



COMPLETE SOLAR CONNECTION SET

Ayvaz offers a complete set to connect all mechanic components of solar systems to each other and the rest of the system. Ayvaz continues working for to provide high efficiency to the solar systems and to produce brand new solutions for the problems that the workers face during the installation and to reduce the labouring time and costs.

AYVAZ'S SOLAR CONNECTION RANGE

- Nano-Flex/EZ-Flex: Pre-insulated flexible metal hoses between collectors and heating tank or solar boiler.
- Boiler-Flex: Flexible metal hose designs applied into the water heating tanks or heat exchangers
- Pan-Flex: Quick connection parts between the solar collectors.
- Su-Flex: Flexible metal hoses for expansion vessel connections.

AYVAZ'S PRE-INSULATED SOLAR CONNECTION HOSES

Flexible metal hoses manufactured from stainless steel AISI 316L material that are used to transport the hot and cold water between solar collectors and the heating tank or the heat exchanger save on the installation time and the labouring costs accordingly.

Ayvaz's insulated metal solar hoses make the installation easier and quicker, especially where the installation space is limited and causes difficulties for the workers such as roofs and attics.

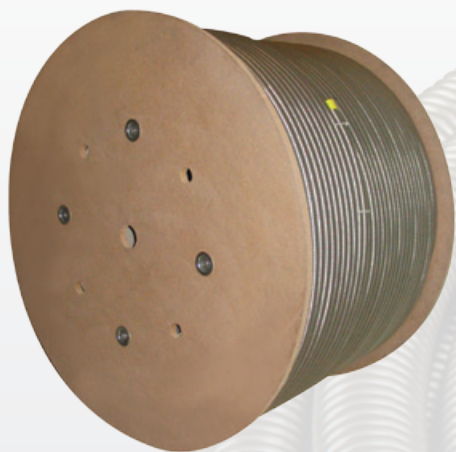
INDUSTRIAL METAL HOSES FOR SOLAR APPLICATIONS

PRODUCT FEATURES

Hose Type: Open pitch corrugated metal hose
Hose Material: Stainless Steel AISI 316L



Open Pitch



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HOSE DIMENSIONS	COIL	DN	LENGTH (m)
		6-25	50
BOBBIN	32-50	25	
	65-250	10	
	12	1000	
	16	700	
	20	450	
	25	250	
	32	180	

OPEN PITCH CORRUGATED HOSE DIMENSIONS

DN	Internal Diameter	Outer Diameter	Tolerance	Minimum Bending Radius	Nominal Bending Radius	Operation Pressure	Nominal Pressure (PN) DIN EN ISO 10380/SF4
	mm	mm	mm	rmin (mm)	rn (mm)	P1 (bar) 20°C/SF3	
12	11,8	15,8	0,2	20	165	21	16
16	16,6	21,4	0,2	25	195	13	10
20	20,9	26,4	0,2	30	225	13	10
25	25,1	31,8	0,3	35	260	8	6
32	32,3	39,6	0,3	40	300	5	4

EZ-FLEX INSULATED SOLAR HOSES (2in1 and 1in1)

APPLICATION AREAS

Solar energy applications
Collector and solar boiler connections
Hot water applications
Drinking water connections



Standard Pitch



Open Pitch

ADVANTAGES

- Polyamide braiding protects the hose and insulation against the mechanical damages
- Highly resistant to the birds and other external effects
- Rubber based insulation prevents the heat loss and is to be applied up to 150°C (Peak temperature 175°C)
- Easily separable with using no additional tools
- UV resistant braiding prevents the negative effects of the sun and protects the hose and insulation.

EZ-FLEX

Separable Polyamide
braiding or non braided

Stainless Steel
AISI 316L

Silicone
Cable

Rubber
based insulation
Thickness:
9mm/13mm/19mm

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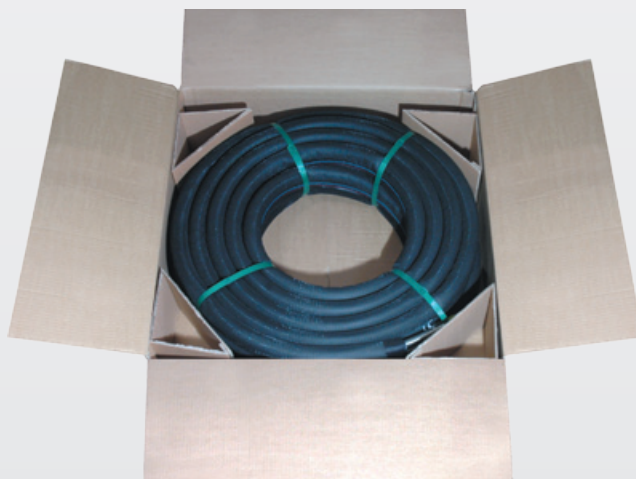


COIL

Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	10-50	10-50	10-50	10-50

BOBBIN

Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	150	150	125	100



APPLICATION AREAS

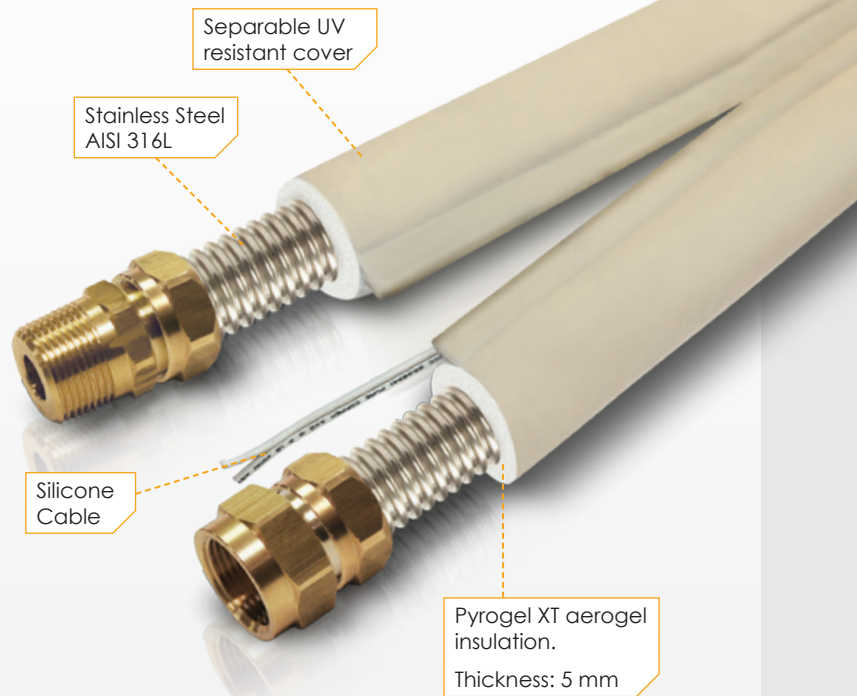
Solar energy applications
Collector and solar boiler connections
Industrial high temperature applications
Drinking water connections
Hot water applications



Standard Pitch



Open Pitch



CHOOSE YOUR
COLOR!



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COIL				
Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	10-50	10-50	10-50	10-50

BOBBIN				
Diameter (DN)	DN12	DN16	DN20	DN25
Max. Length (m)	150	150	125	100

ADVANTAGES

- Pyrogel XT which is derived from world's lightest insulation material called Aerogel with low λ value (0.02 W/mK) and is suitable for a wide temperature range, from -40°C up to +650 °C.
- Low thickness of the insulation material (5mm) reduces the external diameter of the hose and provides a relief on the transportation and the logistics area up to 66%.
- Easily separable compact design requires no additional pipe support during the installation that shortens the installation time and makes it quicker and easier.
- The UV cover that is applied on the insulation externally prevents the negative effects of the sun and protects the hose against the damages of the birds and other hazardous species

"PAN-FLEX" FLEXIBLE CONNECTIONS BETWEEN SOLAR PANELS

Pan-flex solar collector connectors are used to connect the solar collectors that are located very closely to each other. These highly flexible metal connectors enable installers to complete collector connections safely and reliably in a very short time.

TYPES

- Threaded Connectors (Male-Male, Female-Female)
- Welded End Connectors
- Press Type (Push-in) Connectors

ADVANTAGES

- Highly reliable, leak-proof connection.
- Easy and quick connection saves on time and labouring costs.
- Long service life, no maintenance required.

APPLICATION AREAS

APPLICATION AREAS

Solar collector connections

PRODUCT FEATURES

Hose Type	Closed pitch corrugated highly flexible metal hose
Hose Material	Stainless Steel AISI 316L
Fittings Material	MS 58 Brass / Stainless Steel
Fittings Types	Female-Female, Male-Male, Welded Ends, Press Type



HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2"x1/2"	50
	16	3/4"x3/4"	
	20	1"x1"	100

"QUICK SET" FITTINGS SYSTEM FOR INSULATED SOLAR HOSES WITHOUT GASKET

Ayvaz quick connection set is the new generation press-fittings system that reduces the time spent on preparing and installation. It is possible to fit the required connection and complete the assembly within minutes. With the quick connection set, preparing the connection end could be completed in there easy steps.

1. Cut the hose into required length
2. Fit the required press-fitting by pushing the hose through the fittings until hearing the click sound.
3. Screwing the fittings and completing the connection.

PRODUCT FEATURES

Fittings Material	MS 58 Brass
Fittings Types	Externally Threaded, Internally Threaded, Adapter, Welded End, Erneto Nut



Male	
Hose Dia.	Con. Size
DN12 x 1/2"	
DN12 x 3/4"	
DN16 x 1/2"	
DN16 x 3/4"	
DN16 x 1"	
DN20 x 3/4"	
DN20 x 1"	
DN25 x 1"	
DN25 x 1 1/4"	

Female	
Hose Dia.	Con. Size
DN12	1/2"
DN12	3/4"
DN16	1/2"
DN16	3/4"
DN16	1"
DN20	3/4"
DN20	1"
DN25	1"
DN25	1 1/4"

Adapter	
Hose Dia.	Con. Size
DN12 x DN12	
DN16 x DN16	
DN20 x DN20	
DN25 x DN25	

Welded End	
Hose Dia.	Con. Size
DN12 x 15 mm	
DN16 x 15 mm	
DN16 x 18 mm	
DN16 x 22 mm	
DN20 x 18 mm	
DN20 x 22 mm	
DN25 x 22 mm	

Ermeto Nut	
Hose Dia.	Con. Size
DN12 x 15 mm	
DN12 x 18 mm	
DN12 x 22 mm	
DN16 x 15 mm	
DN16 x 18 mm	
DN16 x 22 mm	
DN20 x 18 mm	
DN20 x 20 mm	
DN20 x 22 mm	
DN25 x 18 mm	
DN25 x 22 mm	



BOILER-FLEX

In all solar heating systems, there is a horizontal heating tank combined with the collector or an independent vertical solar heating boiler where the heating and domestic water is heated. The water which keeps circling between the collectors and the heating tank transfers its temperature to the system in these places and provides the required heating.

Ayvaz is able to provide the most appropriate boiler-flex application from the cage coiling to the selection of correct fittings type and length to the tank and boiler manufacturers. Please apply our the sales team for your special boiler-flex designs.

Boiler-flex applications prevent numerous problems that the tank or boiler manufacturers face, because of the use of rigid pipes in their production.

PRODUCT FEATURES

Hose Type	Standard or open pitch corrugated metal hose
Hose Material	Stainless Steel AISI 316L
Fittings Material	Stainless Steel AISI 316
Fittings Types	Internal and external threaded pipe

CONNECTION TYPES

Standard Connections

1-Conic Sealing External Threaded (Male)
Connection DIN EN 10226/1

2-Flat Sealing External Threaded (Male)
Connection DIN EN 10226/1

3-Conic Sealing Internal Threaded (Female)
Connection DIN EN 10226/1

4-Flat Sealing Internal Threaded (Female)
Connection DIN EN 10226/1

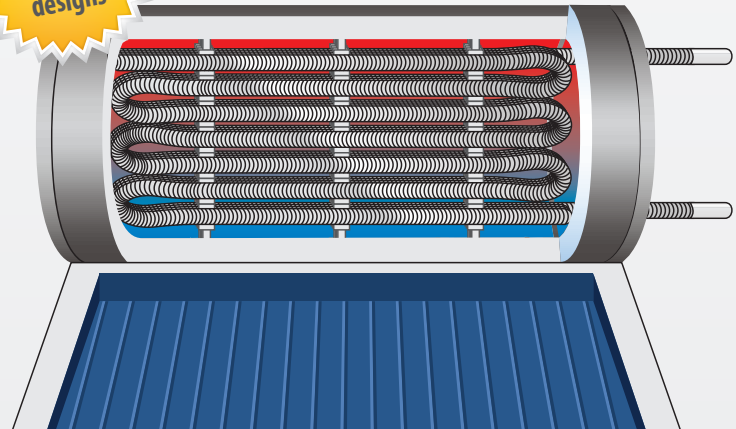
Connection Dimensions				
DN	ØD	R" (Male)	Rp"-Rc" (Female)	L (mm)
16	21,3	1/2"x1/2"	3/8"x3/8"	100
20	26,9	3/4"x3/4"	1/2"x1/2"	
25	33,7	1"x1"	3/4"x3/4"	
32	42,4	1 1/4"x1 1/4"	1"x1"	
40	48,3	1 1/2"x1 1/2"	1 1/4"x1 1/4"	150
50	60,3	2"x2"	1 1/2"x1 1/2"	
	70	-	2"x2"	

BOILERFLEX

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Suitable
for horizontal
designs



ADVANTAGES

- Corrugated structure of the hose provides almost doubled surface area in comparison with rigid pipe applications. Greater surface area means better heat transfer capacity and higher efficiency.
- Boiler-flex systems are economical, energy saving applications.
- Hose corrugations keep moving as a result of constant thermal expansion and compression, this movement prevents the lime and residue formation on the hose surface and provides longer service life.
- Stainless steel (AISI 316L) hose is suitable for drinking water application and highly resistant to corrosion.
- With the help of flexibility and low bending radius, the hose can be formed in any form required for various applications.

BOILER-FLEX

DN	Corrugation Type	Ød Internal Diameter (mm)	ØD External Diameter (mm)	Tolerance ± mm	Wall Thickness (mm)	Bending Radius		PN bar	Surface Area	Internal Volume
						rmin (mm)	rn (mm)			
12	Standard	12,7	17,7	0,2	0,2	20	140	0-10	0,090 m²	0,177 dm³
16	Standard	15,5	20,8	0,2	0,2	28	160		0,112 m²	0,254 dm³
16	Open Pitched	16,5	21,35	0,2	0,18	25	195		0,091 m²	0,276 dm³
20	Standard	18,7	24,8	0,2	0,2	32	170		0,130 m²	0,364 dm³
20	Open Pitched	21	26,6	0,2	0,18	30	225		0,116 m²	0,450 dm³
25	Standard	24,6	31,3	0,2	0,2	40	190	0-8	0,204 m²	0,604 dm³
25	Open Pitched	25,3	31,7	0,2	0,2	35	260		0,151 m²	0,644 dm³
25	Open Pitched	24,4	31,2	0,2	0,3	35	260		0,154 m²	0,658 dm³
32	Standard	33,35	41,15	0,3	0,3	50	260	0-6	0,269 m²	1,073 dm³
32	Open Pitched	32,4	39,9	0,3	0,3	40	300		0,197 m²	1,034 dm³
40	Standard	40,7	49,8	0,4	0,4	58	290		0,248 m²	1,584 dm³
50	Standard	51,4	60,2	0,4	0,25	68	300		0,329 m²	2,472 dm³

SU-FLEX EXPANSION VESSEL CONNECTION HOSE

The water coming from the collectors loses its temperature in the heating tank or the exchanger that causes an expansion in the volume of the water. In order to maintain the system efficiency and the security, this expanded amount of the water is held by an expansion vessel.

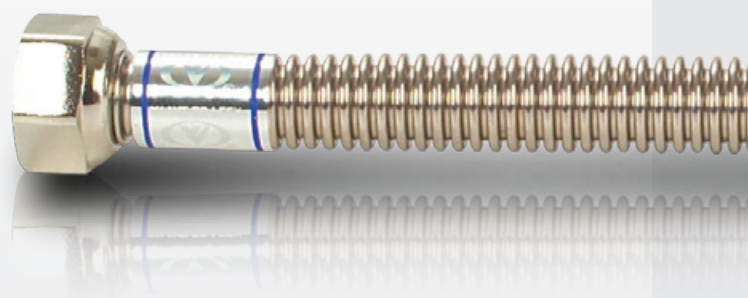
This expanded volume is carried to the vessel by doing a by-pass connection from the cool water line through the solar collectors. This by-pass connection can be completed using flexible metal hose (Su-flex). The flexible structure of the Su-flex provides easy, quick and reliable connection.

APPLICATION AREAS

Sanitary applications
Dish washers and washing machines
Boiler and hot water tank connections
Radiator connections

PRODUCT FEATURES

Hose Type	Standard corrugated metal hose
Hose Material	Stainless Steel AISI 316L
Fittings Types	Nut-Nut (Male adapters are available)
Fittings Materials	Nut in Brass EN ISO 228/1
Cover	Non-covered
Gasket	Klingrit



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HOSE DIMENSIONS	DN	CONNECTION	LENGTH (mm)
	12	1/2	200 all sizes are available in between 5000
	16	3/4"	



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