



Product Data Sheet

FlowMaxx IDL Lineset

Model	Diameter (in.)	Length (ft.)	Max Operating Pressure @ 302°F (psi)	Insulation (in.)	Max Operating Pressure @ 68°F (psi)	R @104°F
FlowMaxx-IDL-5/8IN-19MM-82FT	5/8	82	150	3/4	232	R5.0
FlowMaxx-IDL-3/4IN-19MM-82FT	3/4	82	95	3/4	145	R4.75
FlowMaxx-IDL-1IN-19MM-82FT	1	82	95	3/4	145	R4.4

- Easy, leak-free installation - no torch needed
- Flow and return markings for easy use
- Meets the highest requirements for modern solar heating systems
- Pre-insulated and flexible stainless steel piping
- No special tools needed for installation or maintenance
- CFC and HCFC-free insulation, according to DIN 1988 Parts 2 and 7
- DIN EN 13823 & EN ISO 11925-2 fire resistant EPDM rubber
- AISI 316L Stainless Steel

Technical Specifications - Stainless Steel Pipe

Material	Flexible, corrugated stainless steel
Stainless Steel Grade	316L
Bending Radius	5/8" Models: 0.98" 3/4" Models: 1.18" 1" Models: 1.57"
Internal Diameter	5/8" Models: 0.64" 3/4" Models: 0.80" 1" Models: 1.0"
External Diameter	5/8" Models: 0.85" 3/4" Models: 1.1" 1" Models: 1.3"
Wall Thickness	5/8" Models: 0.007" 3/4" Models: 0.007" 1" Models: 0.008"
Burst Pressure	4x Max Operating Pressure
Fluid Capacity	5/8" - 0.0143 gal./ft. 3/4" - 0.0362 gal./ft. 1" - 0.0519 gal./ft.

- NSF/ANSI 61 Compliant (stainless steel piping) Pending IAPMO Listing* EN 10204 3.1: DIN 1.4404
- ASTM A312
- ASTM D792

Technical Specifications - Insulation

Material	Closed-cell, synthetic high-temperature rubber
Thickness	3/4" (19mm)
Continuous Service Temperature Range	-40°F to 300°F
Maximum Temperature	375°F
Thermal Conductivity Btu-in./hr.-ft ² -°F @ 104°F	0.26
UV & Outdoor Protective Coating:	LLDPE + Carbon Black UV Stabilizer

Insulation Notes

- FlowMaxx Lineset insulation coated with LLDPE UV Black protective layer (10+ years lifespan)
- FlowMaxx Lineset does not require additional coating or protection when installed outdoors.
- Insulation LLDPE allows for expansion and contraction of interior stainless steel pipe to allow for system thermal expansion and contraction.

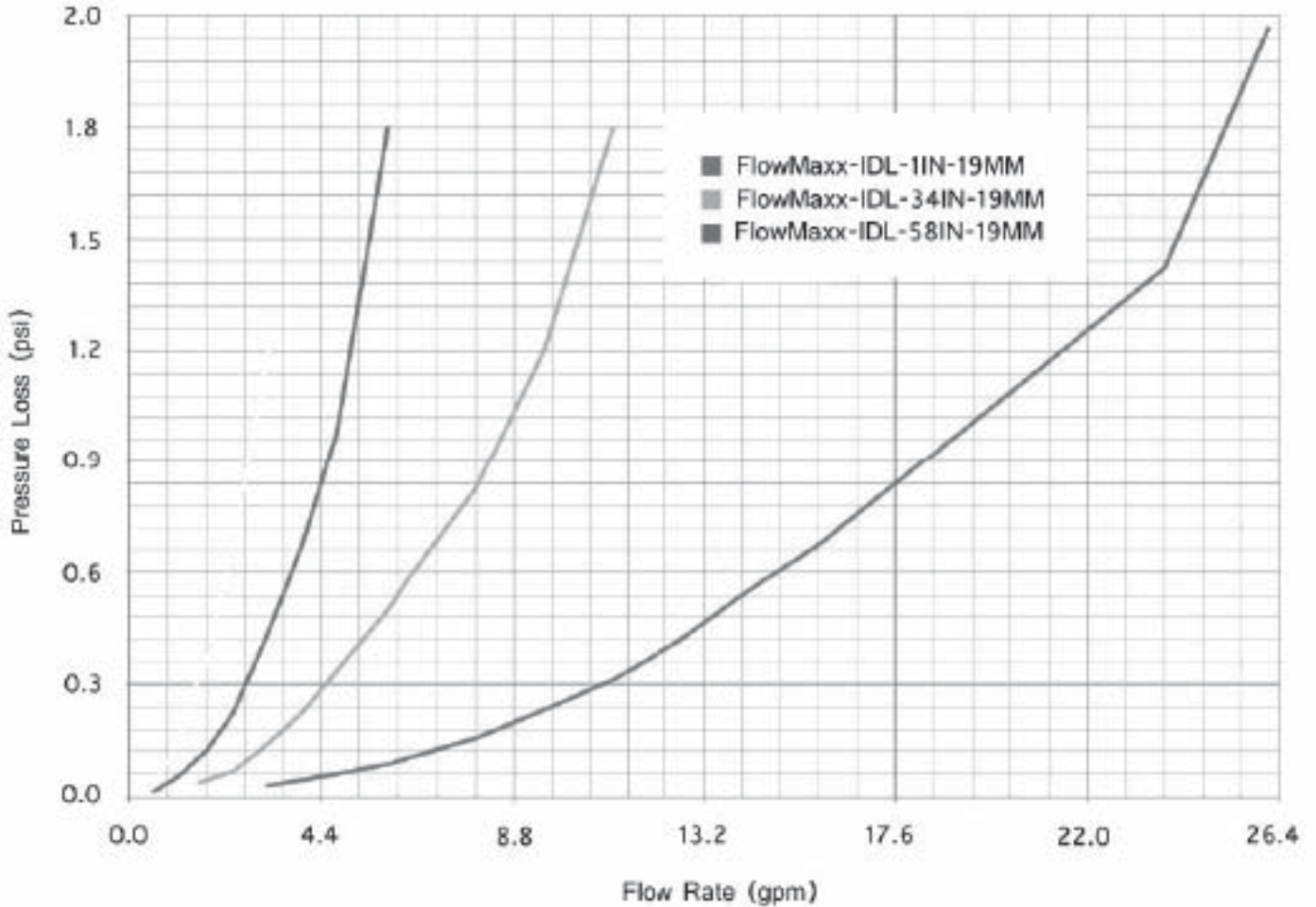
SunMaxx Solar
 5098 NY 206
 Bainbridge, NY 13733
 P: 1.877.786.6299
 F: 1.800.786.0329
www.SunMaxxSolar.com



Product Data Sheet

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Pressure Loss Graph



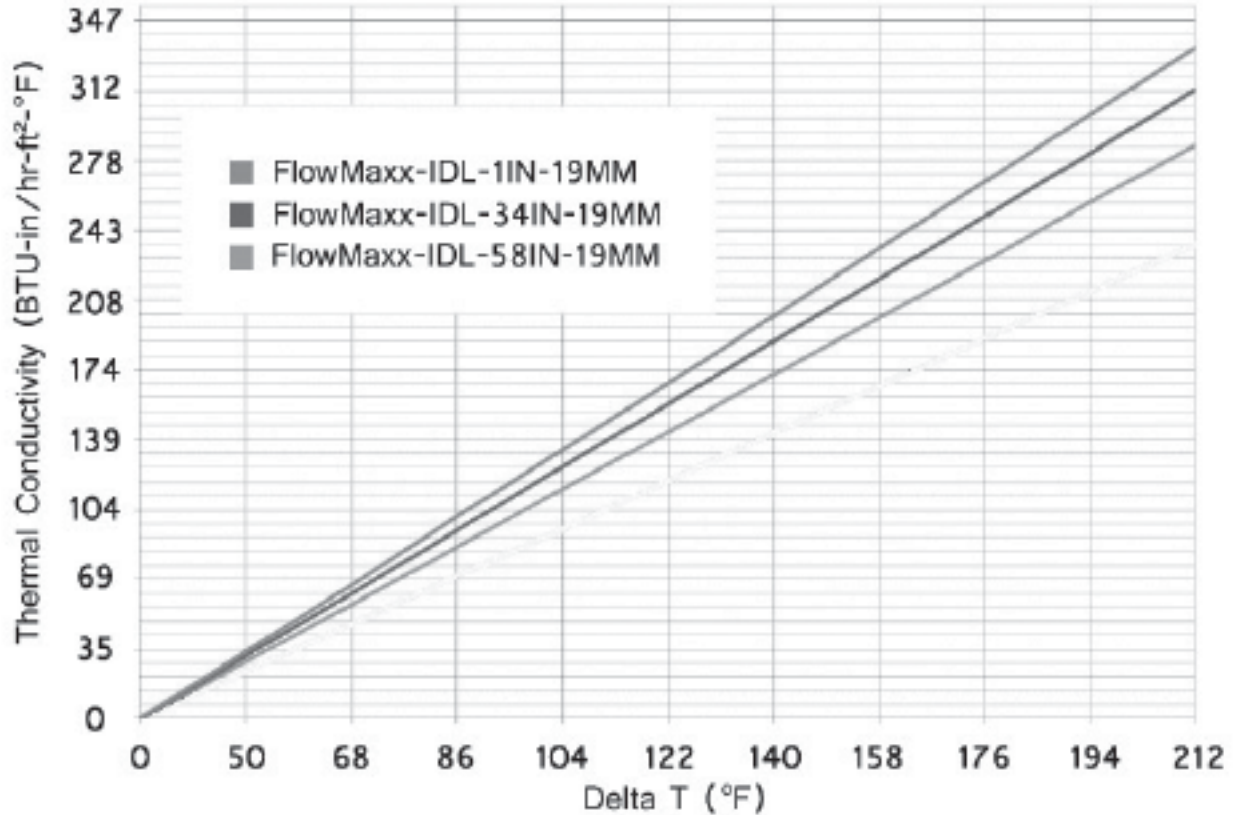
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Heat Loss Graph



Parameters

- Lambda Insulation (104°F) = 0.26 BTU-in./hr.-ft.²-°F
- Lambda Steel Pipe = 146 BTU-in./hr.-ft.²-°F
- Wind Speed = 2.2 mph
- Outside Temperature = 50°F
- VL Flow Temperature
- RL Return Temperature

Calculation Method

Media Temperature $T_v = (V_L + R_L)/2$
 $\Delta T = T_v - T_o$
 Heat Loss = $2 \times Q (\Delta T)$

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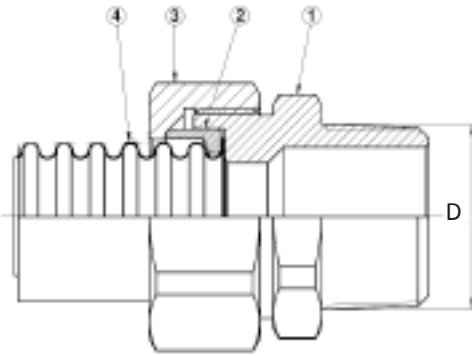
FlowMaxx Quick-Connect Fittings

Fitting Type	Connections	SKU
Male Fittings (NPT)	5/8" D x 3/4"	FlowMaxx-A-5/8IN-3/4IN-PF-M
	3/4" D x 3/4"	FlowMaxx-A-3/4IN-3/4IN-PF-M
	1" D x 1"	FlowMaxx-A-1IN-1IN-PF-M
Couplings	5/8" D	FlowMaxx-A-5/8IN-5/8IN-CC-PF
	3/4" D	FlowMaxx-A-3/4IN-3/4IN-CC-PF
	1" D	FlowMaxx-A-1IN-1IN-CC-PF
T Fittings (NPT)	3/4" x 3/4" x 3/4"	FlowMaxx-A-TEE-3/4IN-PF
	3/4" x 1" x 3/4"	FlowMaxx-A-TEE-3/4IN-1IN-3/4IN-PF
	1" x 1" x 1"	FlowMaxx-A-TEE-1IN-PF

Temperature & Pressure Ratings

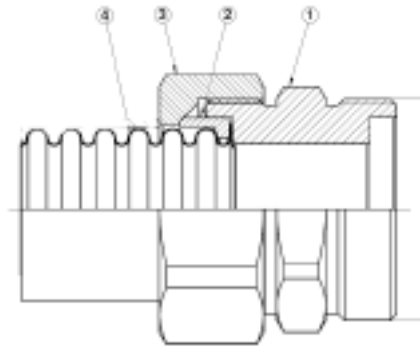
Operating Pressure Rating: 500°F @ 150 psi

Male Fittings



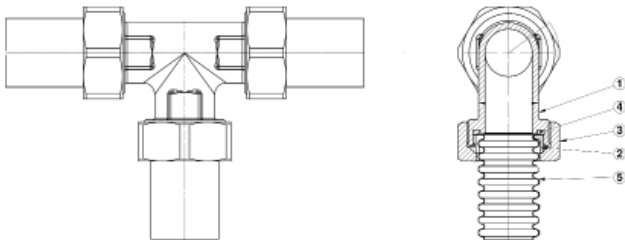
1. Brass Adapter Nipple
2. Brass Ring
3. Brass Nut
4. Corrugated Stainless Steel Piping

Couplings



1. Brass Adapter Nipple
2. Brass Ring
3. Brass Nut
4. Corrugated Stainless Steel Piping

T Fittings



1. Brass Adapter Nipple
2. Brass Ring
3. Brass Nut
4. Gasket
5. Corrugated Stainless Steel Piping

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Tube Insulation Technical Data

Description

Black, EPDM-based, flexible, closed-cell elastomeric thermal insulation in tubular with proprietary LLDPE jacketing inhibited with Carbon Black UV protection.

Specifications Compliance

ASTM C 534 Type I (Tubular) Grade 2

UV Protection: > 2.5% Carbon Black LLDPE; 10+ year lifespan for outdoor use.

Approvals, Certifications, Compliances

- Manufactured without CFCs, HFCs, HCFCs, PBDEs, or Formaldehyde

Typical Properties

Specifications	Values	Test Method
Water Vapor Permeability Perm-in [Kg/[s x m x Pa]]	0.08 (1.6 x 10 ⁻¹³)	ASTM E 96, Procedure A
Flame Spread and Smoke Developed Index	20/50 rated	ASTM E 84
Water Absorption % by Volume	0.2%	--
Mold Growth: Fungi Resistance: Bacterial Resistance:	Passed	UL181 ASTM G21/C1338 ASTM G22
Upper Use Limit ¹ : Lower Use Limit ² :	375°F (190°C) -297°F (-183°C)	ASTM C534 ASTM C534
Ozone Resistance	Excellent	ASTM D 1149
Oil Resistance	Excellent	ASTM Oil No. 1 and No. 3

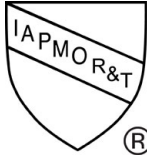
¹ Suitable for systems with occasional or intermittent temperatures up to 375°F (190°C), with a recommended exposure limit of one 30-minute period at 375°F (190°C) over 24 hours of operation.

² At temperatures below -20°F (-29°C), elastomeric insulation starts to become less flexible. However, this characteristic does not affect thermal efficiency or water vapor permeability of insulation.

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IAPMO RESEARCH AND TESTING, INC.

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CERTIFICATE OF LISTING

IAPMO Research and Testing, Inc. is a product certification body which tests and inspects samples taken from the supplier's stock or from the market or a combination of both to verify compliance to the requirements of applicable codes and standards. This activity is coupled with periodic surveillance of the supplier's factory and warehouses as well as the assessment of the supplier's Quality Assurance System. This listing is subject to the conditions set forth in the characteristics below and is not to be construed as any recommendation, assurance or guarantee by IAPMO Research and Testing, Inc. of the product acceptance by Authorities Having Jurisdiction.

The most updated information on this Certificate of Listing is available online at pld.iapmo.org

Effective Date: December 2018 Void After: December 2019

Product: Drinking Water System Components - Health Effects File No. W-10716

Issued To: INNOVATIVE SOLAR SOLUTIONS
2917 STATE HIGHWAY 7
BAINBRIDGE, NY 13733

Identification: Each product shall be permanently and legibly marked with the manufacturer's name or trademark. The product may also be marked with the standard designation "NSF/ANSI 61".

Listed products shall also bear the IAPMO R&T mark

Characteristics: Materials or products that come into contact with drinking water and/or drinking water treatment chemicals. Products and materials may include process media, protective materials, joining and sealing materials, pipes and related products, mechanical devices used with treatment/transmission/distribution systems, and mechanical plumbing devices. To be installed in accordance with the manufacturer's instruction. Lead free requirements are addressed under a separate certificate of listing.

Products listed on this certificate have been tested by an IAPMO R&T recognized laboratory. This recognition has been granted based upon the laboratory's compliance to the applicable requirements of ISO/IEC 17025.

Products are in compliance with the following standard(s):

NSF/ANSI 61-2017

MODELS:

<u>Model Number</u>
FlowMaxx-A-5/8IN-3/4IN-QF-M DN16 x 3/4" M NPT 701.056.250.023
FlowMaxx-A-3/4IN-PF-M DN20 x 3/4" M NPT 701.056.250.033
FlowMaxx-A-1IN-PF-M DN25 x 1" M NPT 701.056.250.041
XMaxx-HW-Tee-3/4IN-PF Tee DN20 701.057.094.020
XMaxx-HW-Tee-1IN-PF Tee DN25 701.057.094.035
XMaxx-HW-Tee-3/4IN-1IN-3/4IN-PF Tee DN20xDN20xDN25 701.057.094.025
FlowMaxx-A-5/8IN-5/8IN-CC-PF DN16 x DN16 701.056.320.020
FlowMaxx-A-3/4IN-3/4IN-CC-PF DN20 x DN20 701.056.330.030
FlowMaxx-A-1IN-1IN-CC-PF DN25 x DN25 701.056.340.040
FlowMaxx-5/8IN-19MM-1FT 5/8 in. Corrugated Stainless Steel Piping
FlowMaxx-3/4IN-19MM-1FT 3/4 in. Corrugated Stainless Steel Piping
FlowMaxx-1IN-19MM-1FT 1 in. Corrugated Stainless Steel Piping