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# **PETROLEUM HOSE**

Distributed by: MCCIII HOSE & COUPLING Kanaflex manufactures PVC, rubber, polyurethane and polypropylene hose and ducting of the highest quality utilizing advanced technology, equipment, and proprietary blends of raw materials. Each product series has been designed and tested to ensure outstanding service life and dependability in applications that conform to the required specifications.

Since 1952, Kanaflex's revolutionary production methods have taken the best properties of plastics and rubber, producing products capable of outperforming conventional plastic and rubber hose. Today, Kanaflex technology leads the industry and we continue to search for new raw materials and manufacturing processes to meet the most demanding current and future applications.

Kanaflex Corporation operates manufacturing facilities in Vernon Hills, Illinois, and Compton, California, and a distribution center in Houston, Texas. The company is a wholly owned subsidiary of Kanaflex Corporation Japan. Kanaflex hose is sold through a network of distributors throughout the United States and Canada.

Kanaflex hose is flexible, easy-to-handle, lightweight, and inherently durable. Our hoses continue to replace more expensive and harder-to-handle hoses for many of the industry's toughest jobs.



#### Flexible

Kanaflex hose lends itself to working in tight spaces.

#### Lightweight

Kanaflex is up to 50% lighter than conventional rubber hose, making it easier to handle and less expensive to transport.

#### Economical

Initial cost is low, and Kanaflex hoses are virtually maintenance-free which saves money in the long run.

#### Smooth bore

A smooth bore and flexible bending characteristics make for the fastest and most efficient transfer of fluids.

#### Premium rubber materials

Our hose properties are ideally suited for the following applications and conditions:

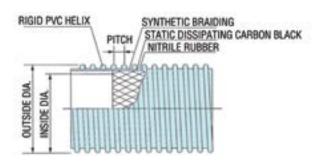
- Oil
- Chemicals
- Gasoline
- Abrasives
- Extreme temperature variations
- Extreme weather conditions

Because we continually improve our products, we reserve the right to alter specifications without notice.



# KanaPower (ST120 LT)

# *Tank truck drop hose with static grounding wire; 50% lighter than conventional rubber hose*





#### SPECIFICATIONS

Temp. Range: -30°F to 140°F

Applications: Gasoline tank truck gravity drop hose for fluids such as naphtha, kerosene, light and heavy oil, diesel and some ethanol

**Construction:** Nitrile rubber static dissipating tube, rigid PVC helix, synthetic braiding, smooth bore, static grounding wire, corrugated 0.D.

**Features:** Lightweight and flexible. External helix provides for easy drag. Rated for up to 40% aromatic content. **Note:** Banding sleeves or banding coils must be used for all sizes.

Static wire must be properly imbedded during fitting installation and tested to assure proper static grounding of hose to a grounded system.

Inside Dia. Inches	Outside Dia. Inches	Pitch Inches	Minimum Bend Radius 72°F, Inches	Working Pressure 72°F, P.S.I.	<b>Vacuum</b> <b>Rating</b> 72°F, In Hg	Weight Lbs/Ft	Standard Length Ft
2	2.68	0.39	5.0	65	29.8	1.13	60,100
3	3.8	0.59	6.0	65	29.8	1.37	60,100
4	4.9	0.65	8.0	65	29.8	2.16	60,100

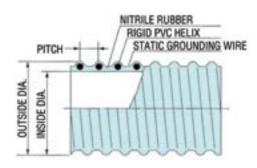
#### **AVAILABLE SIZES**



\* Over flexing or repeated flexing of hose within 18" of fitting is a common cause of hose failure. Installing a 12"-14" section of our Banding Coil at the end of the hose should be considered. *Kanaflex will not be responsible for damage to hose due to over flexing.* 

# KanaVapor (ST120 VP)

#### Gasoline vapor recovery hose





#### **SPECIFICATIONS**

Temp. Range: -40°F to 140°F

Applications: Gasoline vapor recovery only

Construction: Nitrile rubber, rigid PVC helix, smooth bore, corrugated O.D., static grounding wire

**Note:** Static wire must be properly imbedded during fitting installation and tested to assure proper static grounding of hose to a grounded system.

#### **AVAILABLE SIZES**

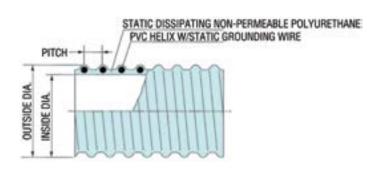
Inside Dia. Inches	Outside Dia. Inches	Pitch Inches	<b>Minimum</b> <b>Bend Radius</b> 72°F, Inches	Working Pressure 72°F, P.S.I.	<b>Vacuum</b> <b>Rating</b> 72°F, In Hg	Weight Lbs/Ft	Standard Length Ft
2	2.36	0.39	3.0	20	29.8	0.61	60,100
3	3.46	0.59	3.5	10	29.8	1.00	60,100
4	4.57	0.65	5.0	10	29.8	1.70	60,100



\* Over flexing or repeated flexing of hose within 18" of fitting is a common cause of hose failure. Installing a 12"-14" section of our Banding Coil at the end of the hose should be considered. *Kanaflex will not be responsible for damage to hose due to over flexing.* 

# KanaVapor Bio (ST120 UACVR)

#### The ultimate all purpose tank truck and terminal vapor recovery hose with clear static dissipating tube and static grounding wire





#### **SPECIFICATIONS**

Temp. Range: -52°F to 140°F

Applications: Tank truck and terminal recovery of gasoline, ethanol, and biodiesel vapors.

**Construction:** Lightweight clear static dissipating non-permeable polyurethane with smooth bore, corrugated 0.D., rigid PVC helix, and static grounding wire.

**Features:** Lightweight and flexible even in sub-zero temperatures. Polyurethane construction allows use with all gasoline blends, biodiesel (up to B100), ethanol (up to E85; currently testing E100), kerosene, diesel, and ASTM fuel oils. Static dissipating tube combined with multi-strand copper static wire provides the ultimate protection against static discharge. Clear tube allows visual confirmation of fuel backup into the hose.

**Note:** Banding sleeve or banding coil must be used. Static wire must be properly imbedded during fitting installation and tested to assure proper static grounding of hose to a grounded system.

Inside Dia. Inches	Outside Dia. Inches	Pitch Inches	<b>Minimum</b> <b>Bend Radius</b> 72°F, Inches	Working Pressure 72°F, P.S.I.	<b>Vacuum</b> <b>Rating</b> 72°F, In Hg	Weight Lbs/Ft	Standard Length Ft
2	2.38	0.39	2.0	9	16.0	0.44	60,100
3	3.56	0.57	3.0	8	15.0	0.71	60,100
4	4.57	0.65	4.0	7	13.0	0.98	60,100

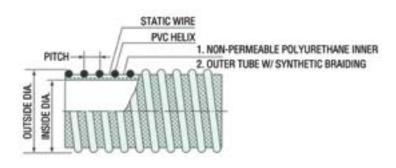
#### **AVAILABLE SIZES**

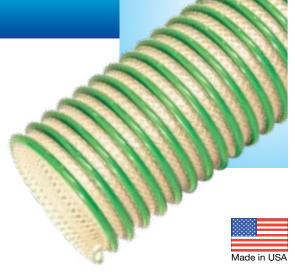


\* Over flexing or repeated flexing of hose within 18" of fitting is a common cause of hose failure. Installing a 12"-14" section of our Banding Coil at the end of the hose should be considered. *Kanaflex will not be responsible for damage to hose due to over flexing.* 

# KanaPower Bio (ST120 UAPDH)

# The ultimate all purpose tank truck drop hose with clear static dissipating tube and static grounding wire





#### **SPECIFICATIONS**

Temp. Range: -52°F to 140°F

**Applications:** All purpose tank truck gravity drop hose for items such as gasoline, ethanol, biodiesel, kerosene and diesel.

**Construction:** Non-permeable polyurethane inner and outer tube with synthetic braiding, smooth bore, corrugated O.D., PVC helix for easy drag, clear static dissipating tube and multi-strand copper static wire providing maximum protection against static discharge.

**Features:** Lightweight and flexible even in sub-zero temperatures. Static dissipating polyurethane inner and outer tube provides maximum resistance to gasoline, biodiesel (up to B100 compliant with ASTM D6751), ethanol (E85 to E100), kerosene, diesel and ASTM fuel oils. Clear tube allows visual confirmation of flow.

**Note:** Banding coil or banding sleeve must be used for all sizes. Static wire must be properly imbedded during fitting installation and tested to assure proper static grounding of hose to a grounded system.

#### AVAILABLE SIZES

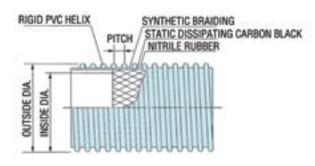
Inside Dia. Inches	Outside Dia. Inches	Pitch Inches	Minimum Bend Radius 72°F, Inches	<b>Working</b> <b>Pressure</b> 72°F, P.S.I.	<b>Vacuum</b> <b>Rating</b> 72°F, In Hg	Weight Lbs/Ft	Standard Length Ft
2	2.68	0.43	5.0	65	29.8	0.95	60,100
3	3.72	0.62	6.3	65	29.8	1.40	60,100
4	4.81	0.68	7.0	65	29.8	1.87	60,100



\* Over flexing or repeated flexing of hose within 18" of fitting is a common cause of hose failure. Installing a 12"-14" section of our Banding Coil at the end of the hose should be considered. *Kanaflex will not be responsible for damage to hose due to over flexing.* 

# KanaPower Max (ST120 HP)

# *Tank truck drop hose with static grounding wire;* 50% lighter than conventional rubber hose





#### SPECIFICATIONS

Temp. Range: -30°F to 140°F

Applications: Gasoline tank truck gravity drop hose for fluids such as naphtha, kerosene, light and heavy oil, diesel and some ethanol

**Construction:** Nitrile rubber static dissipating tube, rigid PVC helix, synthetic braiding, smooth bore, static grounding wire, corrugated 0.D.

**Features:** Lightweight and flexible. External helix provides for easy drag. Rated for up to 40% aromatic content. **Note:** Banding sleeves or banding coils must be used for all sizes.

Static wire must be properly imbedded during fitting installation and tested to assure proper static grounding of hose to a grounded system.

#### **AVAILABLE SIZES**

Inside Dia. Inches	Outside Dia. Inches	Pitch Inches	<b>Minimum</b> <b>Bend Radius</b> 72°F, Inches	<b>Working</b> <b>Pressure</b> 72°F, P.S.I.	<b>Vacuum</b> <b>Rating</b> 72°F, In Hg	Weight Lbs/Ft	Standard Length Ft
3	3.88	0.62	6.0	150	29.8	1.55	60,100
4	4.98	0.65	8.0	150	29.8	2.60	60,100



\* Over flexing or repeated flexing of hose within 18" of fitting is a common cause of hose failure. Installing a 12"-14" section of our Banding Coil at the end of the hose should be considered. *Kanaflex will not be responsible for damage to hose due to over flexing.* 

# **Banding Sleeve**

#### Plastic banding sleeve for use with ST 120 LT hose

Temp. Range: -40°F to 140°F

Applications: 9" sections are recommended at each end of the ST 120 LT tank truck drop hose.

Construction: PVC construction, corrugated inside, smooth 0.D.

Available Sizes: 3" and 4". Standard length: 3 ft.



# Banding Coil (black or white)

#### Black or white PVC banding coil available in 1-1/2", 2", 3", 4", 5", 6", 8", 10", and 12" sizes

Applications: PVC Banding Coil designed to fit and fill the area between the helix providing a smooth service for installation of tension bands. Use 4" of banding coil to cover 9" length of the hose. Also, when used behind the coupling, the coil adds rigidity to the hose, preventing over flexing at the coupling. Coil can be installed on individual hoses as noted. Standard length: 1 ft.



Steel, worm gear type clamp designed specifically for use with our duct hose. Easily installed with only a screw driver. Available in 2-1/2", 3", 4", 5", 6", 7", 8", 10" and 12" sizes.



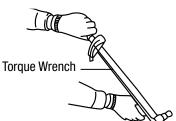
The Powerlock clamp is a steel, double bolt clamp designed specifically for use with our corrugated hose such as Series 100, 180, 200 and KANALINE. Available in 2", 2-1/2", 3", 4", 5", 6", 8", 10" and 12" sizes.

The Powerlock clamp PS is available for use with our 101 PS Series in 2", 3" and 4" sizes.

### Tightening Kanaflex Powerlock Clamps

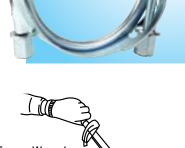
Please use the table below to determine the correct torgue recommended when tightening down our Powerlock clamps.

Size (in)	2	2-1/2	3	4	5	6	8	10	12
Torque (lbs-ft)	7.2	7.2	9.4	14.5	14.5	16.6	16.6	18.1	18.1









# **Chemical Resistance**

A — Satisfactory B — Suggest Testing

C — Unsatisfactory

Chemical Name	Concentration	All PVC Hoses 150 UDH*, Kanaline UFG*	Kanaline OR	ST 120 HP ST 120 LT ST 120 VP	KP-AT, 180 STAR, 180 AR, 180 BL, 220 RS	180 HR,390 SD, 620 WD, 630 ED, 660 YD	300 EPDM GR	ST120 UAPDH
Acetaldehyde		С	С	C	C	В	С	-
Acetamide		С	С	A	C	В	В	-
Acetic acid	10%	A	A	С	С	A	A	В
Acetic acid	50%	В	В	C	С	В	В	-
Acetic acid	100%	С	C	C	С	C	C	-
Acetic anhydride		C	С	С	С	C	С	-
Acetone		C	C	C	С	В	C	-
Alums NH3, Cr, K		A	A	A	A	A	A	-
Ammonium hydroxide (ammonia water)		В	В	C	C	A	A	-
Animal oil (Lard oil)		C	A	A	C	C	С	-
ASTM reference fuel A		C	Α	A	С	C	C	-
ASTM reference fuel B		C	В	A	C	C	С	-
ASTM reference fuel C		С	С	A	С	C	С	-
ASTM #1 oil		С	A	A	C	C	С	-
ASTM #2 oil		С	A	A	С	С	С	-
ASTM #3 oil		С	A	A	С	С	С	-
Beer		A	A	A	A	A	A	-
Benzene (Benzol)		С	C	С	С	C	С	-
Benzine		С	С	В	С	С	С	В
Benzyl alcohol		С	С	С	C	В	В	-
Biodiesel, B20		-	-	-	-	-	-	А
Biodiesel, B100		-	-	-	-	-	-	A
Brake Fuel (H.D.)		-	-	-	-	-	-	A
Bromine		С	С	С	С	С	С	-
Bunker oil		С	-	A	С	С	С	-
Butane		_	-	Ä	-	-	_	А
Calcium chloride		А	А	A	А	А	А	-
Calcium hydroxide		A	A	A	A	A	A	-
Carbon disulfide		C	C	C	C	C	C	-
Carbon tetrachloride		C	C	C	C	C	C	_
Carbonic acid		A	A	A	A	A	A	-
Chlorine gas (dry)		C	C	C	C	C	C	_
Chlorine gas (wet)		C	C	C	C	C	C	-
Chromic acid	2%	A	C	C	C	C	C	_
Chromic acid	2 % 5%	B	C	C	C	C	C	_
Chromic acid	10%	C	C	C	C	C	C	_
Chromic acid	25%	C	C	C	C	C	C	_
Creosote oil	2370	C	C	В	C	C	C	_
Cresol		C	C	C	C	C	C	_
		C	C	B	C	C	C	-
Cyclohexane								-
Cyclohexanone		C	C	C	С	C	C	C _
Developing solutions (Hypos)		A	A	A	В	A	A	
Diesel Fuel		-		A	-		-	A
Diethyl ether		C	C	С	C	В	C	-
Diethylene glycol		A	A	A	A	A	A	-
Dimethyl formamide		С	C	С	C	С	С	C
Dioctyl phthalate (DOP)		С	С	С	С	В	В	A
Ethanol E85		-	-	A	-	-	-	A
Ethanol E98		-	-	T	-	-	-	A
Ethanol E100		-	-	T	-	-	-	A
Ethyl acetate		С	С	С	С	В	С	-
Ethyl acetoacetate		С	С	С	C	В	С	-
Ethyl alcohol		В	A	A	A	A	В	-
Ethylene dichloride		С	С	С	С	С	С	С
Ethylene glycol		Α	Α	A	A	Α	Α	Α
Ethylene glycol H20	50%	-	-	A	-	-	-	A
Fluoroboric acid		-	-	A	В	A	A	-
Formaldehyde	40%	В	В	В	C	В	В	-
Formic Acid	50%	В	С	С	С	В	В	-
Freon 11		С	С	A	С	С	С	С
Freon 113		С	С	В	В	С	С	С
Freon 114		С	С	A	A	С	С	-
Freon 12		С	С	В	С	В	-	А
Freon 21		С	С	С	С	С	С	-

\* Exceeds PVC ratings

The "Chemical Resistance classification" for each Kanaflex Hose is determined by the phenomenon (change of the quality of the material) which results when the material is exposed to the specified chemical. Testing is conducted on straight sections of hose which are set in a static position. Unless otherwise noted, the concentration of water solution is saturated and temperature is 72°F.

					austactory	B — Suggest I	<u>-</u>	- Unsatistactory
Chemical Name	Concentration	All PVC Hoses 150 UDH*, Kanaline UFG*	Kanaline OR	ST 120 HP ST 120 LT ST 120 VP	KP-AT, 180 STAR, 180 AR, 180 BL, 220 RS	180 HR,390 SD, 620 WD, 630 ED, 660 YD	300 EPDM GR	ST120 UAPDH
Furan Furufuran		С	С	C	C	C	С	-
Gasoline (Aromatic content: less than 40	%)	С	С	А	C	С	С	А
Glycerin		А	Α	Α	Α	Α	Α	-
Hexane		С	А	А	С	С	С	-
Hydrobromic acid	20%	-	-	С	С	В	В	-
Hydrochloric acid	10%	А	А	С	В	A	A	-
Hydrochloric acid	38%	В	В	С	C	В	В	-
Hydrofluoric acid	10%	А	А	С	C	A	A	-
Hydrofluoric acid	20%	В	В	С	C	A	A	-
Hydrofluoric acid	40%	С	С	С	С	В	В	-
Hydrofluoric acid anhydrous		С	С	С	С	С	С	-
Hydrogen peroxide	5%	А	А	С	С	В	В	-
Hydrogen peroxide	30%	Α	Α	С	С	В	В	-
Hydrogen sulfide		-	-	С	С	A	Α	-
Hypochlorous acid		-	-	С	С	С	С	-
Isooctane		С	А	А	С	С	С	-
Isopropyl alcohol		В	А	В	В	В	В	-
Jet Fuel, JP-8		-	-	A	-	-	-	A
Kerosene		С	А	A	С	С	С	A
Lacquer		C	C	C	C	C	C	-
Magnesium hydroxide		A	A	В	B	A	A	-
Mercury		A	A	A	A	A	A	-
Methyl alcohol		В	A	A	A	A	A	В
Methyl ethyl ketone (MEK)		C	C	C	C	B	B	-
Nitric acid	10%	A	A	C	C	B	B	-
Nitric acid	30%	B	B	C	C	B	B	_
Nitric acid	50% 61.3%	C	C	C	C	C	C	_
		C	C	C	C	C	C	-
Nitric acid	(fuming)	C		C	C		C	_
Nitrobenzene			C			C	U	
Oil, Transmission Type A		-	-	A	-	-	-	A
Oleic acid		A	A	В	C	В	В	-
Oxalic acid		A	A	С	С	В	В	-
Oxygen		A	A	В	В	A	A	-
Ozone		В	В	С	С	A	A	-
Perchloric acid		A	В	В	В	В	В	-
Phosphoric acid	50%	A	A	В	С	A	A	-
Potassium dichromate	10%	A	A	Α	В	Α	Α	-
Potassium hydroxide	30%	В	В	В	В	A	A	-
Potassium permanganate	5%	A	A	В	В	A	A	-
Potassium permanganate	30%	A	В	В	A	В	В	-
Propyl alcohol		A	A	A	A	A	A	-
Sea water		A	A	A	A	A	A	-
Silicone grease		A	Α	A	A	A	A	-
Silicone oils		A	A	A	A	A	A	-
Soap solutions		В	Α	А	В	Α	Α	-
Sodium hydroxide	10%	А	А	В	А	В	В	В
Sodium hypochlorite	5%	Α	А	С	C	A	A	-
Sodium peroxide		С	С	В	В	A	А	-
Sodium phosphate		Α	А	А	A	A	A	-
Soybean oil		С	А	A	В	С	С	-
Sulfur dioxide		А	А	С	С	A	A	-
Sulfuric acid	10%	А	А	В	A	В	В	A
Sulfuric acid	30%	В	В	С	В	С	С	В
Sulfuric acid	98%	С	С	С	C	С	С	-
Sulfuric acid	(fuming)	С	С	С	С	С	С	-
Sulfurous acid	10%	A	A	C	C	C	C	-
Tetrachloroethane		C	C	C	C	C	C	-
Tetrahydrofuran		C	C	C	C	В	C	-
Toluene		C	C	C	C	C	C	В
Trichloroethylene (Trichlene)		C	C	C	C	C	C	C
Turpentine		-	-	В	-	-	-	A
Vegetable oil		С	А	A	С	С	С	-
Vinegar		A	A	B	B	A	A	_
Whiskey		B	A	A	A	A	A	_
		B C	A C	C	C	C	C	_
Xylene		U	U	U		L U		

A — Satisfactory

B — Suggest Testing

C — Unsatisfactory

\* Exceeds PVC ratings

**Note**: Differing phenomena may result during hose use as a result of application variables such as hose bends, stress, vacuum, pressure, temperature, etc.

# Application Guide

	100 CL/100 CWFLX/101 PS 101 PSUV0R. 100 Blue	100 UCLRD	110 CL/110 GR	112 AG/112 CL, 113UVCLBK, 114CL/GR	116 CL/116 Blue/Kanaflo Blue	150 CL	150 UDH	155 GY	180 AR/180 STAR STKB	180 BL	180 HR	180 MV	200 SFG	210 HFG/212 MK	220 RS	300 EPDM	390 SD BK	620 WD	620 WD WS	630 ED	660 YD	ST 120 LT/ST 120 UAPDH/ ST120HP, ST 120 VP	ST 200 SFG	Banding Coil	Banding Sleeve	Duct Clamp	Kanaduct	Kanaline CW Kanaline Blue	Kanaline FW	Kanaline OR	Kanaline SR	Kanaline UFG (STKLUFG)	Kanapower AT	Powertock Clamp/PS	Spa Cream
Agriculture, Grain Agriculture, Chemical																	•																		
Air Seeder		•	•													•	•																		
Auger Down Spout																				•															
Cotton																																			
Fertilizer Sprayer																	•																		
Foam Markers																																			
Grain Vac									•								-																		
									•			•																						•	
Irrigation																-								-											
Manure Spreader																	•																		
General Use	•		•	•	•											•								•							•				
Boating, Marine																																			
Bilge, Sanitary																•		•						•		-					•				
Ventilation																		•								•									
General Use	•															•								•							•				
Construction																																			
Cement Plant, Dust							•		•	•										-						•								•	
Concrete Surfacing, Dust							•													•														•	
Directional Drilling														_			_		_	_				•		_					•				
Micro Tunneling																																			
Vacuum Excavators									•	•					_		_		_	_							_							•	
Water Pumping																•								•											
Fishing												_	_	_		_	_	_		_						_	_								
Fish Suction																																		•	
Ice Slinging	•		•	•																				•				•			٠			•	
Food, Milk Handling																																			
Food Processing													•	•										•					•			•			
Milk Truck													•	•										•											
Wine Processing													•	•										•					•			•			
<b>General Plant Services</b>																																			
Car Wash																		•								•									
Duct Cleaning						٠		•			٠	•									٠					•									
Ducting (exhaust)						٠	•	•										•	•	•	٠					•									
Ducting (fumes, vent)						٠												•	•	•	•					•									
Fly Ash											•																							•	
Power Plant, Coal Dust									•		٠	•																							
Sand Blast Recovery									ullet	ullet	•							•	•	•						•								ullet	
Sand Dust/Wood Chips																		•	•	•						•									
Shipyard Ducting																																			
Spot Coolers																																			
General Use																•																			

	100 CL/100 CWFLX/101 PS 101 PSUV0R. 100 Blue	100 UCLRD	110 CL/110 GR	112 AG/112 CL, 113UVCLBK, 114CL/GR	116 CL/116 Blue/Kanaflo Blue	150 CL	150 UDH	155 GY	180 AR/180 STAR STKB	180 BL	180 HR	180 MV	200 SFG	210 HFG/212 MK	220 RS	300 EPDM	390 SD BK	620 WD	620 WD WS	630 ED	660 YD	ST 120 LT/ST 120 UAPDH/ ST 120 HP ST 120 VP	ST 200 SFG	Banding Coil	Banding Sleeve	Duct Clamp	Kanaduct	Kanaline CW Kanaline Blue	Kanaline FW	Kanaline OR	Kanaline SR	Kanaline UFG (STKLUFG)	Kanapower AT	Powerlock Clamp/PS	Spa Cream
Insulation																																			
Blower																										•								•	
Lawn Mower, Gardening																																			
Grass Collection																					•					$\bullet$									
Mulch Blowing																																			
Material Handling																																			
Bulk Unloading																																	$\bullet$		
Pneumatic Conveying		•											•	•																				•	
Mining																																			
Cable Guard																																			
Coal Rock Dust			•	ullet					ullet																									•	
Oil Drill Site Clean Up																•																			
Rock Drill Dust									ullet																									•	
General Use			٠																																
Petroleum																																			
General Tank Truck																																			
Gasoline Terminal													_				_					•													
Refinery, Catalyst Removal											•																							•	
Plant, Tank Scale										•	_		_				_								_									•	
Rental																																			
Lawn & Garden						•		•		_	_		_	_	_		_	•		•	•				_	•								_	
Water Pumping																•															•				
Roofing										_	_		_	_	_		_								_									_	
Gravel Removal									•		•	•																						•	
Spa										_	_		_	_	_		_																	_	
Water Lines																																			
Transportation											_		_	_	_		_																	_	
Aircraft, Avionics Cooling							•																												
Airport, Lavatory Drop																				•	•					•									
RV, Ducting																																			
Railroad Lavatory Drop																																			
Waste Management																																			
Honey Truck	-														•	•																			
Landfill (methane gas)																																			
Sanitation Plant																•																			
Street Sweeper Vacuum Truck										•											•														
									•		•				•		•																	•	
General Use											•																								

# **Minimum Bending Radius**

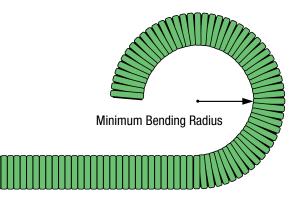
Minimum bending radius is the smallest diameter to which a hose can be bent without causing internal damage to the hose or flattening in the cross-section of the hose (kinking). Minimum bending radius is measured to the inside curvature of the hose as illustrated.

For Kanaflex hose, minimum bend radius is established at 72°F. Temperature changes, either lower or higher, will effect minimum bend radius. Caution should be taken to assure proper hose selection for the actual application temperature of both the material handled and the ambient temperature surrounding the application.

During storage of hose, ambient temperature should also be considered to prevent hose damage. When possible, minimum bending radius of the hose should be as large as possible to avoid damage to the hose and early hose failure.

**Note:** Over flexing or repeated flexing of hose within 18" of the fitting is a common cause of hose failure. To help support the hose, installing a 12" - 14" section of our Banding Coil at the end of the hose, just before the fitting, should be considered. And, to help prevent this common problem, Kanaflex recommends caution when using the hose.

Kanaflex will not be responsible for damage to the hose due to over flexing.



### **Temperature Effects**

Kanaflex conducts tests at 72°F to determine the recommended minimum bending radius, working pressures, and vacuum ratings. Straight lengths of hose are used during testing. If the ambient temperatures, or application induced temperatures, vary from the 72°F baseline, stated specifications and ratings for the hose will change. If the hose application and placement includes bends, the stated specifications and ratings for the hose will also change.

Please take these variance guidelines into account when determining the suitability of a hose for a specific application.

#### **CARE AND MAINTENANCE**

#### When Using Your Hose

The life of the hose is greatly influenced by the surrounding temperature, fluid temperature and time of exposure. Please select the proper hose according to the fluid used.

Especially in the case of a PVC hose, if the fluid temperature reaches or exceeds 120°F, do not exceed one half the rated working pressure of the hose.

In pressure applications, please open and close the valve slowly to avoid impact pressure. Suddenly closing the valve could cause the hose to burst.

Please do not use high-grade chemicals with high toxicity and hazardous materials such as high concentrations of Acidum or Alkalies and flammable or explosive gas.

Please set pump pressure below working pressure when you use it in the upright part of an underwater pump, otherwise there is a possibility of a failure caused by a water hammer when the pump is turned off.

Please do not use for compressed air; there is a possibility of a burst.

Please do not use for food grade unless indicated. Also, do not use for pharmaceutical products.

Exposure to the weather will increase the deterioration rate of the hose.

Remember hoses are replaceable items. The rate of their replacement will depend on the conditions under which they are used and deterioration.

#### Installation

Prior to the installation, please consider the impact on human health and surrounding facilities in case of a hose failure.

Since the hose will expand and contract because of internal pressure, please provide sufficient slack at the time of installation for expansion and contraction.

If twisted, the performance of a hose will fall. Please use a joint when a twist arises by rocking or rotation.

The hose could be damaged if there is a sharp bend at the fitting. Use appropriate elbows and fittings to support the hose so that when it is operational it will not bend sharply at the fitting. Please use an elbow or allow extra length to avoid this problem.

Please protect the hose against external impact (i.e. falling rock or running over the hose with a vehicle). If the installation of the hose requires 150 or more feet of continuous length, the resulting head or loss of pressure may disrupt the quantity of flow.

The hose will deteriorate with age. If you find any defects in your periodic inspections please replace the hose.

#### Storage — As Stock

Temperature, humidity, ozone, sunlight, oils, solvents, corrosive liquids, fumes, insects, rodents, and radioactive materials can adversely affect hose products in storage.

Exposure to direct or reflected sunlight should be avoided.

The hose needs to be stored under these conditions:

- 1. Out of direct sun, preferably a dark location
- 2. In a cool location
- 3. Low humidity
- 4. Free of dust and dirt
- 5. First-in, first-out basis
- 6. Ideal temperature range is 50 to 70 degrees F

The hose should not be piled or stacked to such an extent that the weight of the stack creates distortions on the lengths stored at the bottom.

#### Storage — After Use

Follow above recommendations.

After using, remove residual substance by washing the hose in cold water, etc.

Please store the hose with good ventilation so that air passes through the inside of a hose freely. In the case of rubber hose, please cap the ends.

#### Transport

When moving hose, please do not drag on the ground.

Handle carefully to protect the hose from impact during loading and unloading.

If you are lifting the hose by a crane, etc., do not lift it up by only one point but use several.

#### **Exterior Inspection**

If the following abnormalities are discovered, please stop use immediately and replace the hose.

- · Hose shows any swelling or leakage near fittings
- Exterior cracking that allows any loss of fluid or creates a safety hazard
- · Collapsing or kinking
- · An inside swelling and exfoliation
- · Others: hardening, swelling, cracking, etc.

### **Precautionary Statement**

Kanaflex Corporation manufactures and distributes hose, ducting, and other products that conform to established specifications. These specifications are to be used as guidelines for the selection of hose to meet the specified criteria of each application. However, these established specifications are not intended to predict the performance of a Kanaflex product in any particular application. Since application criteria vary, Kanaflex makes no recommendation of our products for use in a particular application. The distributor and final customer of the product should determine the acceptability of use of the product. Therefore, the distributor and customer will assume all responsibility regarding the proper selection and resultant success of Kanaflex products used for any application.

# Claims

All claims on Kanaflex products must be reported to Kanaflex immediately. Kanaflex will forward a claim form and all information requested on the form is to be inserted and returned to Kanaflex. Kanaflex will request either the entire amount of product in question or sections of the product. The returned product must be labeled clearly and sent to the attention of the Kanaflex staff member responsible for receipt of the claim information. All additional product in question must be retained until a final determination is made regarding the claim. Upon receipt of the requested material, Kanaflex will determine if the product meets all requirements as stated within our WARRANTY and then send notification as to the determination of the claim.

Often, the exact cause of failures cannot be determined. Kanaflex may suggest possible causes in an effort to prevent future failures.

# **Returned Goods Policy**

The following guidelines must be met for acceptance of returned product:

- 1. Contact Kanaflex Customer Service department for return authorization.
- 2. Product must have been purchased within the last 90 days.
- 3. Only standard products, in standard lengths may be returned.
- 4. Merchandise must be sent back freight prepaid.
- 5. Merchandise must reach Kanaflex in good condition so that it may be resold. Damaged goods will be refused.
- 6. Restocking fee will apply.

# Warranty

Every KANAFLEX hose is thoroughly inspected and tested before leaving the factory and is warranted to be free from defects in material and workmanship at the time of shipment by Kanaflex. Should any trouble develop within ninety (90) days of the date of shipment, please notify the manufacturer and obtain a written authorization for return. If an inspection by the manufacturer shows the trouble to be caused by defects in material or workmanship, Kanaflex will replace such merchandise at no charge, freight prepaid.

This warranty shall not apply (1) in the event the hose has been abused or involved in an accident; (2) in the event of misuse (such as subjecting the hose to pressure beyond rated capacity, exceeding minimum bending radius specifications or transfer of materials not recommended by the manufacturer); (3) in the event of damage caused by insects and/or rodents. THIS WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY OF KANAFLEX AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, IMPLIED, STATUTORY OR OTHERWISE CREATED UNDER APPLICABLE LAW INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. IN NO EVENT SHALL KANAFLEX BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR FOR LOSS OF PROFITS.



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