

Flexible stainless steel insulated piping SolarFlex

NA3540-15

**CALEFFI
SOLAR**



BSI EN ISO 9001:2000
Cert. n° FM 21654



UNI EN ISO 9001:2000
Cert. n° 0003



01172/08 NA



Function

SolarFlex is a system solution with pre-insulated flow and return pipes for solar hot water heating systems used to connect the solar collector with the storage tank in an easy, quick and professional way. It optimizes thermal efficiency of the entire system. The pre-insulation solution of two flexible stainless steel pipes inside two EPDM closed cell insulation and the integrated sensor cable, saves time and reduces cost of installation. SolarFlex is packaged in a 50-foot continuous coil with a complete range of accessories to ensure a smooth and secure installation.

General

- Easy to install, enabling pipes to be run without using a torch in confined spaces or on the roof.
- Ensures a leak-free installation.
- Easy to separate, without damaging the tubes.
- External copolymer foil protects against UV radiation and mechanical strain.
- Identification mark for flow and return.
- Meets highest requirements for modern solar heating systems.
- Pre-insulated feed and return pipes can be joined easily without special tools.

Product range

NA3520-15	1/2" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers
NA3540-15	3/4" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers
NA3560-15	1" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers

Technical specifications

Materials:

- pipe: two corrugated stainless steel 316L
- insulation: two closed cell elastomer UV resistance EPDM
- outer cover: UV resistant polyolefin copolymer foil

Insulation thickness: 5/8 inch (16mm)

Thermal conductivity at 105°F (40°C): R-3.6 (.04W/mK)

Max. working pressure: 150 psi (10 bar)

Max. fluid temperature: 350°F (175°C)

Min. surface temperature: -60°F (-50°C)

Length per coil: 50 feet (15m)

Fluid capacity per foot: 1/2" - 0.0219 gallons (0.08 liters)

3/4" - 0.0346 gallons (0.13 liters)

1" - 0.0509 gallons (0.19 liters)

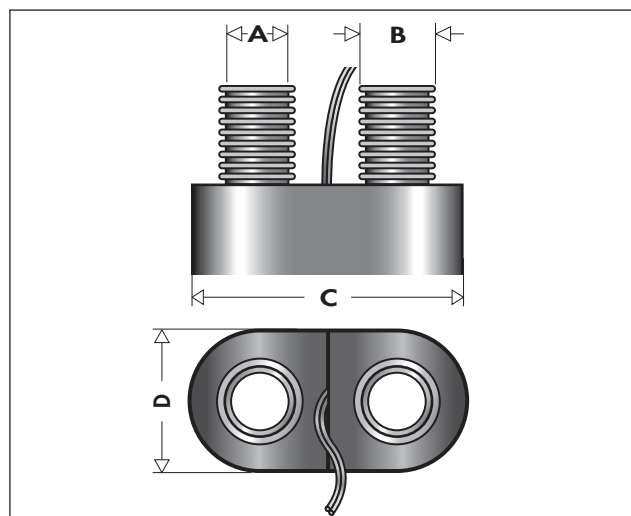
Min. bending radius: 5 inch (130mm)

Pressure loss: Approx. 25% more than in a comparable smooth pipe

Flammability: Class VO

Flame spread/smoke density 25/50

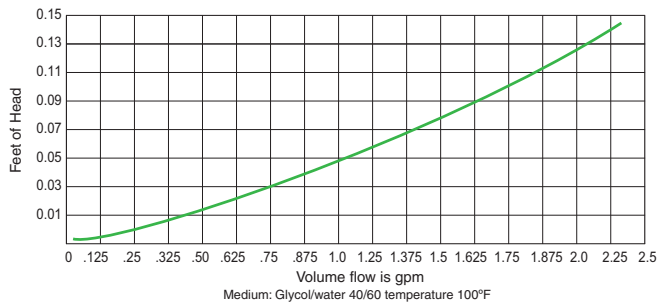
Dimensions



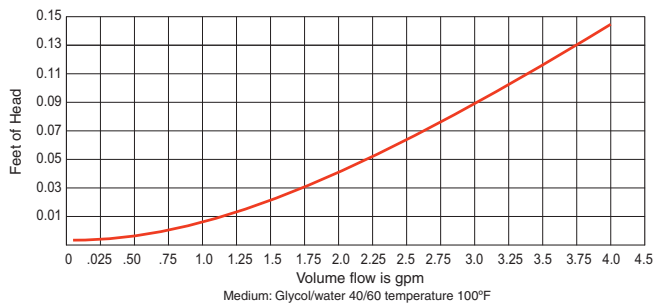
Code	A	B	C	D	Weight (lb/ft)
NA3520-15	1/2"	1 1/16"	4"	2"	
NA3540-15	3/4"	1 5/16"	4 - 3/8"	2 - 1/8"	0.5
NA3560-15	1"	1 - 1/4"	4 - 7/16"	2 - 1/2"	

Hydraulic characteristics

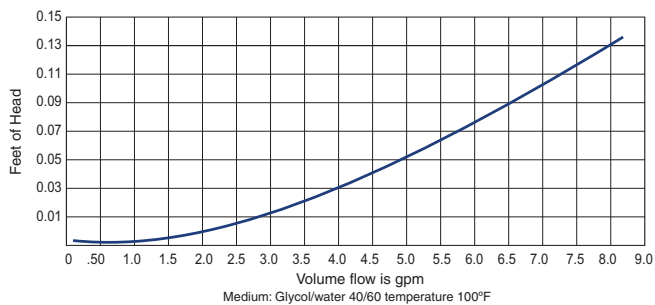
Feet of head curve for 1 foot of 1/2" SolarFlex



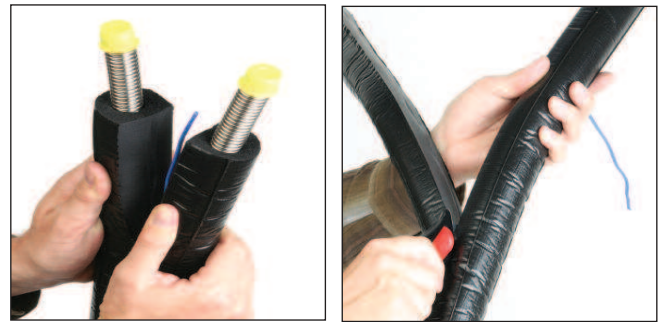
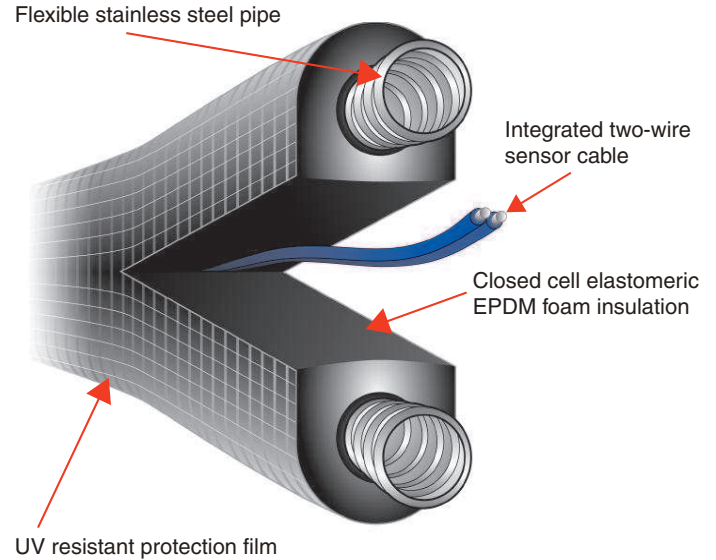
Feet of head curve for 1 foot of 3/4" SolarFlex




Feet of head curve for 1 foot of 1" SolarFlex

































Construction details



Flow and return pipes are easy to separate without damaging the insulation or sensor cable.

Item	Code	Description
SolarFlex pipe hangers		
	NA12132	Pipe hangers 1/2" pack of 4 hanger for 1/2" SolarFlex
	NA12133	Pipe hangers 3/4" pack of 4 hangers for 3/4" SolarFlex
	NA12134	Pipe hangers 1" pack of 4 hangers for 1" SolarFlex
SolarFlex extra connection kits		
	NA12102	Connection Kit for 1/2" SolarFlex with 4 nuts, 4 segment rings and 4 flat sealing washers
	NA12103	Connection Kit for 3/4" SolarFlex with 4 nuts, 4 segment rings and 4 flat sealing washers
	NA12104	Connection Kit for 1" SolarFlex with 4 nuts, 4 segment rings and 4 flat sealing washers
SolarFlex insulating tape		
	NA35001	Insulating EPDM foam tape (UV resistant) to wrap exposed piping, 50 ft roll x 2" wide x 1/8" thick
	NA35002	Black film tape (UV resistant) to wrap foam tape, 50 ft roll x 2" wide

Item	Code	Description	Item	Code	Description
1/2" SolarFlex pipe fittings			3/4" SolarFlex pipe fittings		
	NA12122	Double nipple for 1/2" SolarFlex with 3/4" male thread		NA10060	3/4" NPT female to 3/4" SolarFlex with 1" male thread
	R41298	Union nut for 1/2" SolarFlex with 3/4" female thread		NA10061	3/4" sweat adaptor to 3/4" SolarFlex with 1" male thread
	NA12112	Segment rings for 1/2" SolarFlex		NA10062	1" sweat adaptor to 3/4" SolarFlex with 1" male thread
	R50058	Washer flat sealing for 1/2" SolarFlex		NA12162	3/4" male with o-ring x 1" male thread for 3/4" SolarFlex
	NA10001	1/2" sweat tail piece, use union nut and double nipple		NA10064	1" NPT male to 3/4" SolarFlex with 1" male thread
	NA10118	3/4" sweat to 1/2" SolarFlex with 3/4" male thread		254462	22mm compression to 3/4" SolarFlex with 1" male thread
	NA12152	3/4" male with o-ring x 3/4" male thread for 1/2" SolarFlex		NA254862	22mm compression elbow to 3/4" SolarFlex with 1" male
	254452	22mm compression to 1/2" SolarFlex with 3/4" male thread		NA10085	22mm smooth pipe to 3/4" SolarFlex with 1" male thread
	254752	22mm compression elbow to 1/2" SolarFlex with 3/4" male	1" SolarFlex pipe fittings		
	NA10095	22mm smooth pipe to 1/2" SolarFlex with 3/4" male thread		NA12124	Double nipple for 1" SolarFlex with 1-1/4" male thread
3/4" SolarFlex pipe fittings				R31495	Union nut 1-1/4" for 1" SolarFlex with 1-1/4" female thread
	NA12123	Double nipple for 3/4" Solar Flex with 1" male thread		NA12114	Segment rings 1" SolarFlex
	R61008	Union nut for 3/4" Solar Flex with 1" female thread		R50056	Washer flat sealing for 1" SolarFlex
	NA12113	Segment rings 3/4" SolarFlex		31390FD	3/4" sweat tail piece for union nut, washer and double nipple
	R50055	Washer flat sealing for 3/4" Solar Flex		NA10042	1" sweat tail piece for union nut, washer and double nipple
	NA10002	1/2" sweat tail piece for 1" union nut		NA10119	1" sweat x 1-1/4" male union hale for 1" SolarFlex
	NA10003	3/4" sweat tail piece for 1" union nut		NA10087	1" female x 1-1/4" male bushing for 1" SolarFlex
	59834A	1" sweat tail piece with built-in 1" nut			

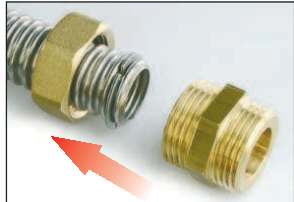
Installation of union nuts



Cut pipe with tubing cutter. Do not use a hack saw.



Slide on union nut and close segment ring around pipe groove.



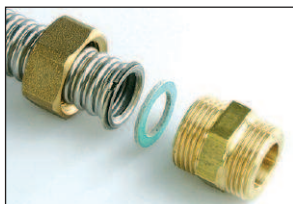
Connect nipple with union nut without flat-sealing washer.



Tighten nipple to union nut. Forming a flat-sealing surface.



Remove union nipple to inspect flat-sealing surface.



Insert flat-sealing washer and connect to other fittings.

Optional special tool



Quicker installation, inserts DN 12-25 available.



Segment ring supports flat end.



Using cut sections of pipe

Cut the length of pipe required to connect solar collector to the solar pumping stations and attach union nut fittings on each end. Any remaining short sections of pipe can be used for tank connection or other connections.

SPECIFICATION SUMMARIES

Code NA3520-15

1/2" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers. Two corrugated stainless steel 316L pipes. Two closed cell elastomer UV resistance EPDM insulation. UV resistant polyolefin copolymer foil outer cover. 5/8 inch (16mm) insulation thickness. Thermal conductivity at 105°F (40°C): R-3.6 (.04W/mK). Maximum working pressure 150 psi (10 bar). Maximum fluid temperature 350°F (175°C). Minimum surface temperature -60°F (-50°C). Length per coil 50 feet (15m). Fluid capacity per foot 0.0219 gallons (0.08 liters). Minimum bending radius 5 inch (130mm). Pressure loss Approximately 25% more than in a comparable smooth pipe. Flammability Class VO. Flame spread/smoke density 25/50.

Code NA3540-15

3/4" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers. Two corrugated stainless steel 316L pipes. Two closed cell elastomer UV resistance EPDM insulation. UV resistant polyolefin copolymer foil outer cover. 5/8 inch (16mm) insulation thickness. Thermal conductivity at 105°F (40°C): R-3.6 (.04W/mK). Maximum working pressure 150 psi (10 bar). Maximum fluid temperature 350°F (175°C). Minimum surface temperature -60°F (-50°C). Length per coil 50 feet (15m). Fluid capacity per foot 0.0346 gallons (0.13 liters). Minimum bending radius 5 inch (130mm). Pressure loss Approximately 25% more than in a comparable smooth pipe. Flammability Class VO. Flame spread/smoke density 25/50.

Code NA3560-15

1" SolarFlex pipe 50' coil including (2) double nipples, (4) union nuts, 4 segment rings and 4 washers. Two corrugated stainless steel 316L pipes. Two closed cell elastomer UV resistance EPDM insulation. UV resistant polyolefin copolymer foil outer cover. 5/8 inch (16mm) insulation thickness. Thermal conductivity at 105°F (40°C): R-3.6 (.04W/mK). Maximum working pressure 150 psi (10 bar). Maximum fluid temperature 350°F (175°C). Minimum surface temperature -60°F (-50°C). Length per coil 50 feet (15m). Fluid capacity per foot 0.0509 gallons (0.19 liters). Minimum bending radius 5 inch (130mm). Pressure loss Approximately 25% more than in a comparable smooth pipe. Flammability Class VO. Flame spread/smoke density 25/50.

We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.



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