355; 400; 450; 500; 560; 630
	Length of bars [m]:	6; 12
	NOTES:	<ul style="list-style-type: none"> Possibility of producing pipe in a different colour Possibility of producing pipe in other strength parameters

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.













Symbol	D [mm]	e [mm]	Compressive strength	Colour red / black		Item / pack
				6m	12m	
				index	index	
ROS-Zk 110/6,3 SDR 17,6	110	6,3	750N	12870*	12869*	48
ROS-Zk 110/10 SDR 11	110	10	1250N	12872*	12873*	48
ROS-Zk 125/7,1 SDR 17,6	125	7,1	1250N	12874*	12875*	38
ROS-Zk 125/7,4 SDR 17	125	7,4	1250N	12876*	12849*	38
ROS-Zk 125/11,4 SDR 11	125	11,4	1250N	12877*	12878*	38
ROS-Zk 140/8,0 SDR 17,6	140	8,0	1250N	12882*		38
ROS-Zk 140/8,3 SDR 17	140	8,3	1250N	12883*	12884*	38
ROS-Zk 160/9,1 SDR 17,6	160	9,1	4000N	12885*	12788*	33
ROS-Zk 160/9,5 SDR 17	160	9,5	4000N	12886*	12790*	33
ROS-Zk 160/14,6 SDR 11	160	14,6	4000N	12887*	12848*	20
ROS-Zk 180/10,7 SDR 17	180	10,7	1250N	12888*	12889*	28
ROS-Zk 180/16,4 SDR 11	180	16,4	1250N	12890*	12891*	28

* product available on request at the minimum production requirement

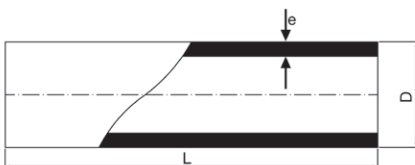
Symbol	Ø D [mm]	e [mm]	Compressive strength	Colour red / black		Item / pack
				6m	12m	
				index	index	
ROS-Zk 200/11,4 SDR 17,6	200	17,6	1250N	12982*	12983*	14
ROS-Zk 200/11,9 SDR 17	200	11,9	1250N	12894*	12895*	14
ROS-Zk 200/18,2 SDR 11	200	18,2	1250N	12896*	12897*	14
ROS-Zk 225/12,8 SDR 17,6	225	12,8	1250N	12898*	12899*	11
ROS-Zk 225/13,4 SDR 17	225	13,4	1250N	12900*	12901*	11
ROS-Zk 225/20,5 SDR 11	225	20,5	1250N	12902*	12903*	11
ROS-Zk 250/14,2 SDR 17,6	250	14,2	1250N	12904*	12905*	11
ROS-Zk 250/14,8 SDR 17	250	14,8	1250N	12906*	12862*	11
ROS-Zk 250/22,7 SDR 11	250	22,7	1250N	12907*	12908*	11
ROS-Zk 280/16,6 SDR 17	280	16,6	1250N		12855*	11
ROS-Zk 280/25,4 SDR 11	280	25,4	1250N		12856	11
ROS-Zk 315/18,7 SDR 17	315	18,7	1250N		12863*	3
ROS-Zk 315/28,6 SDR 11	315	28,6	1250N		12864*	3
ROS-Zk 355/21,1 SDR 17	355	21,1	1250N		12825*	3
ROS-Zk 355/32,2 SDR 11	355	32,2	4000N		12826*	3
ROS-Zk 400/23,7 SDR 17	400	23,7	1250N		12911*	3
ROS-Zk 400/36,3 SDR 11	400	36,3	4000N		12912*	3
ROS-Zk 450/26,7 SDR 17	450	26,7	1250N		12913*	2
ROS-Zk 450/40,9 SDR 11	450	40,9	4000N		12914*	2
ROS-Zk 500/29,7 SDR 17	500	29,7	1250N		12915*	2
ROS-Zk 500/45,4 SDR 11	500	45,4	4000N		12916*	2
ROS-Zk 560/33,2 SDR 17	560	33,2	1250N		12917*	2
ROS-Zk 560/50,8 SDR 11	560	50,8	4000N		12918*	2
ROS-Zk 630/37,4 SDR 17	630	37,4	1250N		12919*	2
ROS-Zk 630/57,2 SDR 11	630	57,2	4000N		12920*	2

* product available on request at the minimum production requirement

Cable protective non pressure pipes - colour in coils - ROS-Zk

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid, smooth pipe • Connected by welding or by means of ZROS, ZSROS connectors
	Application:	Protection of cables in difficult conditions. Used as culverts under communication routes with maximum transport loads and as passages through water obstacles.
	Material:	HDPE
	Compressive strength:	750N, 1250N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	External: red Internal: black
	Ø External diameter [mm]:	32; 40; 50; 63; 75; 90; 110
	Length of bars [m]:	50; 100
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in a different colour • Possibility of producing pipe in other strength parameters












 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Symbol	Ø D [mm]	e [mm]	Compressive strength	Colour red / black	L [m]
				 index	
ROS-Zk 32/2,0 SDR17	32	2,0	750N	12956*	100
ROS-Zk 40/2,4 SDR17	40	2,4	750N	12981*	100
ROS-Zk 40/3,7 SDR11	40	3,7	1250N	12999*	100
ROS-Zk 50/3,0 SDR17	50	3,0	750N	12957*	100
ROS-Zk 63/3,8 SDR17	63	3,8	750N	12779*	100
ROS-ZK 75/4,5 SDR17	75	4,5	750N	12780*	100
ROS-ZK 90/5,4 SDR17	90	5,4	750N	12781*	100
ROS-ZK 110/6,6 SDR17	110	6,6	1250N	12782*	50
ROS-ZK 110/6,6 SDR17	110	6,6	1250N	12783*	100
ROS-ZK 110/10 SDR11	110	10	1250N	12726*	50
ROS-ZK 110/10 SDR11	110	10	1250N	12784*	100

* product available on request at the minimum production requirement

Rigid lightning protection pipe - GROM

	Reference documents:	PN-EN 62305 PN-EN 61386
	Characteristics:	<ul style="list-style-type: none"> Rigid pipe, flammability class:V-0, self - extinguishing Characterised by increased durability and colour stability even in conditions of constant exposure to UV radiation
	Application:	For laying and protecting down conductors in lightning protection systems. Protection against the effects of surge current during a lightning strike.
	Material:	PVC modified
	Compressive strength:	1250N
	Impact resistance:	High
	Scope of temperatures:	-15°C ÷ 60°C
	Colour:	Dark gray
	Ø External diameter [mm]:	20; 28; 32; 40
	Length of bars [m]:	3
	NOTES:	Possibility of producing pipe in a different colour











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



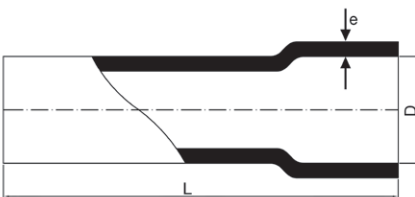
Symbol	Ø D / d [mm]	Compressive strength	L [m]	index	Item / pack
GROM 20/14	20/14	1250N	3	10792	10
GROM 28/22	28/22	1250N	3	10751	10
GROM 32/26	32/26	1250N	3	10750	10
GROM 40/34	40/34	1250N	3	10793	10



Rigid connection UV resistant pipe with a socket - RPS-UV-M

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid, smooth pipe • UV resistant • Ended with a socket
	Application:	Used to protect cables in open spaces on poles, building walls, viaducts and bridges.
	Material:	HDPE with added UV stabilizer
	Compressive strength:	450N, 750N, 1250N, 4000N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	32; 50; 63; 75; 110; 160
	Length of bars [m]:	3; 6
	NOTES:	Possibility of producing pipe in a different colour











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



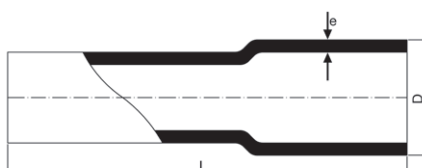
Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]		Item / pack
				3	6	
				 index	 index	
RPS-UV-M 32/3	32	3	750N	10679	10678	345
RPS-UV-M 50/3,5	50	3,5	750N	10680	10681	220
RPS-UV-M 50/5	50	5	750N	10682	10683	220
RPS-UV-M 63/6	63	6	750N	11137*	11138*	149
RPS-UV-M 75/4	75	4	450N	10684	10685	60
RPS-UV-M 75/7	75	7	750N	10686	10687	60
RPS-UV-M 110/4	110	4	450N	11006	11007	50
RPS-UV-M 110/5,5	110	5,5	750N	10690	10691	50
RPS-UV-M 110/10	110	10	1250N	10688*	10689	50
RPS-UV-M 160/8	160	8	750N	11685*	11684*	35
RPS-UV-M 160/14,5	160	14,5	4000N	10692	10693	21

* product available on request at the minimum production requirement

Rigid connection UV pipe with a compensation socket - MOST - RPS-UV-M*

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid smooth pipe • UV resistant • Ended with a compensation socket (about 18 cm long)
	Application:	Used to protect cables in open spaces on poles, building walls, viaducts and bridges.
	Material:	HDPE with added UV stabilizer
	Compressive strength:	750N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	110; 160
	Length of bars [m]:	6
	NOTES:	Possibility of producing pipe in a different colour

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.













Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]	index	Item / pack
RPS-UV-M* 110/5,5	110	5,5	750N	6	11113*	50
RPS-UV-M* 160/8	160	8	750N	6	11112*	35
RPS-UV-Mt* 110/5,5	110	5,5	750N	6	11130*	50
RPS-UV-Mt* 160/8	160	8	750N	6	11129*	35

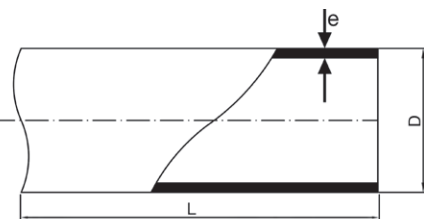
* product available on request at the minimum production requirement


t - means flame retardant

Rigid connection UV resistant pipe - RPS-UV

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Rigid, smooth pipe • UV resistant
	Application:	Used to protect cables in open spaces on poles, building walls, viaducts and bridges.
	Material:	HDPE with added UV stabilizer
	Compressive strength:	450N, 750N, 1250N, 4000N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	32; 50; 63; 75; 110; 160
	Length of bars [m]:	3; 6
	NOTES:	Possibility of producing pipe in a different colour











 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]		Item / pack
				3	6	
				 index	 index	
RPS-UV 32/3	32	3	750N	10694	11131	186
RPS-UV 50/3,5	50	3,5	750N	11132	11133	237
RPS-UV 50/5	50	5	750N	10695	11134	237
RPS-UV 63/6	63	6	750N	10699*	11009*	116
RPS-UV 75/4	75	4	450N	10700	11114	131
RPS-UV 75/7	75	7	750N	10696	11135	131
RPS-UV 110/4	110	4	450N	11008	11116	57
RPS-UV 110/5,5	110	5,5	750N	11680*	11681	57
RPS-UV 110/10	110	10	1250N	10697*	11136	57
RPS-UV 160/8	160	8	750N	11682*	11683*	33
RPS-UV 160/14,5	160	14,5	4000N	10698	11115	20

* product available on request at the minimum production requirement

Corrugated double-wall UV resistant pipe in coils - RODK-UV

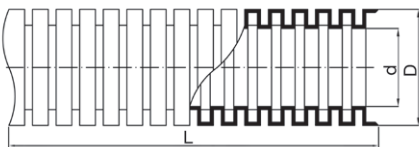
	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Double-wall flexible pipe with corrugated external and internal wall • UV resistant • Equipped with a pulling wire
	Application:	Protection of power cables, telecommunications and signalling cables, and for communication engineering purposes.
	Material:	HDPE with added UV stabilizer
	Compressive strength:	450N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black
	Ø External diameter [mm]:	40; 50; 63; 75; 110; 125; 160
	Length of bars [m]:	25; 50
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing on request a pipe in a different colour • Possibility of producing pipe with different strength parameters

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.



Symbol	Ø D / d [mm]	Compressive strength	L [m]	index
RODK-UV 40/32	40/32	450N	50	10622
RODK-UV 50/40	50/40	450N	50	10623
RODK-UV 63/52	63/52	450N	50	11836*
RODK-UV 75/60	75/60	450N	50	10624
RODK-UV 110/92	110/92	450N	50	12880*
RODK-UV 125/105	125/105	450N	50	12971*
RODK-UV 160/134	160/134	450N	25	12881*

* product available on request at the minimum production requirement















TELECOMMUNICATIONS















Optical telecommunications cable protective pipe - TELKOM

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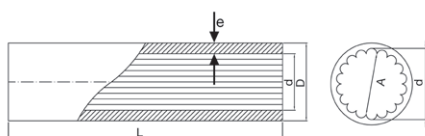
Optical telecommunications cable protective pipe - TELKOM

	Reference documents:	PN-EN 61386-24
	Characteristics:	<ul style="list-style-type: none"> • Single - layer, flexible pipe • Smooth external surface • Grooved inner surface with a sliding layer for easy cable pulling • Used by means of ZTELKOM connector
	Application:	Construction of cable pipelines, telecommunication secondary sewage, local and long-distance teletechnical networks.
	Material:	HDPE
	Compressive strength:	450N; 750N; 1250N
	Scope of temperatures:	-30°C ÷ 90°C
	Colour:	Black or black with different colour stripes along the external surface of the pipe
	Ø External diameter [mm]:	25; 32; 40; 50; 63; 75
	Length of bars [m]:	100; 250
	NOTES:	<ul style="list-style-type: none"> • Possibility of producing pipe in different colour on request • Possibility of producing pipe with different strength parameters • Possibility of producing pipe with a smooth inner layer • Possibility of producing pipe in a different length (examples: 400, 500,1000, 2000 m)

 The manufacturer's recommendations regarding the product's installation temperature are available in the warranty card.

Symbol	Ø D [mm]	e [mm]	Compressive strength	L [m]	Stripes colour						
					none	white	red	blue	orange	green	yellow
											
											
TELKOM 25/2,0	25	2	750N	250	11078	11079*	11080*	11081*	11082*	11083*	
TELKOM 25/2,3	25	2,3	1250N	250	11084*	11085*	11086*	11087*	11088*	11089*	
TELKOM 32/2,0	32	2	450N	250	10718*	10719*	10720*	10721*	10722*	10723*	11071*
TELKOM 32/2,9	32	2,9	1250N	250	10724	10725	10726	10727	10728	10729	11077*
TELKOM 40/3,7	40	3,7	1250N	250	10730	10731	10732	10733	10734	10735	11072*
TELKOM 50/4,6	50	4,6	1250N	100	10736	10737*	10738*	10739*	10740*	10741*	
TELKOM 63/3,6	63	3,6	750N	200	12760*						
TELKOM 63/4,3	63	4,3	1250N	100	12761*						
TELKOM 75/4,5	75	4,5	750N	100	12762*						

* product available on request at the minimum production requirement



ACCESSORIES FOR CASING PIPES

Accessories for corrugated double - wall pipes	60
Accessories for smooth casing pipes	60
Accessories for optical telecommunications pipes (TELKOM) and lightning protecting pipes (GROM)	61
Accessories for UV resistant pipes	61

Accessories for corrugated double - wall pipes (RODO, RODK, RODK-UV, RODOH, ROD-VENT)



Ø D [mm]	Gasket URD		Connector ZRD		Separator PD		Internal cup ZSRD WEW	
	index	Item / pack	index	Item / pack	index	Item / pack	index	Item / pack
40			10214	20				
50	10206	50	10202	20			10210	1
63	11837	50	11840*	20				
75	10207	100	10203	20			10211	1
90	11673	50	11639	20			11892	1
110	10208	50	10204	30	11672	20	10212	1
160	10209	30	10205	14	11010	1	10213	1
232			11675	10			11687*	1

* product available on request at the minimum production requirement

Gasket URD - seals the connection between the pipe and the connector. Protects against sand and moisture.

Connector ZRD - provides durable and tear-resistant connections of double-wall pipes. Together with the gasket protects the inside of the pipe against water, moisture and sand.

Separator PD - for laying pipes in the communication route.

Internal cap ZSRD WEW - protects inside of the pipe against dirt during storage and transport.

Accessories for smooth casing pipes (ROS-Z, ROS-ZK, ROS-M, ROSc-M, ROS-Zł, ROS-D)



Ø D [mm]	Connector ZROS		Connector ZSROS		Internal cap ZSRD ZEW	
	index	Item / pack	index	Item / pack	index	Item / pack
110	10755	25	10757	25	11174	1
125	11022	18				
140	11676*	15				
160	10756	12	10758*	1	11175	1

* product available on request at the minimum production requirement

Connector ZROS - connector for rigid pipes. Protects inside of the pipe against sand.

Connector ZSROS - connector for rigid pipes, strengthened, with gasket. Protects the inside of the pipe against sand and moisture.

External cup ZSRD ZEW - protects the inside of the pipe against dirt during storage and transport.

Accessories for optical telecommunications pipes (TELKOM) and lightning protection pipes (GROM)



Ø D [mm]	Connector ZTELKOM		External cup ZSRD ZEW		Connector ZGROM		Clamp GROM	
	index	Item / pack	index	Item / pack	index	Item / pack	index	Item / pack
20					10790	20	11958*	1
25	11111	28	11101*	1				
28					10788	20	11959*	1
32	10752	45	11100*	1	10789	20	11957*	1
40	10753	25	11099*	1	10791	20		
50	10754	15	11637*	1				

* product available on request at the minimum production requirement

Connector ZTELKOM - creates a permanent connection and to protect the inside of the pipe against sand and moisture.

External cup ZSRD ZEW (for smooth casing pipes) - protects inside of the pipe against dirt during storage and transport.

Connector ZGROM - connects rigid lightning protection pipes - GROM.

Clamp GROM - single metal clamp for lightning protection pipes with gasket, double treat and pin.

Accessories for UV resistant pipes (RPS-UV, RPS-UV-M)



Ø D [mm]	Single socket elbow ZRPS-UV-1-KIEL	Double socket elbow ZRPS-UV-2-KIEL	Clamp	Top holder	Long side bracket	Short side bracket
	index	index	index	index	index	index
32	10780*	10784*				
50	10781*	10785*				
63	10782*	10786*				
75	10783*	10787*				
110			11121*	11118* (length 150 mm) 11171* (length 300 mm)	11170*	11169*
160			11122*	11118* (length 150 mm) 11171* (length 300 mm)	11170*	11169*

* product available on request at the minimum production requirement

Single socket elbow ZRPS-UV-1-KIEL - elbow connects rigid UV connection pipes at an angle of 90 degrees, ended with a socket on one side.

Double socket elbow ZRPS-UV-2-KIEL - elbow connects rigid UV connection pipes at an angle of 90 degrees, ended with a socket on both sides.

Clamp, top holder, side brackets - used for mounting rigid UV connection pipes

Non-flame spreading casing pipes PVC pipes and Halogen-free pipes

Fire regulation		Fire classification standard EN 13501		
Main definition	Supplementary definition	Euro class	Supplementary classes	
			Smoke development	Burning droplets
Non-combustible		A1	–	–
		A2	s1, s2, s3	d0
Combustible	Flame-resistant	A2	s1, s2, s3	d1, d2
		B	s1, s2, s3	d0, d1, d2
	Flame-resistant	C	s1, s2, s3	d0, d1, d2
		D	s1	d0, d1, d2
	Easily flammable	D	s2	d0, d1, d2
		E	–	–
No flaming drops		A1	–	–
		A2, B, C, D	s1, s2, s3	d0
Self-extinguishing		at least E	–	–
Smoke intensity		A2, B, C, D	s3	d0, d1, d2
		E	–	–
		E	–	d2
		F	Non defined	

■ Non flammable - PVC pipes

■ Flame resistant - Halogen-free pipes

HDPE pipes

Possibility of producing all casing pipes with HDPE in diameters from 25-630 mm in non-flame spreading version on request

Compatibility:

- the flame spread test were carried out in accordance with PE-EN 61386-1

Packing Information

Table 1: Corrugated wiring pipe PP/PVC

Symbol	Size	Coil length	Pallet size: 120 x 80 x 220 cm Quantity per pallet [m]
RKLS, RKLSP, RKSS, RKSSP, RKLF	16/12	25	3300
		50	4800
	18/13,5	25	3175
		50	3900
	20/16	25	2500
		50	2800
		100	2800
	23/18	25	1950
		50	2200
		100	2300
	25/20	25	1800
		50	1700
		100	2200
28/23	25	1350	
	50	1400	
32/26	25	1050	
	50	1200	
36/29	25	800	
	50	1100	
40/34	25	750	
	50	700	
43/36	25	575	
	50	550	
50/43	25	500	
RKLSHF, RKLHFP, RKSSHF, RKSSHFP, RKSSUV, RKSSUVP	16/12	50	4500
	20/16	50	2800
	25/20	50	1700
	32/26	50	1200
	40/34	50	700
	50/43	25	500

* sample packaging according to the manufacturer's instructions

Packing Information Pipes 6 m and 12 m

Table 2: Casing pipes

Diameter	Pcs on palette		Meters on frame		Palettes on truck 13,6 m x 2,45 x 2,65	
	6 m	12 m	6 m	12 m	6 m	12 m
110	48	48		576	16	8
125	38	38		456	12	8
140	38	38		456	12	6
160/9,1; 160/9,5	33	33		396	12	6
160/14,6	20	20		240	20	6
180	28	28		336	16	10
200	14	14		168	12	8
225	11	11		132	12	6
250	11	11		132	-	6
280	-	11	-	132	-	6
315	-	3	-	36	-	14
355	-	3	-	36	-	14
400	-	3	-	36	-	10
450	-	2	-	24	-	10
500	-	2	-	24	-	8
560	-	2	-	24	-	8
630	-	No palette	-	-	-	9 PCS

Table 3. TELKOM

Diameter	Lenght in coils [m]	Pcs on truck
25	250	120
32	250	132
40	250	95
50	100	54

Table 4. RODK

Product	Size	Quantity/M
Double wall corrugated pipe in coil 50/40	RODK 50	16 500
Double wall corrugated pipe in coil 75/60	RODK 75	10 500
Double wall corrugated pipe in coil 110/92	RODK 110	4 900
Double wall corrugated pipe in coil 160/134	RODK 160	2 200

* Quantities provided depend on the type/size of the truck.

NOTES

A series of horizontal dotted lines for writing notes.

edition: January 2024

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