

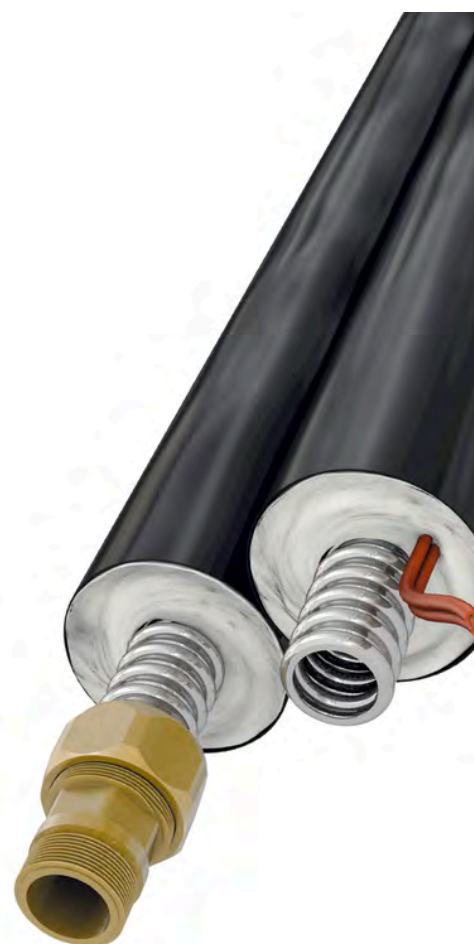


INSTALL IT. OPTIMIZE SOLAR ENERGY.

# ArmaFlex DuoSolar 220

Combines efficiency and ease in solar applications with evacuated tube collectors

- // Specifically designed for evacuated tube collectors
- // Suitable for solar applications up to +220 °C
- // Easy and fast to install



 **armacell**<sup>®</sup>  
ArmaFlex<sup>®</sup>

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# ArmaFlex DuoSolar 220



The stagnation temperature of evacuated tube collectors is significantly higher than that of flat plate collectors. This often leads to breakdowns when standard +150°C components are used.

Armacell now provides the new ArmaFlex DuoSolar 220 which has been especially designed for evacuated tube collectors and offers a perfect solution at high temperatures.

- operating temperatures up to 220°C
- for evacuated tube collectors



## // Components

ArmaFlex DuoSolar 220 consists of a flexible corrugated stainless steel pipe, which is quick and easy to install even with small bending radii and in retrofit applications. The high-tech polyester insulation withstands the extreme operating temperatures of evacuated tube collectors and the tough foil covering protects the pre-insulated pipe against mechanical damage and UV radiation. ArmaFlex DuoSolar 220 has an integrated sensor cable with halogen-free, high-temperature-resistant silicon coating.

## // Accessories

The metal-to-metal sealing quick-fitting couplings from Armacell allow the flexible pipes to be connected to the system components in seconds.

- Ease of assembly: connections are made simply by tightening a nut
- The breakthrough family of quick-fitting couplings provides a permanent, leakproof seal for corrugated stainless steel pipes

## TECHNICAL DATA - ARMAFLEX DUOSOLAR 220

Brief description	ArmaFlex DuoSolar 220 is a flexible pre-insulated, UV-resistant piping system used to connect solar collectors with the hot-water storage tank in an easy and professional way. The system is offered with a smart join-split system with two stainless-steel hoses and includes a sensor cable.
Material type	Corrugated austenitic stainless steel hose according to EN 10088-2: X 2 CrNiMo 17-12-2 and DIN 17441: 1.4404 // Fullfill EN ISO 10380:2013 and EN 13618 p.B. 7.2. Polyolefin-copolymer coating. Insulation: polyester.
Product colour range	Black
Special features	Fulfills DIN 1988 part 200. The covering offers excellent durability, even under UV exposure when used for outdoor applications.
Product range	Pre-insulated corrugated stainless-steel hoses in different coil lengths. In the return pipe, a sensor cable (2x0.75 mm <sup>2</sup> ) with halogen free, temperature resistant silicon coating (+180°C) is integrated.
Applications	Piping system to connect solar collectors with the hot-water storage tank, hot-water boiler and for other uses.
Remarks	During installation we strongly recommend that proprietary hangers are used at every one meter distance to support the whole system. The solar system and heat transfer fluid has to be well matched to ensure corrosion- and interference-free operations. We recommend an annual laboratory test of the fluid medium (density, concentration, corrosion, pH value). The heat transfer fluid has to be completely replaced in case the parameters are out of limits.

Property	Value / Assessment		Standard / Test method
<b>Temperature range</b>			
Service temperature <sup>1</sup>	Min. °C	Max. °C	
	-50	220	
<b>Thermal conductivity</b>			
Declared thermal conductivity	θm	40°C	EN ISO 8497
	λd ≤ [W/(m·K)]	0,040	
<b>Fire Performance and Approvals</b>			
Reaction to fire	B1		DIN 4102
<b>Weather and UV resistance</b>			
UV resistance	Excellent		EN ISO 4892-2
<b>Other technical features</b>			
Additional remarks	Melting point +265°C		
Maintenance	Long term corrosion and failure proof operation of the solar thermal equipment is only possible when the system and heat transfer medium are optimally matched to each other. We recommend an annual laboratory test of the medium (e.g. density, concentration, corrosion protection, pH). The heat transfer medium must be replaced completely, if the parameters do not longer meet the specifications.		
Maximum operating pressure (bar)	DN 16 = 16 DN 20 = 10 DN 25 = 10		

Property	Value / Assessment	Standard / Test method
Maximum operating pressure (graph) <sup>2</sup>		

Pipe volume [l/m]	DN 16 = 0,272 DN 20 = 0,430 DN 25 = 0,633	
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<sup>1</sup>For environmental conditions outside the given range, please contact Technical Services.

<sup>2</sup>Pressure drop [mbar/m] over Volume flow [l/h] for Medium temperature 60°C // Heat fluid 1,2-Propylenglycol // Dynamic Viscosity  $1612.8 \times 10^{-6}$  kg/ms // Weight density 1008 kg/m<sup>3</sup>.

## Coil – pre-insulated with stainless steel pipes. Black

Pipe Ø [mm]	Item	Outer diameter [mm]	Thickness [mm]	Length [m]	EAN	Content [metric]
21	SO-DP-20X16/E15	62	20	15	7612207388220	15 m
21	SO-DP-20X16/E25	62	20	25	7612207388244	25 m
27	SO-DP-20X20/E15	67	20	15	7612207388251	15 m
27	SO-DP-20X20/E25	67	20	25	7612207388275	25 m
32	SO-DP-20X25/E25	72	20	25	7612207388299	25 m