

# AEROLINE<sup>®</sup> SOLAR

THE PERFECT CONNECTION  
TECHNOLOGY FOR SOLAR  
HOT WATER



TECHNICAL  
INSULATION

THE PERFECT CONNECTION  
TECHNOLOGY FOR SOLAR HOT WATER

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# THE PERFECT CONNECTION TECHNOLOGY FOR SOLAR HOT WATER

Field-proven technology and continuous product development are the basis for AEROLINE® Solar pipe systems. The pre-insulated systems with feed and return are easy to connect to any common solar components – without special tools, soldering or welding etc.

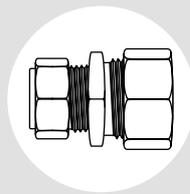
**Your advantage: Reduces costs, faster assembly, excellent heat insulation.**

## THE HIGHLIGHTS AT A GLANCE



### LOWEST THERMAL LOSS

The thermal loss of the twin tube system AEROLINE® Split 100 (DN 16/DN 20) is as low as that of 2 individually laid pipes completed with 26 mm thermal insulation.



### METAL-TO-METAL SEALING

Safe connection with ISICLICK®.



### UV-RESISTANCE

Either a UV-resistant braiding or a polyolefin jacket is protecting the insulation of the AEROLINE®-line sets.



### NO SPECIAL TOOLS

ISICLICK® connections are just ingenious, no special tools are required.



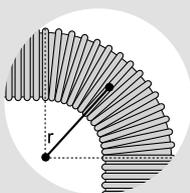
### HIGH TEMPERATURE RESISTANCE

Permanent temperature resistance up to 150°C, short term up to 175°C.



### FAST AND SIMPLE ASSEMBLY

The complete line set is fast and easy to install – even in very narrow spaces



### MINIMUM BENDING RADIUS

Space saving and flexible in narrow space installations.

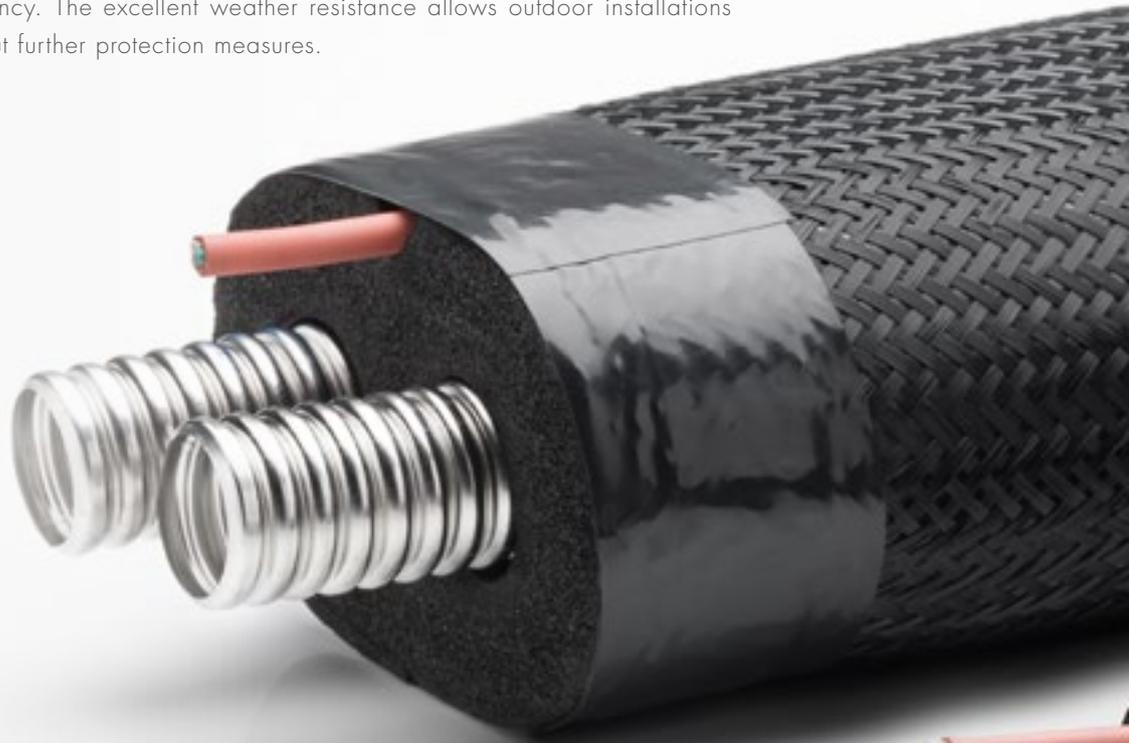


### ROBUST JACKET

Special feature for outdoor use: the robust AEROLINE® PRO mesh protection.

# THE RIGHT THERMAL INSULATION MATTERS!

The CFC-free insulation of the AEROLINE®-systems is made out of a special AEROFLEX® EPDM rubber, and guarantees optimum energy efficiency. The excellent weather resistance allows outdoor installations without further protection measures.

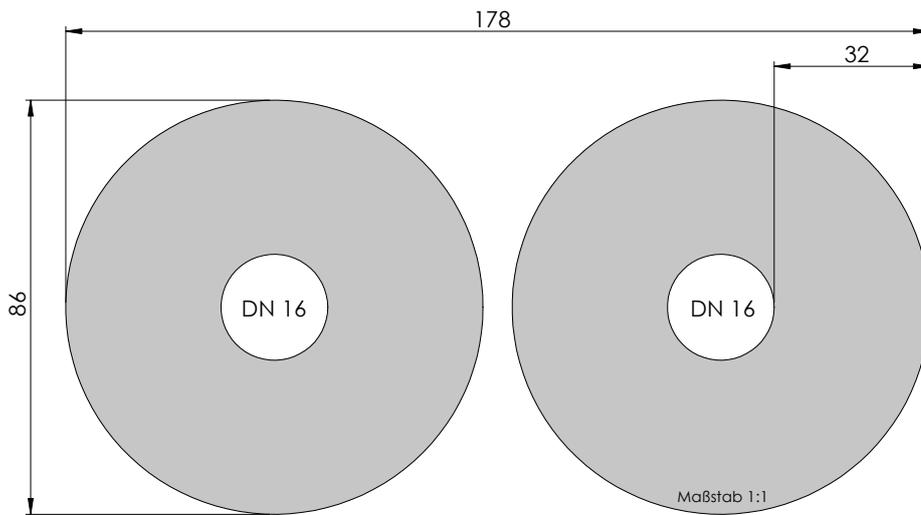


## THE HIGHLIGHTS AT A GLANCE:

- Excellent handling characteristics
- Many years of experiences in heating, air conditioning and solar application
- High temperature resistance
- Outdoor installation
- Highest insulation values
- Short term temperature resistance up to 175 °C
- UV and weather resistance
- Thermal conductivity: 0,038 W/mK at 40 °C
- No embrittlement of copper and stainless steel tubes (DIN 1988 Part 200)
- Quality control by an independent material inspection institute

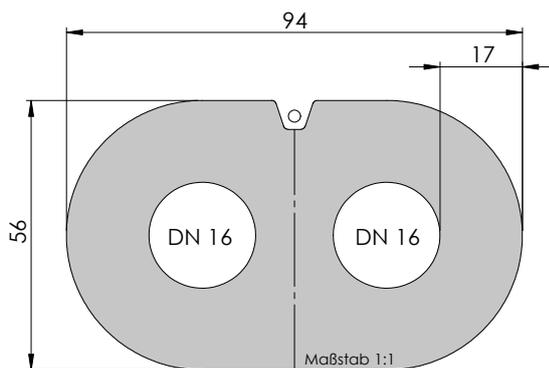


# AEROLINE® SOLAR THERMAL TWIN TUBE SYSTEMS – EXTREMELY SPACE SAVING



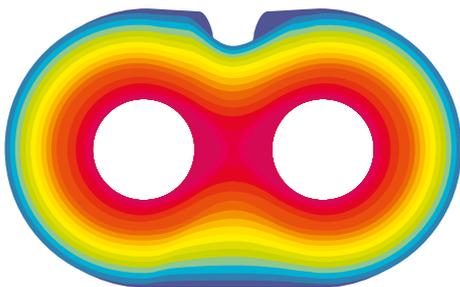
Single tube connection with high temperature rubber 0,042 W/mK at 40 °C

- Space requirement approx. 152 cm<sup>2</sup>



AEROLINE® INOX SPLIT 100 twin tube system with optimal insulation

- Space requirement approx. 53 cm<sup>2</sup> (approx. -65%)



Exemplary temperature run.

## **AEROLINE® COMBINES THE PRACTICAL WITH THE REGULATIONS**

All products in the AEROLINE® product range comply with the norms now in force. The layouts of the products were realised by the Research Institute for Thermal Protection in Munich (FIW) to guarantee installers and customers to work with optimized products.

# AEROLINE® SOLAR PRODUCT RANGE



## AEROLINE® CU SPLIT 100

Easily splittable for simple connection to collector, solar station and storage. With polyolefine-film protection against mounting damage.

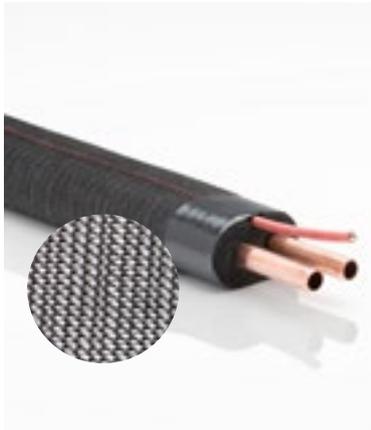
Dimensions Copper tube	Length			
	10 m	15 m	20 m	25 m
12 x 0,8	•	•	•	•
15 x 0,8	•	•	•	•
18 x 1,0	•	•	•	•



## AEROLINE® INOX SPLIT 100

Easily splittable for simple connection to collector, solar station and storage. With polyolefine-film protection against mounting damage.

Dimensions Corrugated stainless steel tube	Length				
	10 m	15 m	20 m	25 m	50 m
DN 16	•	•	•	•	•
DN 20	•	•	•	•	•
DN 20	•	•	•	•	•



**AEROLINE® CU PRO 100**

Strongest mounting protection made of robust polyester-/stainless steel wire mesh.

Dimensions	Length			
Copper tube	10 m	15 m	20 m	25 m
12 x 0,8	•	•	•	•
15 x 0,8	•	•	•	•
18 x 1,0	•	•	•	•



**AEROLINE® INOX PRO 100**

Strongest mounting protection made of robust polyester-/stainless steel wire mesh.

Dimensions	Length				
Corrugated stainless steel tube	10 m	15 m	20 m	25 m	50 m
DN 16	•	•	•	•	•
DN 20	•	•	•	•	•



**AEROLINE® INOX PRO GS**

Strongest mounting protection made of robust polyester mesh.

Dimensions	Length				
Corrugated stainless steel tube	10 m	15 m	20 m	25 m	50 m
DN 25	•	•	•	•	•
DN 32	•	•	•	•	–



### AERORAPID CLASSIC

Pre-insulated for thermal applications (DN 25, DN 32 and DN 40 especially used for the connection of heat pumps). With polyolefin-film protection against mounting damage.

Dimensions Corrugated stainless steel tube	insulation mm	Length		
		10 m	25 m	50 m
DN 16	13/25	•	•	•
DN 20	13/25	•	•	•
DN 25	19	•	•	•
DN 32	19	•	•	–
DN 40	25	•	•	–



### AERORAPID PRO

Strongest mounting protection made of robust polyester-/stainless steel wire fabric. Ideal for outdoor use.

Dimensions Corrugated stainless steel tube	insulation mm	Length		
		10 m	25 m	50 m
DN 16	13/25	•	•	•
DN 20	13/25	•	•	•



### AERORAPID PRO GS

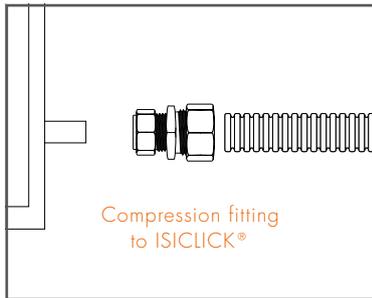
Strongest mounting protection made of robust polyester mesh.

Dimensions Corrugated stainless steel tube	insulation mm	Length		
		10 m	25 m	50 m
DN 16	25	•	•	–
DN 20	25	•	•	–
DN 25	19/38	•	•	–
DN 32	19/38	•	•	–
DN 40	25	•	•	–

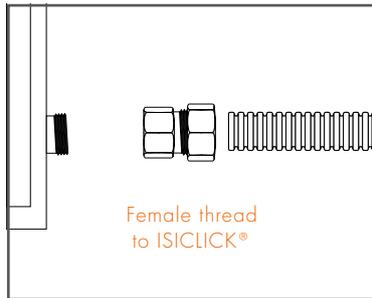
# CONNECTION OPTIONS

Connection options for corrugated stainless steel pipe systems

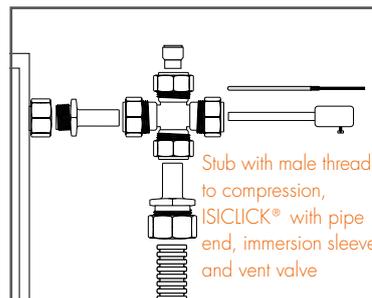
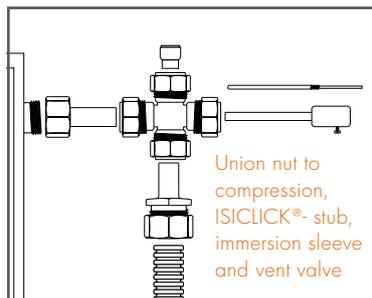
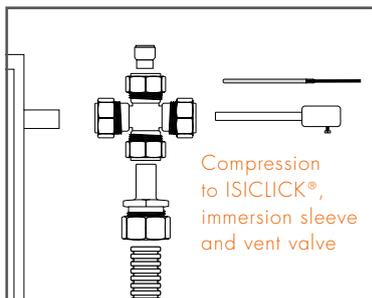
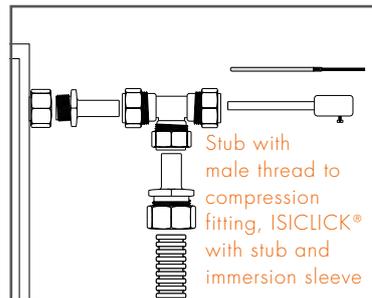
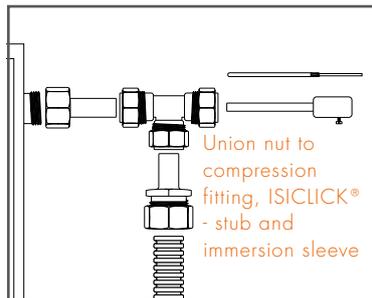
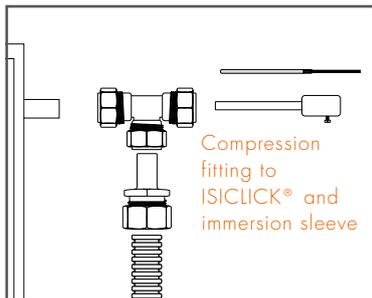
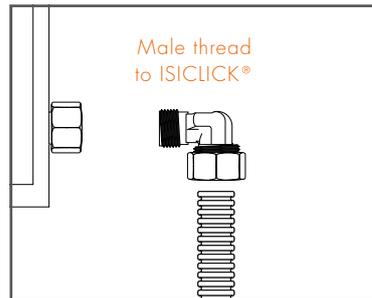
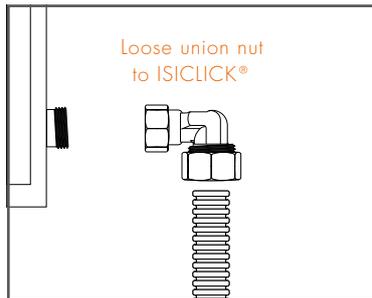
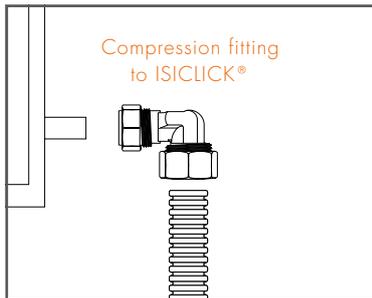
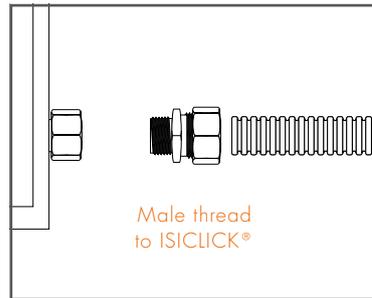
## COLLECTOR WITH PIPE END



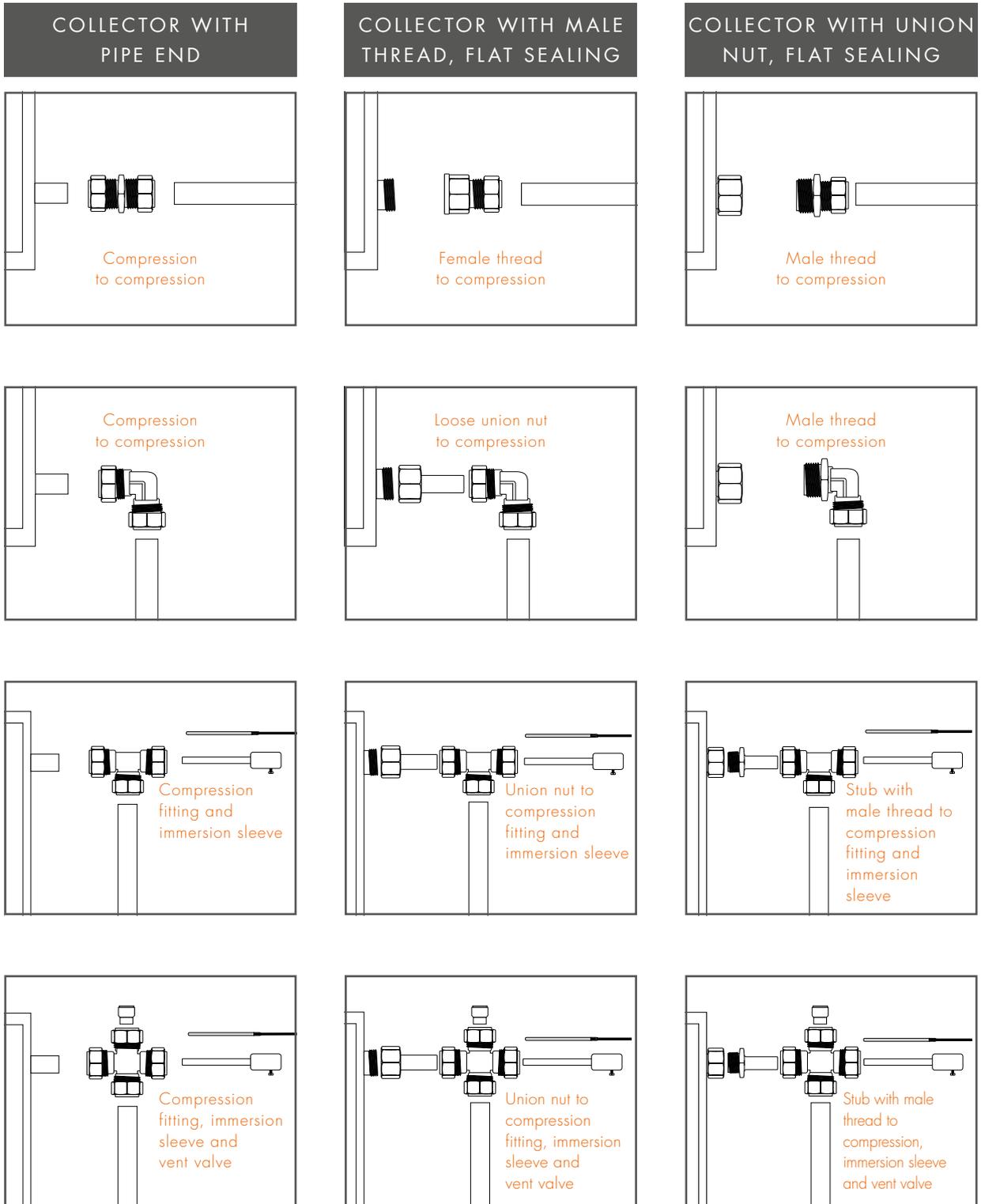
## COLLECTOR WITH MALE THREAD, FLAT SEALING



## COLLECTOR WITH UNION NUT, FLAT SEALING



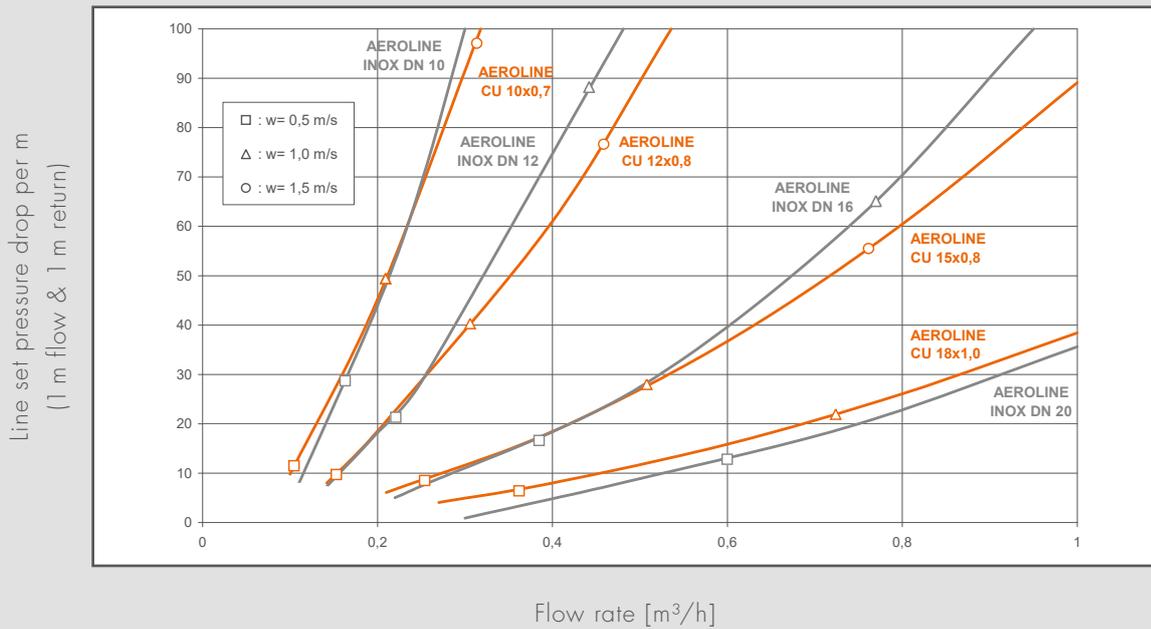
Connection options for copper pipe systems



# PRESSURE DROPS

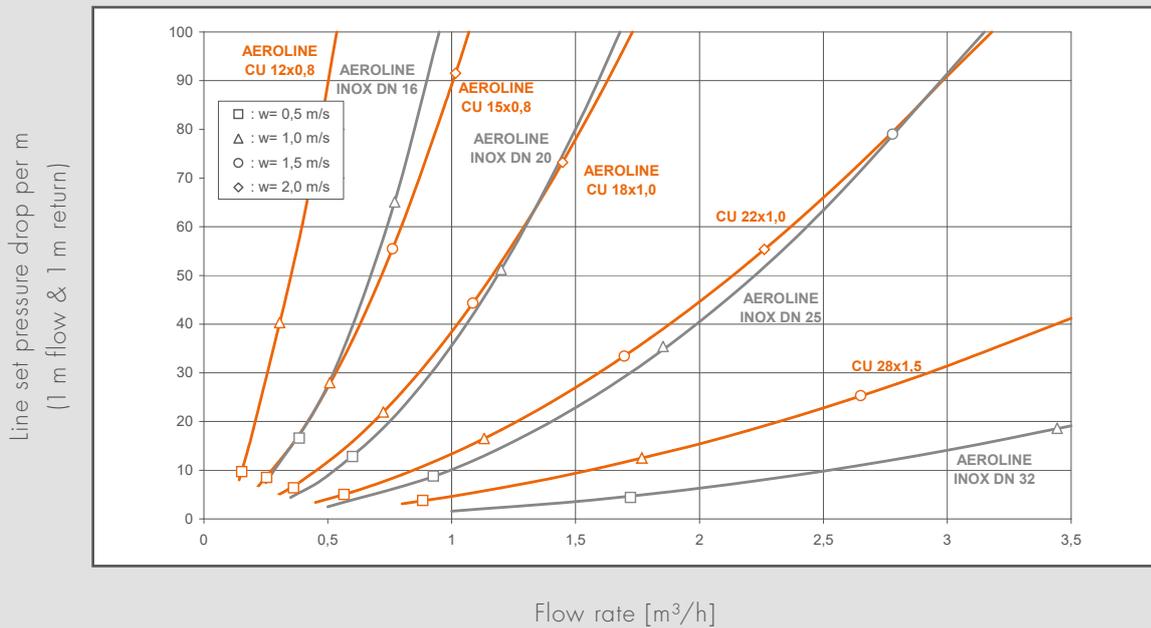
## AEROLINE® INOX & AEROLINE® CU

These diagrams apply for 1 linear meter straight laid twin tubes and a mixture of water-tyfocor L (60/40) at a temperature of 40 °C



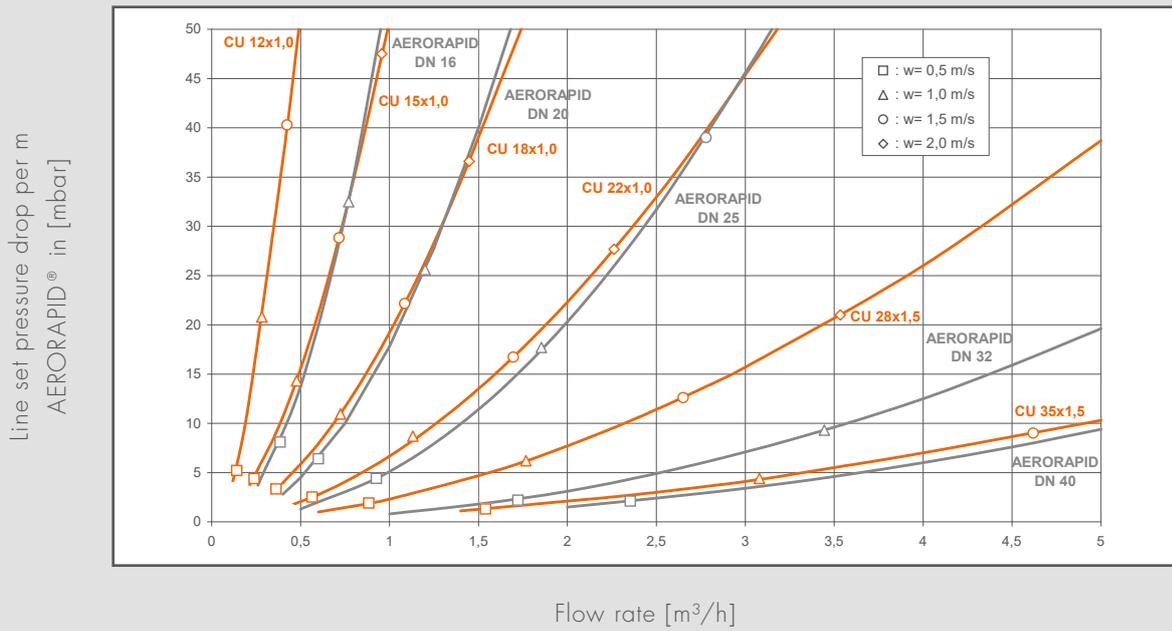
## AEROLINE® INOX & AEROLINE® CU

These diagrams apply for 1 linear meter straight laid twin tubes and a mixture water-tyfocor L (60/40) at a temperature of 40 °C



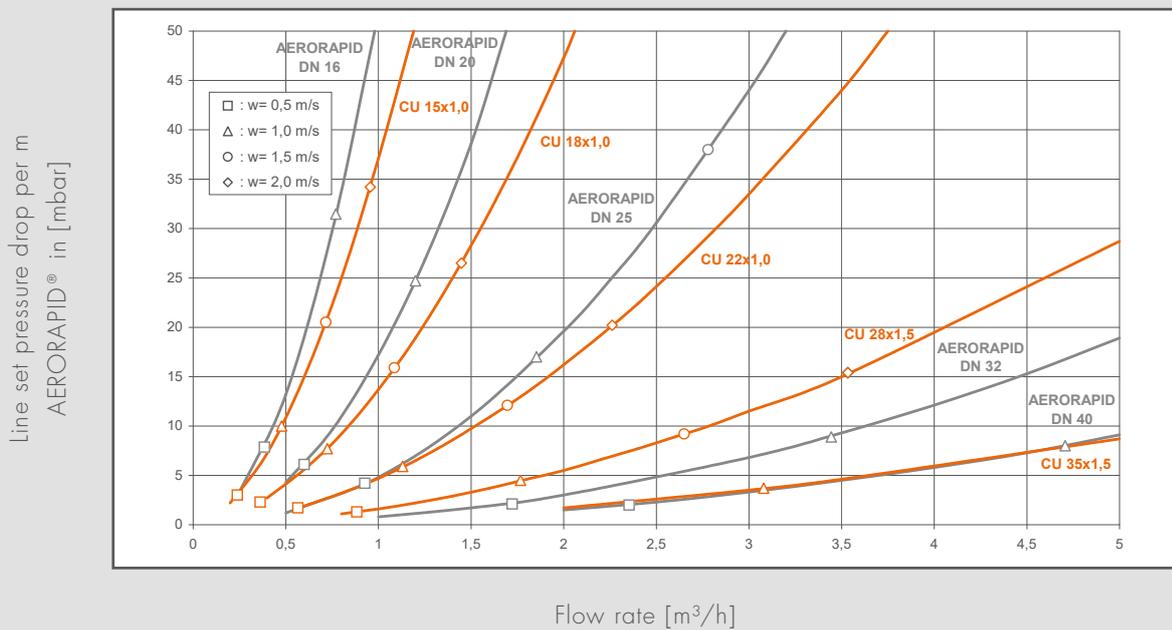
**AERORAPID® & RAPID®**

These diagrams apply for 1 linear meter straight laid tube and a mixture of water-tyfocor L (60/40) at a temperature of 40°C



**AERORAPID® & RAPID®**

These diagrams apply for 1 linear meter straight laid tube with water at a temperature of 40°C



Please consider the total pressure drops of all components (collector, heat exchanger, stop valves, pipe bends, etc.)

# CONCEPTION

## HIGH-FLOW-SOLAR SYSTEMS

Flow rate 40 l/m<sup>2</sup>h with EC-high efficiency pump  
Wilo Stratos ECO-ST 25/1-5 or pump Wilo Star-ST 25/6  
respectively Grundfos UPS Solar 25-60

Maximum length of the line  
set (twin tube in metres) at

Collector surface

### AEROLINE® CU

AEROLINE® CU 12 mm	10 m	7 m <sup>2</sup>
	15 m	6 m <sup>2</sup>
	25 m	5 m <sup>2</sup>
AEROLINE® CU 15 mm	10 m	12 m <sup>2</sup>
	15 m	10 m <sup>2</sup>
	25 m	8 m <sup>2</sup>
AEROLINE® CU 18 mm	10 m	18 m <sup>2</sup>
	15 m	16 m <sup>2</sup>
	25 m	14 m <sup>2</sup>

### AEROLINE® INOX

AEROLINE® INOX DN 16	10 m	12 m <sup>2</sup>
	15 m	10 m <sup>2</sup>
	25 m	8 m <sup>2</sup>
AEROLINE® INOX DN 20	10 m	20 m <sup>2</sup>
	15 m	18 m <sup>2</sup>
	25 m	16 m <sup>2</sup>
AEROLINE® INOX DN 25	10 m	32 m <sup>2</sup>
	15 m	28 m <sup>2</sup>
	25 m	24 m <sup>2</sup>
AEROLINE® INOX DN 32	10 m	58 m <sup>2</sup>
	15 m	50 m <sup>2</sup>
	25 m	44 m <sup>2</sup>

### SPECIAL NOTE:

This reference conception only serves as a pre-selection of your system and does not replace any pressure drop calculation for the complete system. Please consider the total pressure drops of all components (collector, heat exchanger, stop valves, check valves, tube elbows, etc.). For Low-Flow-systems (flow rate 20 l/m<sup>2</sup>h with EC-high efficiency pump Wilo Stratos ECO-ST 25/1-5 or pump Wilo Star-ST 25/6 respectively Grundfos UPS Solar 25-60) the collector surface may be almost doubled. For Drain-Back-systems please follow the manufacturer's instructions.



SAVE ENERGY  
AND PRESERVE  
THE ENVIRONMENT

# TECHNICAL DATA

## **CORRUGATED STAINLESS STEEL TUBE**

- Material no. 1.4404
- Temperature range of -270 °C up to +600 °C
- Maximum working pressure at 200 °C:  
DN 16/11 bar, DN 20/11 bar, DN 25/10 bar,  
DN 32/6 bar, DN 40/1,8 bar
- Bursting pressure  
DN 16/20/25 higher 33 bar,  
DN 32/40 higher 20 bar

## **COPPER PIPE**

- According to EN 12449 (R220)

## **INSULATION MADE OF EPDM**

- Light, flexible, closed-cell synthetic rubber
- Free of PVC and CFC (according to legal requirements)
- Fire protection: Euroclasse E (DIN EN 13501-1)
- No embrittlement of copper and stainless steel tubes (DIN 1988 Part 200)
- Dimensions on the basis of EN 14304
- Long-term thermal stability up to +150 °C; short-term up to +175 °C (stagnation temperature of collectors)
- Very good ozone resistance, UV-resistant

## **THERMAL PROTECTION**

- The thermal loss is equal to that of two individually laid pipes completed with 26 mm thick insulation (SPLIT 100 / DN 16/DN 20)
- Thermal conductivity  
0,036 W/mK at 0 °C  
0,038 W/mK at 40 °C

## **SENSOR CABLE**

- Copper tubes: Silicone sensor line 2 x 0,752 VDE 0295, class 5;
- Corrugated stainless steel tubes: Sensor line, 2 x resp. 3x 0,752 VDE-Reg.-Nr. 7507

AEROLINE® SOLAR

Dimensions	Category	Insulation thickness (d)	Length (l)	Width (b)
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**CU**

AEROLINE® CU 12 mm	CU SPLIT 100	15 mm	67 mm	42 mm
	CU PRO 100	15 mm	67 mm	42 mm
AEROLINE® CU 15 mm	CU SPLIT 100	15 mm	74 mm	45 mm
	CU PRO 100	15 mm	74 mm	45 mm
AEROLINE® CU 18 mm	CU SPLIT 100	16 mm	82 mm	51 mm
	CU PRO 100	16 mm	82 mm	51 mm

**INOX**

AEROLINE® INOX DN 16	INOX SPLIT 100	17 mm	95 mm	57 mm
	INOX PRO 100	17 mm	95 mm	57 mm
AEROLINE® INOX DN 20	INOX SPLIT 100	18 mm	107 mm	64 mm
	INOX PRO 100	18 mm	107 mm	64 mm
AEROLINE® INOX DN 25	INOX SPLIT 100	25 mm	134 mm	85 mm
	INOX PRO GS	25 mm	134 mm	85 mm
AEROLINE® INOX DN 32	INOX PRO GS	25 mm	160 mm	95 mm

Dimensions	Inner diameter	Outer diameter	Maximum operation pressure at 200 °C	Minimum bending radius
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**CU**

CU 12 mm	10,4 mm	12,0 mm	53 bar	72 mm
CU 15 mm	13,4 mm	15,0 mm	42 bar	90 mm
CU 18 mm	16,0 mm	18,0 mm	44 bar	108 mm

**INOX**

INOX DN 16	16,5 mm	20,4 mm	11 bar	40 mm
INOX DN 20	20,6 mm	24,8 mm	11 bar	50 mm
INOX DN 25	25,6 mm	30,5 mm	10 bar	60 mm
INOX DN 32	34,4 mm	44,0 mm	6 bar	55 mm
INOX DN 40	40,8 mm	49,3 mm	1,8 bar	60 mm

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