

## Flexible PE-HD Cable Ducting System for Ducts Exposed to UV Radiation in Photovoltaic and Solar Heat Structures



### HEKASOL:

Flexible cable ducting system made from environmentally friendly PE-HD with special UV stabilisation to protect electric cables exposed to UV radiation in photovoltaic/solar heat structures or in other above-ground applications

### Application:

For installation in

- photovoltaic systems
- solar heat systems
- wind energy plants
- other above-surface applications

# HEGLER



Corrugated and Twin  
Wall Pipes of Plastics

# HEKASOL – PE-HD Cable Ducting System



## HEKASOL cable ducting system

- PE-HD corrugated pipe  
compression strength:  $F \geq 320$  N  
nominal sizes: DN 20/DN 25/DN 32
- PE-HD twin wall pipe  
compression strength:  $F \geq 750$  N  
nominal sizes: DN 40/DN 50/DN 63
- UV-stabilisation with long-term effect
- Small bending radii
- Excellent impact properties
- Resistant to rupture and cracking
- Suitable for winter construction
- Temperature-resistant from  $-25$  °C to  $+80$  °C

## Product application

Surface installation of cable lines in photovoltaic and solar heat systems requires particular protection against mechanical influences, UV radiation and other weather impacts.

The HEKASOL ducting system – a flexible corrugated or flexible twin wall pipe – is used for different applications in solar heat and photovoltaic systems. The requirements a protective pipe has to meet as to adequate stability against deformation during the construction phase and in installed condition are reliably satisfied by HEKASOL. To ensure a significantly longer UV stability compared to conventional cable ducts, HEKASOL is UV-stabilised by a special process. Thus, long-term protection of more than 10 years is guaranteed even under intensive sun exposure.

## Material and compression strength

The raw material, PE-HD, has an excellent impact resistance. This provides effective and reliable protection for the cables inside the pipe against damages like rupture or cracking during the construction phase and in the actual operating state.

The increased compression strength of  $F \geq 750$  N of the twin wall pipes DN 40 - DN 63 imparts the protective pipe a high stability and additional safety in use.

Polyethylene has a good resistance to all aqueous acids and alkalis, including fuels, oils, greases and alcohols. Polyethylene is classified as harmless substance and is considered as toxicologically safe according to directive 1999/45/EG.



*HEKASOL in coils - ideal for a flexible connection between the individual photovoltaic modules*



# for cable routing exposed to UV radiation



## Pipe Variants

Depending on the nominal size, there are two variants of HEKASOL cable ducts made of PE-HD:

- Nominal sizes DN 20, DN 25 and DN 32 are available as corrugated pipes (inside and outside corrugated). This makes them extremely flexible so that they can be installed in very small radii of  $r \leq 20$  cm for narrow spacing of the solar panels.
- Nominal sizes DN 40, DN 50 and DN 63 are produced in twin wall design (inside smooth/ outside profiled). These sizes are preferably used for large-scale connection of the modules within the overall photovoltaic solar heat structure.

Both pipe variants are supplied in coils.

Besides surface installation, cable ducts are often required to be installed below ground. For these applications, HEGLER offers the high-quality cable duct system HEKAPLUS.

The HEKAPLUS system is made from PE-HD in twin wall design in accordance with DIN 16961, meeting the increased requirements of DIN EN 6138624, for example in civil engineering works.



*Subsoil HEKAPLUS cable ducts for large-scale connection of solar modules*

## Characteristics of the HEKAPLUS system

- Nominal sizes: DN 75, DN 110 and DN 160
- PE-HD twin wall pipe, inside smooth, outside profiled
- Ring stiffness:  $S \geq 10$  kN/m<sup>2</sup>
- Increased compression strength of  $F \geq 750$  N for special requirements in concrete installation
- System/water-tight up to 0.5 bar under pressure from outside and inside
- Excellent rupture strength and impact resistance
- Suitable for winter construction

### Important:

- If possible, pipes and fittings should be stored on site in the original stillages until installation. Proper handling on site must be ensured.
- For installation of HEKASOL cable ducts, the manufacturer's laying instructions should be followed.
- In addition, the general regulations of DIN EN 1610, ZTVA-StB 97 and the laying instructions A 535 of KRV and ZTV-FLN 11 of TELE-KOM apply.
- Proper embedding provided, sufficient stability against traffic loads in SLW 60 classified roads is ensured for the twin wall pipes DN 40, DN 50 and DN 63 in depths between 0.8 m to 6.0 m.

The information given in this brochure is the most up-to-date available and is intended to provide information on our products and their possible applications. It is not a guarantee of certain features or of their suitability for certain specific applications. Our guarantee applies to compliance with our specifications, within the scope of our General Terms and Conditions. The current edition supersedes any former versions. Subject to change.

## Technical Data

Nominal size	DN	20	25	32	40	50	63
Pipe design		corrugated pipe			twin wall pipe		
Coil length	m	100	50	50	50	50	50
Colour		black/UV stabilised					
Outside diameter	mm	20	25	32	40	50	63
Inside diameter	mm	≥ 13.5	≥ 17.4	≥ 23.5	≥ 32.0	≥ 38.0	≥ 50.5
Compression strength F to DIN EN 61386-24	N	≥ 320			≥ 750		
Ring stiffness S to DIN EN ISO 9969	kN/m <sup>2</sup>	-			≥ 12		
Minimum bending radius	cm	15	18	20	28	28	30

## Accessories

Nominal size	DN	20	25	32	40	50	63
Coupling		0	0	0	0	0	0
Profiled seal		-	-	-	0	0	0
Plug		-	-	-	0	0	0

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