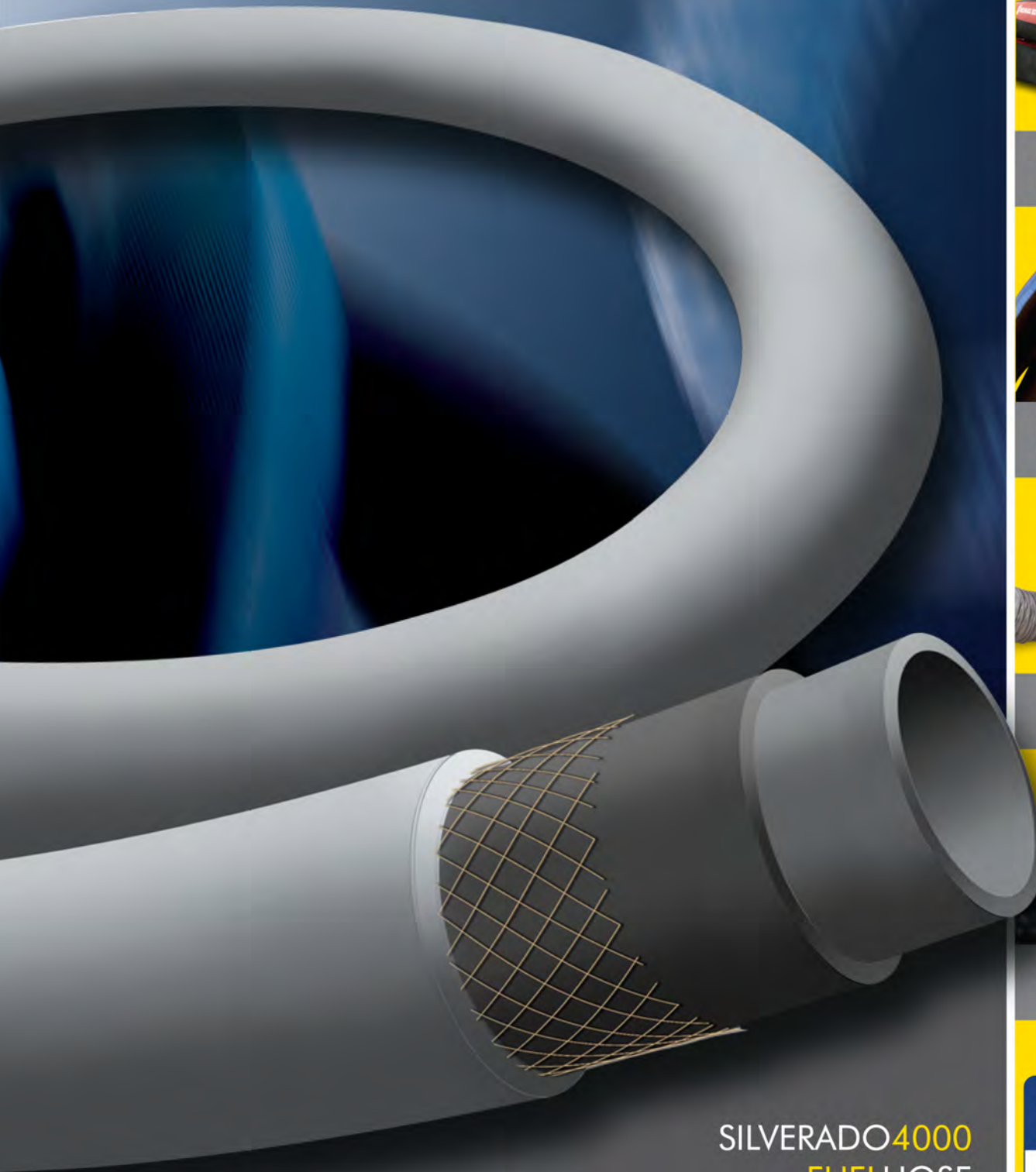




SHIELDS MARINEHOSE



SILVERADO4000
FUELHOSE



WATER



FUEL



EXHAUST



FLEXIBLE



STRENGTH



APPROVED



SHIELDS CODE NUMBERS

All Shields Marine Hoses are identified by a 9 digit code number.

Example:

16-120-0580

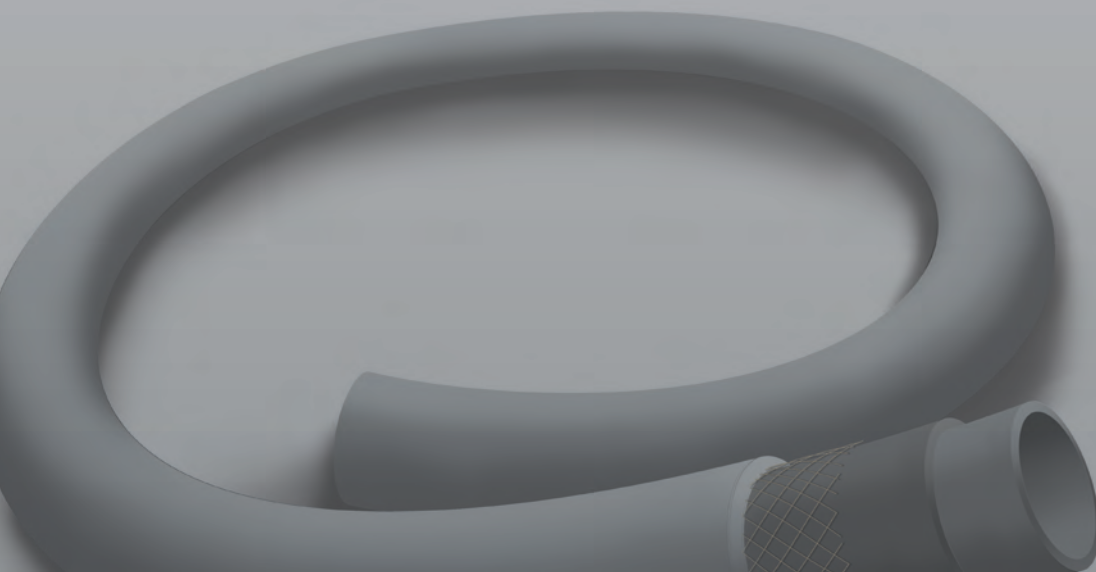
The first two digits identify the product as a Shields hose:
16 = Shields Hose

The third three digits identify the size of the hose:
058 = $\frac{5}{8}$ "

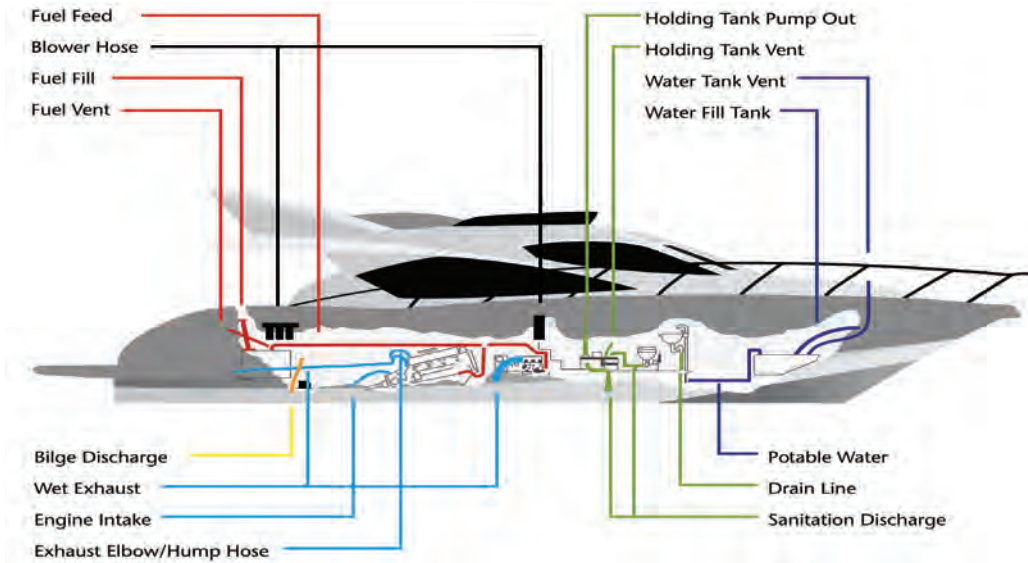
The second three digits identify the type of hose:
120 = Bilgeflex

The last digit identifies the package quantity as follows:

1	6' or 6 $\frac{1}{4}$ ' Length
2	9' Length
3	10' Length
4	12 $\frac{1}{2}$ ' Length
5	25' Length
6	50' Length
7	100' Length
8	75' Length
0	Standard Bulk Pack
0-xx	Special Bulk Length (Example: 0-36 = 3')





Product Application Guide




PRODUCT APPLICATION GUIDE KEY


- EX** — Designed to give excellent service
- G** — Designed to give good service in normal applications
- C** — Product can give good service with proper installation, may not be suitable in all applications.
- X** — Not recommended
- NA** — Not available in size range
- 1** — Can easily be bent into tight radius
- 2** — Can be bent into gradual radius
- 3** — May kink in applications requiring bend radius


SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION							
				Submersible Bilge Pump	Remote Bilge Pump	Hand Bilge Pump	Livewell Inlet	Livewell Drain Above Water Line	Livewell Drain Below Water Line	Flexibility	
 <h3>BILGE/LIVEWELL</h3>											
Series 120	Shields Bilgeflex	5	5/8" - 1 1/2"	G	X	C	X	X	X	1	
Series 123	Shields Bilgevac	5	3/4" - 1 1/8"	EX	G	EX	X	C	X	1	
Series 140	Shields Vac Std.	6	1 1/4" - 1 1/2"	EX	EX	EX	G	G	C	1	
Series 141	Shields Multiflex	7	5/8" - 3"	EX	G	EX	X	G	X	1	
Series 142	Shields Vac Cuffs	6	1 1/4" - 1 1/2"								
Series 146	Shields Vac Extra Heavy Duty/Commercial Grade	7	5/8" - 3"	EX	EX	EX	EX	EX	EX	2	
Series 147	Shields Vac H.D. Cuffs	6	1 1/2"								
Series 148	Shields Vac Extra Heavy Duty	8	5/8" - 1 1/2"	EX	EX	EX	EX	EX	EX	2	
Series 149	Shields Livewell Hose	8	5/8" - 1 1/2"	EX	EX	EX	EX	EX	EX	1	


SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION					Flexibility
				Engine Intake	Generator Intake	Engine Coolant Hose Straight or Limited Bend	Engine Coolant Hose Severe Bend	Exhaust Water Injection	
 <h3>ENGINE HOSE</h3>									
Series 130	Shields #1300 Heater Hose	9	1/2" - 3/4"	X	X	G	X	X	3
Series 135	Shields #1350 H.D. Water Hose	9	1/2" - 1"	X	C	G	X	G	3
Series 160	Shields #1600 Water Hose	9	3/8" - 1 1/4"	X	G	EX	X	G	2
Series 200	Shields Marine Exhaust	10	1/2" - 14"	X	C	EX	X	G	3
Series 202	Shields Nautiflex Silicone Exhaust Hose	11	1" - 14"	X	X	EX	X	C	3
Series 250	Shieldsflex II	12	1/2" - 8"	EX	EX	EX	EX	EX	1
Series 252	Shieldsaust - C	13	3/4" - 8"	EX	EX	EX	EX	1	
Series 262	Shields Corrugated Nautiflex Silicone Exhaust Hose	14	3/4" - 10"	EX	EX	EX	EX	EX	1

Product Application Guide (Cont.)


SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION							
				Non-Pressurized Supply	Pressurized Supply		Water Tank Fill	Drain Lines Below Water Line	Drain Lines To Sump or Above Water Line	Water Tank Vent	Flexibility
					Hot	Cold					
	FRESH WATER SYSTEM/POTABLE										
Series 141	Shields Multiflex	15	5/8" - 3"	C	X	X	EX	X	EX	C	1
Series 148	Shields Vac Extra Heavy Duty	15	5/8" - 1 1/2"	N/A	X	X	EX	EX	EX	EX	2
Series 149	Shields Livewell Hose	16	5/8" - 1 1/2"	X	X	X	X	EX	EX	C	2
Series 150	Shields PVC Tubing — Clear	16	3/16" - 1 1/2"	G	X	X	C	X	G	G	3
Series 162	Shields All Clear Reinforced PVC — Red Tracer	17	3/8" - 1 1/2"	EX	EX	EX	G	G	G	G	2
Series 163	Shields Braided Wash Down Hose	17	5/8"								
Series 164	Shields Clear White Reinforced PVC — Blue Tracer	18	1/2" - 3/4"	EX	G	EX	N/A	G	G	G	3
Series 168	Shields Heavy Duty Reinforced PVC Tubing	18	1/4" - 1 1/2"	EX	EX	EX	G	EX	EX	EX	2

SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION						
				Oil Tank Fill	Fuel Tank Fill	Fuel Feed Inboard/Outdrive	Fuel Feed Outboard	Fuel Tank Vent Inboard	Fuel Tank Vent Outboard	Flexibility
	FUEL SYSTEM									
Series 309	Shields Oil Tank Fill Hose	19	1 1/2"	EX	X	N/A	N/A	N/A	N/A	1
Series 315	Shields 315 - Silverado 2000	19	3/8" - 5/8"	N/A	N/A	X	EX	C	EX	2
Series 331	Shields Silverado 3000	20	5/16" - 3/8"	N/A	N/A	X	EX	N/A	N/A	2
Series 337	Shields Silverado 4000	20	5/16" - 3/8"	N/A	N/A	X	EX	N/A	N/A	1
Series 350	Shields FIRE-ACOL	21	1 5/8" - 2 3/8"	EX	EX	N/A	N/A	N/A	N/A	1
Series 351	Shields FIRE-ACOL-C	21	1 1/2"	EX	EX	N/A	N/A	N/A	N/A	1
Series 355	Shields Fuel Fill	22	1 1/2" - 2"	EX	EX	N/A	N/A	N/A	N/A	1
Series 365	Shields FIRE-ACOL-15	22	3/8" - 1/2"	N/A	N/A	EX	EX	N/A	N/A	1
Series 368	Shields Low Permeation Marine Fuel Hose	23	1/4" - 1/2"	N/A	N/A	EX	EX	N/A	N/A	1
Series 369	Shields FIRE-ACOL Fuel Vent Hose	23	5/8"	N/A	N/A	X	X	EX	EX	1
Fuel Accessories	Shields Brackets / Filters / Fuel Line Assemblies	24	-	-	-	-	-	-	-	-

SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION					
				Toilet to Holding Tank	Holding Tank Pump Out	Holding Tank to Overboard Discharge	Toilet Water Inlet	Holding Tank Vent	Flexibility
	SANITATION SYSTEM								
Series 101	Shields Sanitation Hose	25	1" & 1 1/2"	EX	EX	EX	N/A	N/A	1
Series 105	Shields Poly X Sanitation Hose	25	1" & 1 1/2"	EX	EX	EX	N/A	N/A	1
Fittings	Shields For Series: 101, 105, 144, 148	25	3/4" - 1 1/2"						
Series 144	Shields Super PVC Sanitation	26	1" & 1 1/2"	EX	EX	EX	N/A	N/A	2
Series 146	Shields Vac Extra Heavy Duty/Industrial	26	5/8" - 3"	G	EX	G	EX	EX	2
Series 148	Shields Vac Extra Heavy Duty	27	5/8" - 1 1/2"	G/EX	EX	EX	EX	EX	2
Series 149	Shields Livewell	27	5/8" - 1 1/2"	G	G	G	EX	EX	2

SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION		
				Blower Hose	A/C Duct	Exhaust Vent Stove Head
	VENTILATION/ AC DUCT					
Series 400	Shields Vinylvent	28	3" - 4"	EX	X	X
Series 402	Shields Vinylvent	28	3" - 4"	EX	X	X
Series 420	Shields Extra Heavy Duty Vinylvent	28	3" - 4"	EX	X	G
Series 450	Shields Fibervent	29	3" - 6"	EX	G	EX
Series 460	Shields AC Ducting Hose	29	3" - 7"	EX	EX	EX

Product Application Guide (Cont.)

SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION				
				Straight Pipe Connector Less than 4 x I.D. of Hose	Straight Pipe Connector More than 4 x I.D. of Hose	Require Moderate Bend	Severe Bend	Flexibility
	 WET EXHAUST SYSTEM							
Series 200	Shields Marine Exhaust	30	1/2" - 14"	EX	C	X	X	3
Series 202	Nautiflex Silicone Exhaust Hose	31	1" - 14"	EX	C	X	X	3
Series 250	Shieldsflex II	32	1/2" - 8"	EX	EX	EX	C	2
Series 252	Shieldsaust - C	33	3/4" - 8"	EX	EX	EX	EX	1
Series 262	Corrugated Nautiflex							
	Silicone Exhaust Hose	34	3/4" - 16"	EX	EX	EX	EX	1
Various	Hump Hose & Elbows	35-38	2" - 10"	See our selection for straight or angled connections				

SERIES NO.	NAME	PG. NO.	SIZE RANGE	APPLICATION
	MISCELLANEOUS			
	Exhaust Protector Valves	39	4" - 6"	Prevents water from entering exhaust system
	Hose Clamps	39	5/16" - 7"	Marine grade 316 stainless steel
	Exhaust Hose Clamps - T-Bolt Gand Clamps	39	1" - 14"	Designed to fit Shields Series: 200, 201, 210, 250, 252
	Ferrule Vise / Dies	40	1/4" - 1/2"	For making fuel line assemblies without clamps
Series 128	Flame Retardant Split Wire Conduit	41	1/4" - 2"	Provides chafing protection for wiring systems
Series 126	Shields Sternflex	41	2"	Provides protection for outboard rigging cables & hose
	Neoprene Sheet rubber	42	1/8" - 1/4"	Used under fuel tanks to comply with USCG requirements
Series 151	Speedometer Pitot Tubing	42	1/8" - 4mm	Connection from pitot to speedometer





Bilge/Livewell

SHIELDS BILGEFLEX



Shields Bilgeflex Hose is a single layer corrugated polyethylene hose. It is resistant to mild chemicals and salt water and there is a clamping cuff every foot. It is available in black or white (add B or W to suffix to specify color). This hose is primarily used for bilge pump discharge. **Do not attach to thru hull fitting below the water line.**



I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Code # *	Bulk Pack	m	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 9' (2.7M) Polypac Code #	6' (1.8M) Polypac Code #	25' (7.6M) R/O Ctn.
5/8"	15.9	1/2"	12.7	20	5	16-120-0580	600'	182.9	16-120-0586	16-120-0582	16-120-0581	—
3/4"	19.1	3/4"	19.1	20	6	16-120-0340	500'	152.4	16-120-0346	16-120-0342	16-120-0341	—
1 1/8"	28.6	1"	25.4	20	7	16-120-1180	300'	91.4	16-120-1186	16-120-1182	16-120-1181	—
1 1/4"	31.8	1 1/2"	38.1	20	10	16-120-1140	200'	61.0	16-120-1146	—	—	—
1 1/2"	38.1	2"	50.8	20	13	16-120-1120	150'	45.7	16-120-1126	—	—	16-120-1125

* Add B or W suffix to specify black or white

SHIELDS BILGEVAC

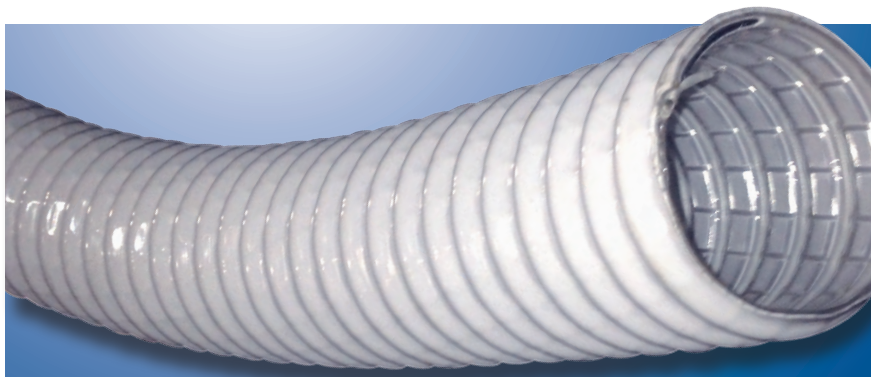


Shields Bilgevac Hose is a black PVC hose with a flexible vinyl helix. It is very flexible, abrasion resistant and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump discharge and drains (sinks, shower, scupper, and livewell). **Do not attach to thru hull fitting below the water line.**

I.D.	mm	Bend Radius	mm	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
3/4"	19.1	3/4"	50.8	8	16-123-0340	16-123-0346
1 1/8"	28.6	1"	76.2	16	16-123-1180	16-123-1186



SHIELDS VAC STANDARD



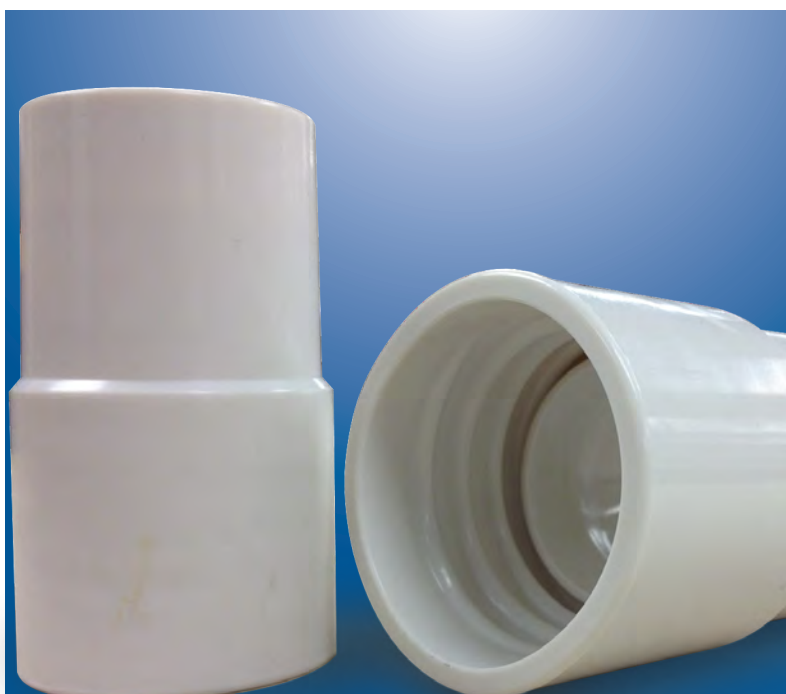
Shields Vac Standard Hose is PVC supported by vinyl covered steel wire and is very flexible. It is Nylon reinforced (1 ¼" and 1 ½" only) and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, diaphragm style hand operated bilge pump intake and discharge and drains (sinks, shower, and scupper). This hose uses 142 left hand thread cuffs. **Do not attach to thru hull fitting below the water line.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
1 ¼"	31.8	¾"	19.1	28	19	16-140-1140①	16-140-1146
1 ½"	38.1	¾"	19.1	28	23	16-140-1120①	16-140-1126

① 2 x 50' per box



SHIELDS VAC CUFFS



Shields Vac Cuffs provide added clamping protection for Shields Vac Hose. For watertight seal apply with sealing compound. Use with Series 140 & 141.

Size	mm	Wt. "C"	Code No.	For:	Thread
1 ¼"	31.8	12.5	16-142-1140	Series 140	Left Hand
1 ½"	38.1	13.0	16-142-1120	Series 140	Left Hand
1 ½"	38.1	13.0	16-147-1120	Series 141	Right Hand



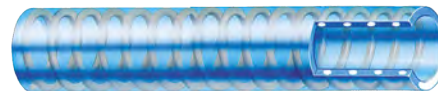
SHIELDS MULTIFLEX



Shields Multiflex Hose has a clear FDA formula PVC with black vinyl helix. It is abrasion resistant, flexible and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump discharge, potable water tank fill and drains (sinks, shower, livewell and scupper). This hose uses 147 right hand thread cuffs. **Do not attach to thru hull fitting below the water line. Do not use ethylene glycol based antifreeze in hose.**

I.D.	mm	Bend Radius	mm	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	10' (3.1m) Length Code #
5/8"	15.9	1/2"	12.7	8	16-141-0580B	16-141-0586B	—
3/4"	19.1	3/4"	19.1	10	16-141-0340B	16-141-0346B	—
1"	25.4	7/8"	22.2	13	16-141-1000B	16-141-1006B	—
1 1/8"	28.6	1"	25.4	16	16-141-1180B	16-141-1186B	—
1 1/4"	31.8	1 1/2"	38.1	19	16-141-1140B	16-141-1146B	—
1 1/2"	38.1	2"	50.8	24	16-141-1120B	16-141-1126B	—
2"	50.8	5"	127.0	34	16-141-2000B	—	16-141-2003B
1 1/2"	38.1	2"	50.8	24	16-141-1120W	—	16-141-1123W

SHIELDS VAC EXTRA HEAVY DUTY - INDUSTRIAL GRADE

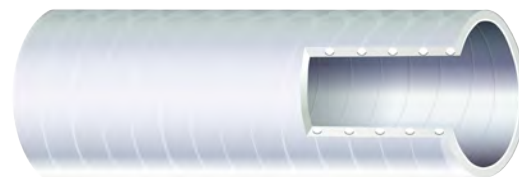
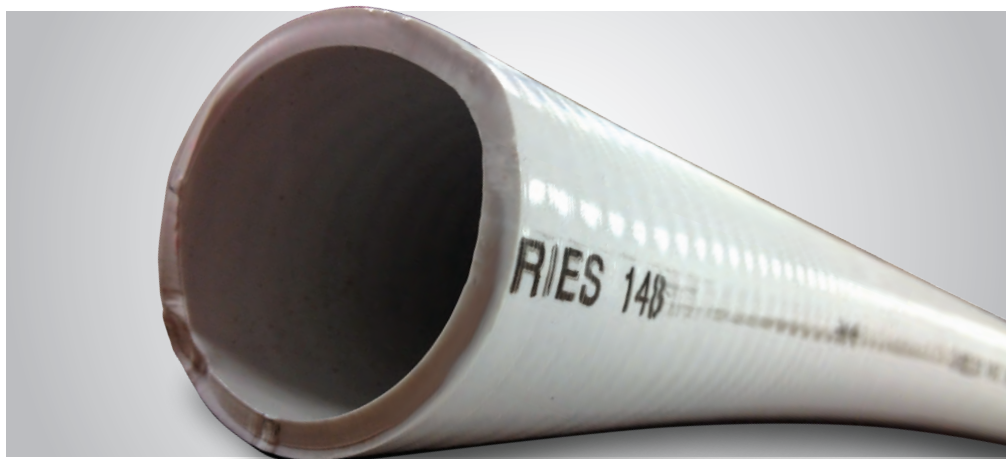


Shields Vac Extra Heavy Duty/Commercial Grade Hose has a smooth cover and clear FDA formula PVC with a white vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, potable water tank fill, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake, vent and pump out). This hose is utilized for below the waterline connections. **Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 10' (3.1m) Length Code #
5/8"	15.9	3	76.2	28	15	16-146-0580	16-146-0586	—
3/4"	19.1	3	76.2	28	16	16-146-0340	16-146-0346	—
1"	25.4	3	76.2	28	27	16-146-1000	16-146-1006	—
1 1/8"	28.6	4	101.6	28	25	16-146-1180	16-146-1186	—
1 1/4"	31.8	3	76.2	28	30	16-146-1140	16-146-1146	—
1 1/2"	38.1	4	101.6	28	40	16-146-1120	16-146-1126	—
2"	50.8	5	127.0	28	57	16-146-2000	—	16-146-2003
2 1/2"	63.5	7	177.8	28	74	16-146-2120	—	16-146-2123
3"	76.2	9	228.6	28	94	16-146-3000	—	16-146-3003



SHIELDS VAC EXTRA HEAVY DUTY/FDA

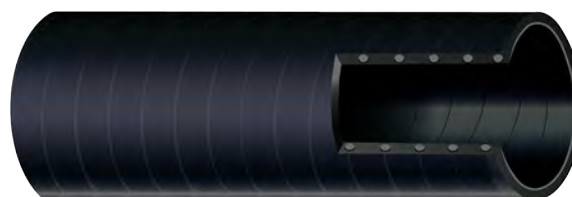


Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet to holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation. **Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	25' (7.6m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-148-0580W	16-148-0586W	—
3/4"	19.1	3	76.2	28	20	16-148-0340W	16-148-0346W	—
1"	25.4	3	76.2	28	27	16-148-1000W	16-148-1006W ①	—
1 1/8"	28.6	4	101.6	28	29	16-148-1180W	16-148-1186W	—
1 1/4"	31.8	4	101.6	28	31	16-148-1140W	16-148-1146W	—
1 1/2"	38.1	5	127.0	28	40	16-148-1120W	16-148-1126W ①	16-148-1125W

① **WARNING:** Lines containing raw sewage should be plumbed to be self-draining.

SHIELDS LIVEWELL HOSE



Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections. **Do not use ethylene glycol based antifreeze in hose.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-149-0580	16-149-0586
3/4"	19.1	3	76.2	28	16	16-149-0340	16-149-0346
1"	25.4	3	76.2	28	24	16-149-1000	16-149-1006
1 1/8"	28.6	4	101.6	28	25	16-149-1180	16-149-1186
1 1/4"	31.8	4	101.6	28	28	16-149-1140	16-149-1146
1 1/2"	38.1	5	127.0	28	39	16-149-1120	16-149-1126



Engine Hose

SHIELDS 1300/1350 WATER/HEATER HOSE



Shields 1300/1350 Water / Heater Hose is fabric reinforced and has an EPDM tube and cover. This hose is primarily used for engine heater hose, heat exchanger, A/C circulation, and drain lines (sink, icebox, shower and livewell). It is resistant to mild chemicals, heat, cold, ozone and saltwater. The temperature ranges from -40°F – +212°F.

SHIELDS 1300 Water/Heater Hose

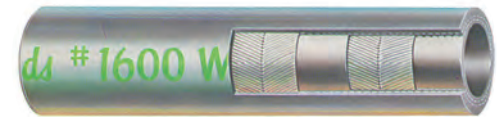
I.D.	mm	O.D.	mm	Working Pressure	Wt. "C"	Bulk Pack Code #	m	Bulk Pack 50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 25' (7.6m) R/O Ctn. Code #
1/2"	12.7	3/4"	18.69	62 PSI	17	16-130-0120 (500' reel)	152.4	16-130-0126	—
5/8"	15.9	7/8"	22.3	62 PSI	21	16-130-0580 (500' reel)	152.4	16-130-0586	16-130-0585
3/4"	19.1	1"	25.48	50 PSI	26	16-130-0340 (500' reel)	152.4	16-130-0346	16-130-0345

SHIELDS 1350 HEAVY DUTY Water/Heater Hose

I.D.	mm	O.D.	mm	Working Pressure	Wt. "C"	Bulk Pack Code #	m	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
1/2"	12.7	13/16"	20.6	200 PSI	19	16-135-0120 (550' reel)	167.6	16-135-0126
5/8"	15.9	31/32"	24.59	200 PSI	26	16-135-0580 (450' reel)	137.2	16-135-0586
3/4"	19.1	1 1/64"	28.4	200 PSI	33	16-135-0340 (400' reel)	121.9	16-135-0346
1"	25.4	1 3/64"	36.6	150 PSI	52	16-135-1000 (300' reel)	91.4	16-135-1006



SHIELDS 1600 WATER/HEATER HOSE



Shields 1600 Water/Heater Hose has a good bend radius, is fabric reinforced, and has an EPDM tube and cover. This hose is primarily used for critical water connections, heat exchanger, toilet intake, small engine intake, bilge pump intake/discharge, and below water line drains and scuppers. It is resistant to mild chemicals, heat, cold, ozone and saltwater. The temperature ranges from -40°F – +190°F

I.D.	mm	O.D.	mm	Working Pressure	Wt. "C"	Bulk Pack Code #	m	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
3/8"	9.5	45/64"	17.8	250 PSI	17	16-160-0380B (500' reel)	152.4	16-160-0386B
1/2"	12.7	27/32"	21.3	250 PSI	22	16-160-0120B (450' reel)	137.2	16-160-0126B
5/8"	15.9	1"	25.4	250 PSI	28	16-160-0580B (400' reel)	121.9	16-160-0586B
3/4"	19.1	1 9/64"	28.8	250 PSI	34	16-160-0340B (300' reel)	91.4	16-160-0346B
1"	25.4	1 29/64"	36.8	200 PSI	52	16-160-1000B (250' reel)	76.2	16-160-1006B
1 1/4"	31.8	1 3/4"	44.5	200 PSI	62	16-160-1140B (200' reel)	61.0	16-160-1146B



SHIELDS MARINE EXHAUST/WATER HOSE (No Wire)



Shields Marine Exhaust / Water Hose is reinforced with 2 or 4 plies of synthetic cord and is made of black, heavy-walled synthetic rubber. This hose is primarily used for straight connections in wet exhaust systems and engine water circulation lines. It is resistant to engine heat, exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose also has double the ozone resistance required by SAEJ2006. The temperature ranges from -20°F – +200°F continuous, +250°F intermittent. The hose meets SAE J2006 Type R1 standards.



Now double the ozone resistance required by SAEJ2006

I.D.	mm	O.D.	Ply	Wt. "C"	50' Coil Code #	12 1/2' Length Code #	6 1/4' Length Code #
1/2"	13	7/8"	2	24	16-200-0120	16-200-0124	16-200-0121
5/8"	16	1 1/32"	2	33	16-200-0580	16-200-0584	16-200-0581
3/4"	19	1 9/64"	2	37	16-200-0340	16-200-0344	16-200-0341
7/8"	22	1 17/64"	2	42	16-200-0780	16-200-0784	16-200-0781
1"	25	1 3/8"	2	48	16-200-1000	16-200-1004	16-200-1001
1 1/8"	28	1 1/2"	2	52	16-200-1180	16-200-1184	16-200-1181
1 1/4"	32	1 45/64"	2	60	16-200-1140	16-200-1144	16-200-1141
1 5/16"	33	1 47/64"	2	62	16-200-1560	16-200-1564	16-200-1561
1 3/8"	35	1 13/16"	2	66	16-200-1380	16-200-1384	16-200-1381
1 1/2"	38	1 15/16"	2	70	16-200-1120	16-200-1124	16-200-1121
1 5/8"	42	2 3/32"	2	77	16-200-1580	16-200-1584	16-200-1581
1 3/4"	45	2 13/64"	2	82	16-200-1340	16-200-1344	16-200-1341
1 7/8"	48	2 23/64"	2	96	16-200-1780	16-200-1784	16-200-1781
2"	51	2 31/64"	2	102	16-200-2000	16-200-2004	16-200-2001
2 1/8"	54	2 19/32"	2	107	16-200-2180	16-200-2184	16-200-2181
2 1/4"	58	2 3/4"	2	114	16-200-2140	16-200-2144	16-200-2141
2 3/8"	60	2 7/8"	2	132	16-200-2380	16-200-2384	—
2 1/2"	63	3"	2	136	16-200-2120	16-200-2124	16-200-2121
2 5/8"	67	3 3/32"	2	147	—	16-200-2584	16-200-2581
2 3/4"	70	3 17/64"	2	152	—	16-200-2344	16-200-2341
2 7/8"	73	3 7/16"	2	174	16-200-2780	16-200-2784	16-200-2781
3"	76	3 9/16"	2	182	16-200-3000	16-200-3004	16-200-3001
3 1/8"	80	3 45/64"	2	190	—	16-200-3184	16-200-3181
3 1/2"	90	4 3/32"	2	198	—	16-200-3124	16-200-3121
3 3/4"	95	4 9/32"	2	221	—	16-200-3344	16-200-3341
4"	102	4 17/32"	4	229	—	16-200-4004	16-200-4001
4 1/2"	114	5 1/8"	2	300	—	16-200-4124	16-200-4121
5"	127	5 5/8"	2	332	—	16-200-5004	16-200-5001
5 1/2"	140	6 3/16"	2	396	—	16-200-5124	16-200-5121
6"	152	6 11/16"	2	427	—	16-200-6004	16-200-6001
8"	203	8 25/32"	4	670	—	16-200-8004	—
10"	254	10 7/8"	4	934	—	16-200-10004	—
12"	305	12 7/8"	4	1095	—	16-200-12004	—
14"	350	14 7/8"	4	1430	—	16-200-14004*	—

* Special Order

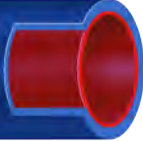


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SHIELDS NAUTIFLEX SILICONE EXHAUST HOSE

Wet Exhaust Hose SAE J2006 Type R1



I.D.	mm	O.D.	Wt. "C"	3' (.9m) Length Code No.	6' (1.8m) Length Code No.	12' (3.7m) Length Code No.
1"	25	1 3/8"	33.1	16-202-1000-36	16-202-1001	16-202-1004
1 1/8"	28	1 1/2"	37.2	16-202-1180-36	16-202-1181	—
1 1/4"	32	1 5/8"	41.3	16-202-1140-36	16-202-1141	16-202-1144
1 3/8"	35	1 3/4"	45.4	16-202-1380-36	16-202-1381	—
1 1/2"	38	1 7/8"	49.6	16-202-1120-36	16-202-1121	16-202-1124
1 3/4"	45	2 1/8"	57.8	16-202-1340-36	16-202-1341	—
2"	51	2 3/8"	66.1	16-202-2000-36	16-202-2001	16-202-2004
2 3/8"	60	2 3/4"	78.5	16-202-2380-36	16-202-2381	16-202-2384
2 1/2"	63	2 7/8"	82.6	16-202-2120-36	16-202-2121	16-202-2124
2 5/8"	67	2 63/64"	86.8	16-202-2580-36	16-202-2581	16-202-2584
2 3/4"	70	3 1/8"	90.9	16-202-2340-36	16-202-2341	—
2 7/8"	73	3 1/4"	94.1	16-202-2780-36	16-202-2781	—
3"	76	3 3/8"	99.2	16-202-3000-36	16-202-3001	16-202-3004
3 1/4"	82	3 1/2"	103.4	16-202-3140-36	16-202-3141	16-202-3144
3 1/2"	90	3 7/8"	115.7	16-202-3120-36	16-202-3121	16-202-3124
4"	102	4 3/8"	132	16-202-4000-36	16-202-4001	16-202-4004
5"	127	5 3/8"	165	16-202-5000-36	16-202-5001	16-202-5004
5 1/2"	140	5 7/8"	181.5	16-202-5120-36	—	—
6"	152	6 3/8"	198	16-202-6000-36	16-202-6001	16-202-6004
8"	203	8 3/8"	264	16-202-8000-36	—	—
10"	254	10 3/8"	330	16-202-10000-36	—	—
12"	305	12 3/8"	396	16-202-12000-36	—	—
14"	350	14 5/8"	462	16-202-14000-36	—	—

Shields Nautiflex Silicone Exhaust Hose has a blue silicone cover with a smooth finish for easy clean up. This hose is flexible, easy to install and has four plies of synthetic fabric. It also remains stable at elevated temperatures. This hose is primarily used for straight connections in the wet exhaust system and engine water circulation lines. The temperature ranges from - 20°F - +350°F. The hose meets SAE J2006 Type R1 and ISO 13363:2004 - Type 2 - Class B standards.



Engine Hose



SHIELDSFLEX II MARINE WATER/EXHAUST HOSE (w/ Wire)



Shieldsflex II Marine Water/Exhaust Hose has a black synthetic rubber tube and cover. It is reinforced with wire helix imbedded between plies of HD synthetic cord. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose is abrasion and odor permeation resistant. It now has double the ozone resistance required by the SAEJ2006. Shieldsflex II is primarily used for engine intake, wet exhaust connections (use where bends or long lengths are required), bilge pump intake/discharge, scupper lines, toilet intake/discharge, and holding tank vent/pump out. The temperature ranges from -20° F – +200°F continuous, +250°F intermittent. The hose meets SAE J2006 Type R2 standards.

I.D.	mm	O.D.	Ply	Wt. "C"	50' (15.2m) Coil Code #	25' (7.6m) Cartons	12 1/2' (3.8m) Length Code #	6 1/4' (1.9m) Length Code #
1/2"	13	27/32"	2	24	16-250-0120	16-250-0125	16-250-0124	16-250-0121
5/8"	16	61/64"	2	28	16-250-0580	16-250-0585	16-250-0584	16-250-0581
3/4"	19	1 1/16"	2	32	16-250-0340	16-250-0345	16-250-0344	16-250-0341
7/8"	22	1 3/16"	2	36	16-250-0780	16-250-0785	16-250-0784	16-250-0781
1"	25	1 5/16"	2	40	16-250-1000	16-250-1005	16-250-1004	16-250-1001
1 1/8"	28	1 7/16"	2	44	16-250-1180	16-250-1185	16-250-1184	16-250-1181
1 1/4"	32	1 19/32"	2	50	16-250-1140	16-250-1145	16-250-1144	16-250-1141
1 5/16"	33	1 5/8"	2	51	16-250-1560	—	16-250-1564	16-250-1561
1 3/8"	35	1 23/32"	2	58	16-250-1380	16-250-1385	16-250-1384	16-250-1381
1 1/2"	38	1 53/64"	2	62	16-250-1120	16-250-1125	16-250-1124	16-250-1121
1 5/8"	42	2"	2	80	16-250-1580	—	16-250-1584	16-250-1581
1 3/4"	45	2 1/8"	2	88	16-250-1340	—	16-250-1344	16-250-1341
1 7/8"	48	2 19/64"	2	93	16-250-1780	—	16-250-1784	16-250-1781
2"	51	2 13/32"	2	99	16-250-2000	—	16-250-2004	16-250-2001
2 1/8"	54	2 17/32"	2	107	16-250-2180	—	16-250-2184	16-250-2181
2 1/4"	58	2 11/16"	2	127	16-250-2140	—	16-250-2144	16-250-2141
2 3/4"	60	2 3/4"	2	132	16-250-2380	—	16-250-2384	16-250-2381
2 1/2"	63	2 7/8"	2	137	16-250-2120	—	16-250-2124	16-250-2121
2 5/8"	67	3 1/16"	2	147	—	—	16-250-2584	16-250-2581
2 3/4"	70	3 3/16"	2	164	16-250-2340	—	16-250-2344	16-250-2341
2 7/8"	73	3 5/16"	2	170	16-250-2780	—	16-250-2784	16-250-2781
3"	76	3 7/16"	2	177	16-250-3000	—	16-250-3004	16-250-3001
3 1/8"	80	3 5/8"	2	200	16-250-3180	—	16-250-3184	16-250-3181
3 1/2"	90	4"	2	223	16-250-3120	—	16-250-3124	16-250-3121
4"	102	4 5/8"	2	269	16-250-4000	—	16-250-4004	16-250-4001
4 1/8"	105	4 47/64"	2	276	—	—	—	—
4 1/2"	114	5 3/32"	2	319	16-250-4120	—	16-250-4124	16-250-4121
5"	127	5 5/8"	2	398	16-250-5000	—	16-250-5004	16-250-5001
5 1/8"	130	5 3/4"	2	417	—	—	—	—
5 1/2"	140	6 3/16"	2	443	—	—	—	—
6"	152	6 21/32"	2	482	—	—	16-250-6004	16-250-6001
8"	203	8 25/32"	2	780	—	—	16-250-8004	—



This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.

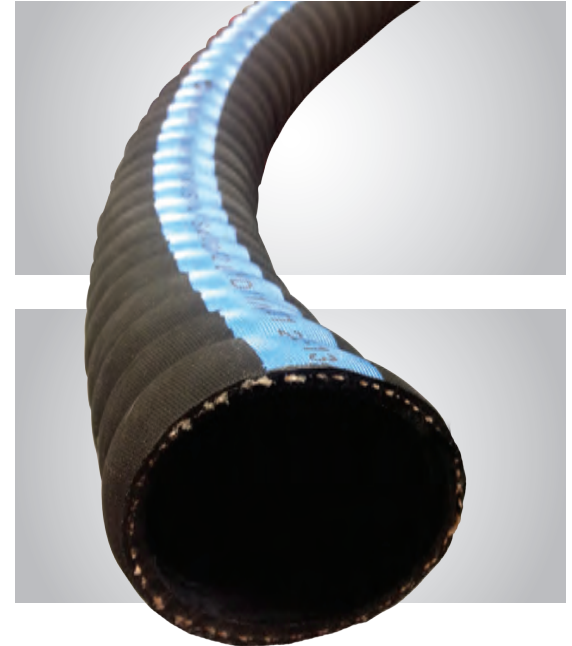


Now double the ozone resistance required by SAEJ2006



Engine Hose

SHIELDSAUST-C



Now double the ozone resistance required by SAEJ2006



Shieldsaust – C Hose has a black synthetic rubber tube and cover. It is reinforced with double wire helix imbedded between plies of synthetic cord and is abrasion resistant. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze, and saltwater. This hose is primarily used for wet exhaust connections with significant bends, engine intake and scupper lines. The temperature ranges from -20°F to + 200°F continuous, +250°F intermittent. The hose now has double the ozone resistance required by SAEJ2006. This hose meets SAE J2006 Type R2 standards.

I.D.	mm	O.D.	Ply	Wt. "C"	50' (15.2m) Coil Code #	12 1/2' (3.8m) Length Code #	6 1/4' (1.9m) Length Code #
3/4"	19	1 1/8"	2	27	16-252-0340	16-252-0344	16-252-0341
1"	25	1 11/32"	2	33	16-252-1000	16-252-1004	16-252-1001
1 1/4"	32	1 39/64"	2	45	16-252-1140	16-252-1144	16-252-1141
1 1/2"	38	1 15/16"	2	70	16-252-1120	16-252-1124	16-252-1121
1 5/8"	42	2 3/32"	2	80	16-252-1580	16-252-1584	16-252-1581
1 3/4"	45	2 7/32"	2	85	16-252-1340	16-252-1344	16-252-1341
1 7/8"	48	2 21/64"	2	91	16-252-1780	16-252-1784	16-252-1781
2"	51	2 7/16"	2	95	16-252-2000	16-252-2004	16-252-2001
2 1/8"	54	2 9/16"	2	100	—	16-252-2184	—
2 1/4"	58	2 23/32"	2	107	16-252-2140	16-252-2144	16-252-2141
2 3/8"	60	2 51/64"	2	110	16-252-2380	16-252-2384	16-252-2381
2 1/2"	63	2 59/64"	2	115	16-252-2120	16-252-2124	16-252-2121
2 3/4"	70	3 3/16"	2	126	16-252-2340	16-252-2344	16-252-2341
2 7/8"	73	3 5/16"	2	137	16-252-2780	16-252-2784	16-252-2781
3"	76	3 7/16"	2	143	16-252-3000	16-252-3004	16-252-3001
3 1/8"	80	3 19/32"	2	150	16-252-3180	16-252-3184	16-252-3181
3 1/2"	90	4 1/16"	2	200	16-252-3120	16-252-3124	16-252-3121
4"	102	4 9/16"	2	231	16-252-4000	16-252-4004	16-252-4001
4 1/8"	105	4 11/16"	2	238	—	16-252-4184	16-252-4181
4 1/2"	114	5 1/8"	2	278	—	16-252-4124	16-252-4121
5"	127	5 9/16"	2	300	16-252-5000	16-252-5004	16-252-5001
6"	152	6 9/16"	2	394	16-252-6000	16-252-6004	16-252-6001
8"	203	8 11/16"	2	607	—	16-252-8004	16-252-8001



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Engine Hose



SHIELDS NAUTIFLEX CORRUGATED SILICONE EXHAUST HOSE



ID	mm	OD	WT "C"	10' (3.1m) length Code No.	12 1/2' (3.8m) Length Code No.	50' (15.2m) coil Code No.
3/4"	19	1 3/8"	34	—	16-262-0344	16-262-0340
1"	25	1 27/64"	42	—	16-262-1004	16-262-1000
1 1/8"	28	1 1/2"	46	—	16-262-1184	16-262-1180
1 1/4"	32	1 45/64"	52	—	16-262-1144	16-262-1140
1 3/8"	35	1 55/64"	60	—	16-262-1384	16-262-1380
1 1/2"	38	2"	71	—	16-262-1124	16-262-1120
1 5/8"	42	2 11/64"	74	—	16-262-1584	16-262-1580
1 3/4"	45	2 19/64"	78	—	16-262-1344	16-262-1340
1 7/8"	48	2 13/32"	82	—	16-262-1784	16-262-1780
2"	51	2 17/32"	87	—	16-262-2004	16-262-2000
2 1/8"	54	2 5/8"	94	—	16-262-2184	—
2 3/8"	60	2 7/8"	101	—	16-262-2384	16-262-2380
2 1/2"	63	3 3/64"	113	—	16-262-2124	16-262-2120
2 7/8"	73	3 7/16"	134	—	16-262-2784	16-262-2780
3"	76	3 35/64"	139	—	16-262-3004	16-262-3000
3 1/2"	90	4 19/64"	227	—	16-262-3124	16-262-3120
4"	102	4 49/64"	255	—	16-262-4004	16-262-4000
5"	127	5 3/4"	310	16-262-5003	—	16-262-5000
6"	152	6 15/16"	484	16-262-6003	—	—
8"	203	9 7/64"	768	16-262-8003	—	—
10"	254	11 17/64"	1136	16-262-10003	—	—

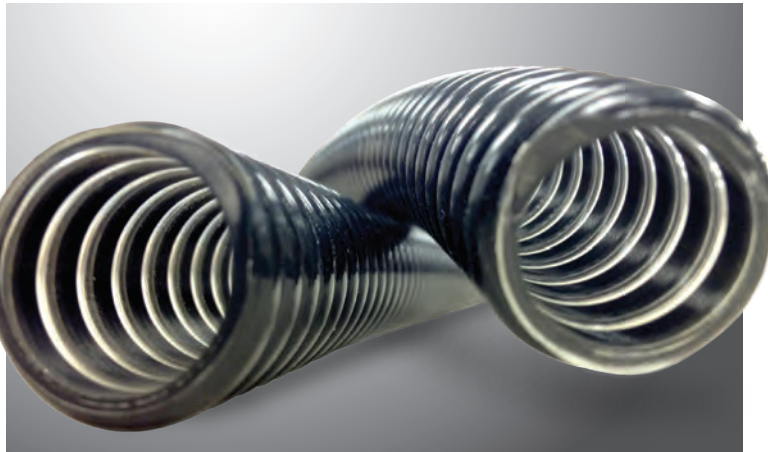
* Special Order

Shields Nautiflex Corrugated Silicone Exhaust Hose has a blue silicone tube and cover with a smooth finish for easy cleaning. The hose is wire reinforced and will not collapse under suction or in a bend. The corrugated cover allows the hose to bend for easy installation. The Nautiflex, two ply construction, has wire captured between fabric plies. This hose is primarily used for main engine exhaust, generator exhaust, engine coolant circulation, engine intake and generator intake. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. The hose remains stable at elevated temperatures. The temperatures ranges from -20°F – +350°F. This hose meets SAEJ2006 Type R2 and ISO 13362:2004 – Type 1 – Class B standards.



Fresh Water System / Potable

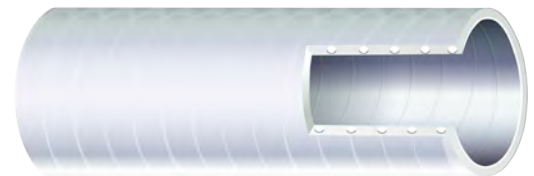
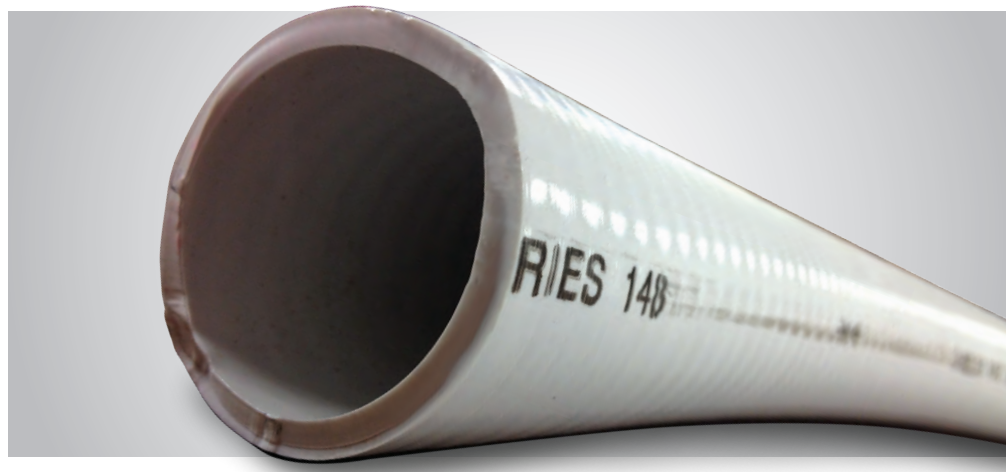
SHIELDS MULTIFLEX



Shields Multiflex Hose has a clear FDA formula PVC with black vinyl helix. It is abrasion resistant, flexible and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump discharge, potable water tank fill and drains (sinks, shower, livewell and scupper). This hose uses 147 right hand thread cuffs. **Do not attach to thru hull fitting below the water line. Do not use ethylene glycol based antifreeze in hose.**

I.D.	mm	Bend Radius	mm	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	10' (3.1m) Length Code #
5/8"	15.9	1/2"	12.7	8	16-141-0580B	16-141-0586B	
3/4"	19.1	3/4"	19.1	10	16-141-0340B	16-141-0346B	
1"	25.4	7/8"	22.2	13	16-141-1000B	16-141-1006B	
1 1/8"	28.6	1"	25.4	16	16-141-1180B	16-141-1186B	
1 1/4"	31.8	1 1/2"	38.1	19	16-141-1140B	16-141-1146B	
1 1/2"	38.1	2"	50.8	24	16-141-1120B	16-141-1126B	
2"	50.8	5"	127.0	34	16-141-2000B	-	16-141-2003B
1 1/2"	38.1	2"	50.8	24	16-141-1120W	-	16-141-1123W

SHIELDS VAC EXTRA HEAVY DUTY/FDA



Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet to holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation. **Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	25' (7.6m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-148-0580W	16-148-0586W	—
3/4"	19.1	3	76.2	28	20	16-148-0340W	16-148-0346W	—
1"	25.4	3	76.2	28	27	16-148-1000W	16-148-1006W ①	—
1 1/8"	28.6	4	101.6	28	29	16-148-1180W	16-148-1186W	—
1 1/4"	31.8	4	101.6	28	31	16-148-1140W	16-148-1146W	—
1 1/2"	38.1	5	127.0	28	40	16-148-1120W	16-148-1126W ①	16-148-1125W

① WARNING: Lines containing raw sewage should be plumbed to be self-draining.



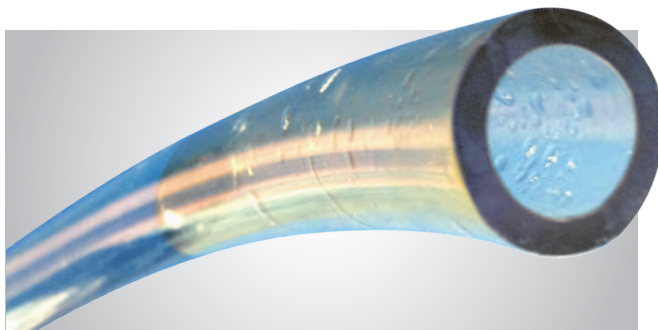
SHIELDS LIVEWELL HOSE



Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections. **Do not use ethylene glycol based antifreeze in hose. Not for potable water.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-149-0580	16-149-0586
3/4"	19.1	3	76.2	28	16	16-149-0340	16-149-0346
1"	25.4	3	76.2	28	24	16-149-1000	16-149-1006
1 1/8"	28.6	4	101.6	28	25	16-149-1180	16-149-1186
1 1/4"	31.8	4	101.6	28	28	16-149-1140	16-149-1146
1 1/2"	38.1	5	127.0	28	39	16-149-1120	16-149-1126

SHIELDS PVC TUBING - CLEAR

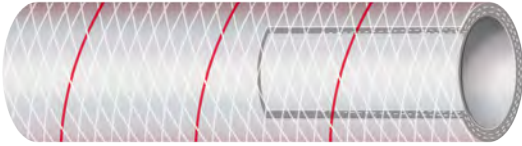


Shields Clear PVC Tubing has a single layer FDA formula vinyl. This hose is primarily used for non-pressurized potable water system supply and drain lines (sink, shower, icebox). This hose is NOT for use in hot water or pressurized water systems.

I.D.	mm	Wall	mm	Burst Pressure 70°	Wt. "C"	Code #	Bulk Pack	mm	100' (30.5m) R/O Ctn. Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	25' (7.6m) Polypac Code #
3/16"	4.8	.062	1.6	65#	3	16-150-0360	750'	228.6	—	16-150-0366	16-150-0365
1/4"	6.4	.078	2.0	60#	4	16-150-0140	500'	152.4	16-150-0147	16-150-0146	16-150-0145
5/16"	7.9	.093	2.4	55#	5	16-150-0560	200'	61.0	16-150-0567	16-150-0566	16-150-0565
3/8"	9.5	.094	2.4	55#	6	16-150-0380	200'	61.0	—	16-150-0386	16-150-0385
1/2"	12.7	.11	2.8	45#	12	16-150-0120	200'	61.0	16-150-0127	16-150-0126	16-150-0125
5/8"	15.9	.11	2.8	40#	15	16-150-0580	200'	61.0	16-150-0587	16-150-0586	16-150-0585
3/4"	19.1	.11	2.8	35#	19	16-150-0340	200'	61.0	16-150-0347	16-150-0346	16-150-0345
1"	25.4	.125	3.2	20#	27	16-150-1000	100'	30.5	16-150-1007	16-150-1006	16-150-1005
1 1/8"	28.6	.125	3.2	20#	29	16-150-1180	100'	30.5	—	16-150-1186	—
1 1/4"	31.8	.125	3.2	20#	31	16-150-1140	100'	30.5	—	16-150-1146	16-150-1145
1 1/2"	38.1	.125	3.2	20#	34	16-150-1120	50'	15.2	—	16-150-1126	16-150-1125



SHIELDS ALL CLEAR PVC TUBING POLYESTER REINFORCED (Red-Tracer)



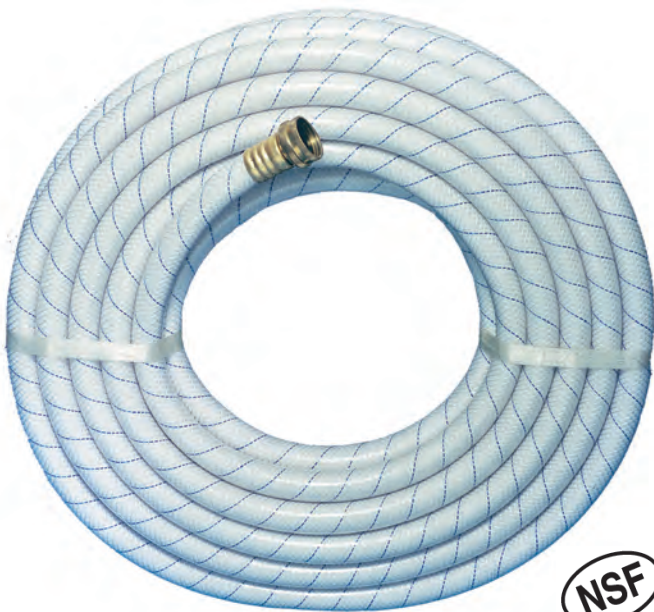
Shields Clear Polyester Reinforced Red Tracer PVC Tubing has a clear heavy wall FDA formula vinyl. It has a polyester braid reinforcement and 250 PSI burst pressure. This hose is primarily used for pressurized water system supply (hot or cold), drain lines (sink, shower, icebox), wash down pump connections and head intake.



I.D.	mm	O.D.	mm	Burst Pressure	Wt. "C"	Bulk Pack 250' (76.2m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	25' (7.6m) Polypac Code #	10' (3.1m) Polypac Code #
3/8"	9.5	9/16"	14.3	250#	7	16-162-0380	16-162-0386	16-162-0385	16-162-0383
1/2"	12.7	23/32"	18.3	250#	11	16-162-0120	16-162-0126	16-162-0125	16-162-0123
5/8"	15.9	27/32"	21.4	250#	14	16-162-0580	16-162-0586	16-162-0585	16-162-0583
3/4"	19.1	31/32"	24.6	250#	17	16-162-0340	16-162-0346	16-162-0345	16-162-0343
1"	25.4	1 5/16"	33.3	250#	24	16-162-1000	16-162-1006	16-162-1005	16-162-1003
1 1/8"	28.6	1 3/8"	34.9	250#	32	16-162-1180 ①	16-162-1186	—	—
1 1/4"	31.8	1 5/8"	41.3	250#	44	16-162-1140 ①	16-162-1146	—	—
1 1/2"	38.1	1 15/16"	49.2	250#	67	16-162-1120 ①	16-162-1126	—	—

① 100' roll

SHIELDS BRAIDED WASH DOWN HOSE

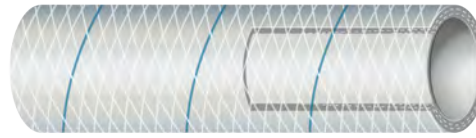
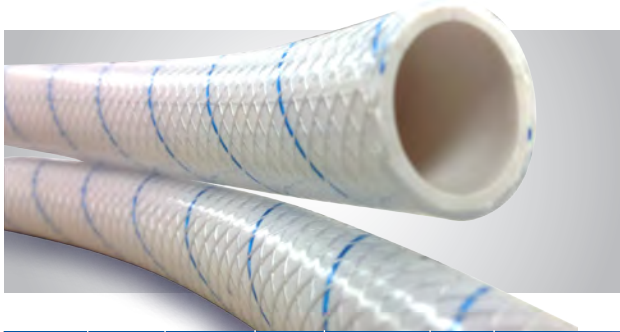


Shields Braided Wash Down Hose has a white FDA formula vinyl tube and clear vinyl cover. It has a polyester braid reinforcement and a 250 PSI burst pressure. This hose has brass ends, is lightweight and easy to handle. This hose is primarily used for dockside wash down and is safe for potable water.

I.D.	mm	Length	mm	Bulk Pack	Wt.	Code No.
5/8"	15.9	25'	7.6	5	3.25	16-163-0585
5/8"	15.9	50'	15.2	5	6.50	16-163-0586
5/8"	15.9	75'	22.9	5	9.75	16-163-0588
5/8"	15.9	100'	30.5	5	13.00	16-163-0587



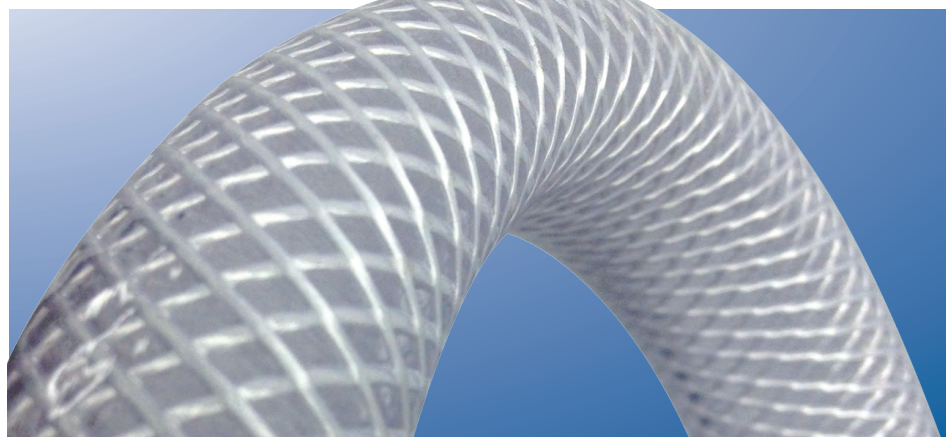
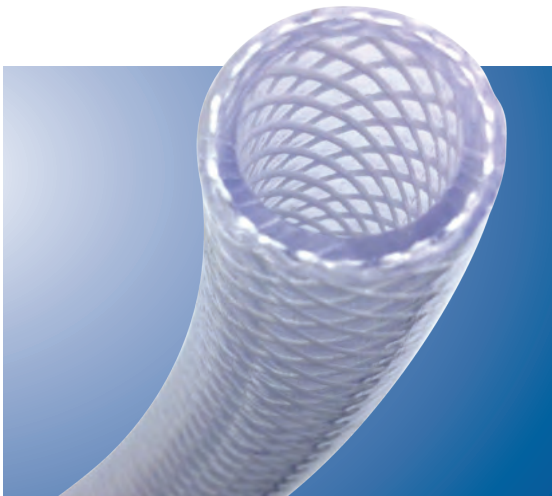
SHIELDS CLEAR WHITE PVC TUBING POLYESTER REINFORCED (Blue-Tracer)



Clear White Blue Tracer PVC Tubing has a white FDA formula vinyl tube. It has a clear vinyl cover, polyester braid reinforcement and 250 PSI burst pressure. This hose is primarily used for pressurized water system supply (hot or cold), drain lines (sink, shower, icebox), wash down pump connections and head intake.

I.D.	mm	O.D.	mm	Burst Pressure	Wt. "C"	Bulk Pack 250' (76.2m) Coil Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 25' (7.6m) Polypac Code #	10' (3.1m) Polypac Code #
1/2"	12.7	1 1/16"	17.5	250#	10	16-164-0120	16-164-0126	16-164-0125	16-164-0123
5/8"	15.9	1 3/16"	20.6	250#	13	16-164-0580	16-164-0586	16-164-0585	16-164-0583
3/4"	19.1	1 5/16"	23.8	250#	17	16-164-0340	16-164-0346	16-164-0345	16-164-0343

SHIELDS HEAVY DUTY POLYESTER REINFORCED PVC TUBING



Shields Heavy-Duty Polyester Reinforced PVC Tubing has a clear extra heavy wall FDA formula vinyl. It has superior kink resistance and a polyester braid reinforcement. This hose is primarily used for pressurized water system supply (hot or cold), wash down pump connections and head intake.

I.D.	mm	O.D.	mm	Burst Pressure	Wt. "C"	Code #	Bulk Pack	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
1/4"	6.4	7/16"	11.1	750#	5.6	16-168-0140	300'	16-168-0146
3/8"	9.5	19/32"	15.1	750#	9.2	16-168-0380	300'	16-168-0386
1/2"	12.7	3/4"	19.1	600#	13.5	16-168-0120	300'	16-168-0126
5/8"	15.9	7/8"	22.2	600#	16.2	16-168-0580	300'	16-168-0586
3/4"	19.1	1 1/64"	25.8	450#	21.1	16-168-0340	300'	16-168-0346
1"	25.4	1 5/16"	33.3	325#	31.2	16-168-1000	200'	16-168-1006
1 1/4"	31.8	1 21/32"	42.1	300#	51	16-168-1140	100'	16-168-1146
1 1/2"	38.1	1 15/16"	49.2	300#	65	16-168-1120	100'	16-168-1126



SHIELDS OIL TANK FILL HOSE

Shields Oil Tank Fill Hose has a nitrile/PVC blend for excellent oil resistance. It has a flexible corrugated design, smooth bore and a vinyl helix to prevent collapse. It also resists ozone and cold temperature cracking. This hose is primarily used for 2-cycle oil tank fill.



I.D.	mm	Bend Radius	mm	Wt "C"	Bulk Pack 100' (30.5m) Coils Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	10' (3.1m) Ctn Code #
1 1/2"	38.1	4"	101.6	22	16-309-1120	16-309-1126	16-309-1123

SHIELDS SILVERADO 2000 FUEL VENT LINE



Silverado 2000 Fuel Vent Line is primarily used for fuel tank vent (outside the engine compartment) and is for pleasure boats only. The Temperature range is -5 F to +180 F. It meets SAE J1527 Type A2 standards.

I.D.	mm	O.D.	mm	Ply	Burst Pressure	Wt. "C"	Bulk Pack Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 25' (7.6m) R/O Ctn. Code #	10' (3.1m) Polypac Code #
5/8"	15.9	29/32"	23.0	2	175#	24.0	16-315-0580 (250' reel)	16-315-0586	16-315-0585	16-315-0583



SHIELDS SILVERADO 3000 OUTBOARD FUEL LINE



Silverado 3000 Outboard Fuel Line is resistant to ethanol blended fuels. This hose is EPA and CARB compliant. Silverado 3000 has a PVDF barrier layer to prevent permeation, and a weather and UV resistant thermoplastic cover. The gray color keeps hose cooler and helps prevent vapor lock. This hose is for above deck primer bulb applications, and is not fire retardant.



Meets SAE J1527 Type B1-15

I.D.	mm	O.D.	mm	Wt. "C"	Bulk Pack Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 25' (7.6m) R/O Ctn. Code #	10' (3.1m) Polypac Code #
5/16"	7.9	1/2"	12.75	7	16-331-0560	16-331-0566	16-331-0565	16-331-0563
3/8"	9.5	35/64"	13.72	7.65	16-331-0380	16-331-0386	16-331-0385	16-331-0383



SHIELDS SILVERADO 4000 OUTBOARD FUEL LINE



Silverado 4000 Outboard Fuel Line is resistant to ethanol blended fuels. This hose is EPA and CARB compliant. Silverado 4000 has a THV barrier layer to prevent permeation, polyester reinforcement for strength and a weather and UV resistant CPE cover. The gray color keeps hose cooler and helps prevent vapor lock. This hose is for above deck primer bulb applications, and is not fire retardant.

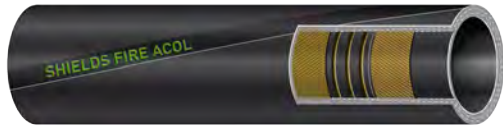


Meets SAE J1527 Type B1-15

I.D.	mm	O.D.	mm	Wt. "C"	Bulk Pack Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 25' (7.6m) R/O Ctn. Code #	10' (3.1m) Polypac Code #
5/16"	7.9	1/2"	12.75	7	16-337-0560	16-337-0566	16-337-0565	16-337-0563
3/8"	9.5	35/64"	13.72	7.65	16-337-0380	16-337-0386	16-337-0385	16-337-0383



SHIELDS FIRE-ACOL FUEL FILL HOSE



Shields Fire – Acol – Fuel Fill Hose resists gasoline/ alcohol blends and is compounded for low permeation. It is abrasion resistant and it is reinforced with wire helix imbedded between plies of HD synthetic cord. This imported hose is primarily used for fuel fill (gas or diesel) and is for pleasure boats only. The temperature range is -5°F to 180°F. It meets SAE J1527 Type A2 and ISO 7840 Type A2 NMMA/CE Type Accepted standards.



I.D.	mm	O.D.	mm	Ply	Burst Pressure	Wt. "C"	50' (15.2m) Coils Code #	12 1/2' (3.8m) Length Code #	12 1/2' (3.8m) Carton Code #	10' (3.1m) Length Code #	10' (3.1m) Carton Code #
1 5/8"	41.3	2 3/64"	52.0	2	90#	89	16-350-1580	16-350-1584	16-350-1584BX	16-350-1583	16-350-1583BX
1 7/8"	47.6	2 9/32"	58.0	2	90#	114	16-350-1780	16-350-1784	16-350-1784BX	16-350-1783	16-350-1783BX
2"	50.8	2 31/64"	63.1	2	90#	121	16-350-2000	16-350-2004	16-350-2004BX	16-350-2003	16-350-2003BX
2 3/8"	60.3	2 27/32"	72.2	2	90#	137	16-350-2380	16-350-2384	16-350-2384BX	16-350-2383	—

SHIELDS FIRE-ACOL "C" FUEL FILL HOSE



Shields Fire – Acol – "C" Fuel Fill Hose resists gasoline/ alcohol blends and has a corrugated cover for extra flexibility. This hose is compounded for low permeation and is reinforced with a wire helix imbedded between plies of HD synthetic cord. It is also abrasion resistant. This hose is primarily used for extra flexible fuel fill (gas or diesel) and is for pleasure boats only. The temperature range is -5°F to 180°F. It meets SAE J1527 type A2 and NMMA Type Accepted standards.



I.D.	mm	O.D.	mm	Ply	Burst Pressure	Wt. "C"	Bulk Pack 50' (15.2m) Coils	Dist. Pkg.	
								12 1/2' (3.8m) Length	10' (3.1m) Length
1 1/2"	38.1	1 57/64"	48.0	2	90#	77	16-351-1120	16-351-1124	16-351-1123



Fuel Systems

SHIELDS FUEL FILL HOSE



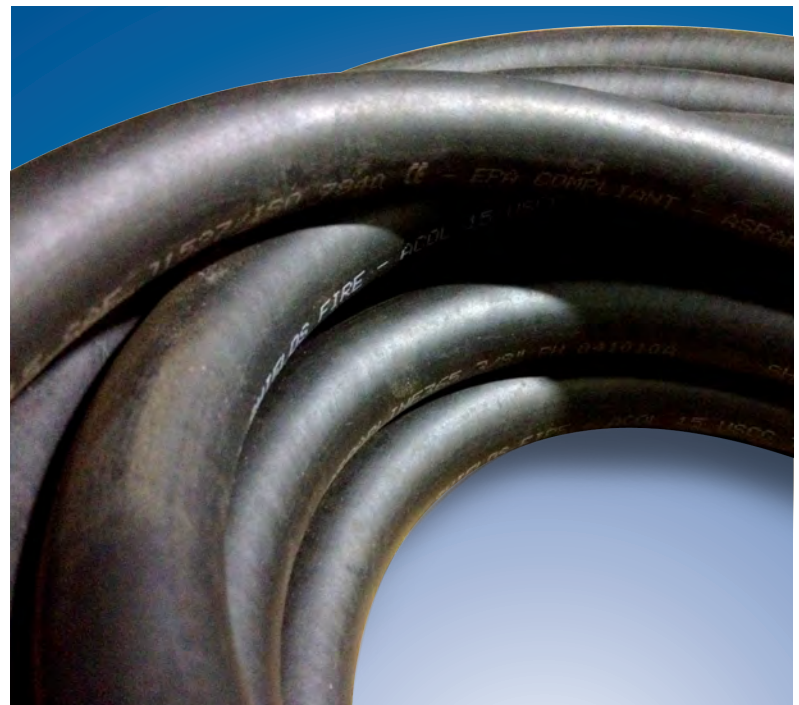
Shields Fire – Acol – Fuel Fill Hose resists gasoline/alcohol blends and is compounded for low permeation. It is abrasion resistant and it is reinforced with wire helix imbedded between piles of HD synthetic cord. This imported hose is primarily used for fuel fill (gas or diesel) and is for pleasure boats only. It meets SAE J1527 Type A2 and ISO 7840 Type A2 NMMA/CE Type Accepted standards.



I.D.	mm	O.D.	mm	Ply	Burst Pressure	Wt. "C"	50' (15.2m) Coils Code #	12 1/2' (3.8m) Length Code #	12 1/2' (3.8m) Carton Code #	10' (3.1m) Length Code #	10' (3.1m) Carton Code #	25' (7.6m) Length Code #
1 1/2"	38.1	1 57/64"	48.0	2	90#	77	16-355-1120	16-355-1124	16-355-1124BX	16-355-1123	16-355-1123BX	16-355-1125
2"	51	2 31/64"	63.1	2	90#	111	16-355-2000	16-355-2004	16-355-2004BX	16-355-2003	16-355-2003BX	—

SHIELDS FIRE-ACOL 15 LOW PERMEATION FUEL HOSE

Shields Fire-Acol 15 – Low Permeation Fuel Hose has a special design NBR tube with an embedded plastic barrier layer to prevent permeation. The design of this hose provides easy coupling insertion and the NBR/PVC cover is weather and UV resistant. The hose is also polyester reinforced and fire-resistant. This hose is primarily used for fuel feed (gasoline up to 85% ethanol blended fuels/diesel/bio-diesel all blends). The temperature range is -20°F to 212°F.



I.D.	mm	O.D.	mm	Max WP	Wt. C	Bulk Pack 250' reel Code #	50' R/O Ctn. Code #	10' Polypac Code #
3/8"	9.5	49/64"	19.3	100	22	16-365-0380	16-365-0386	16-365-0383
1/2"	12.7	29/32"	22.86	100	27	16-365-0120	16-365-0126	16-365-0123

This hose complies with EPA and CARB very low permeation requirements. It meets USCG Type A1-15 requirements for pleasure boats, SAE J1527 Type A1-15, ISO 7840 Type A1, and NMMA/CE Type accepted standards



SHIELDS LOW PERMEATION MARINE FUEL HOSE



Shields Low Permeation Marine Fuel Hose has a plastic barrier veneer with an NBR outer layer tube to prevent permeation. This polyester reinforced hose complies with EPA and CARB very low permeation requirements and is weather/UV resistant. This hose is primarily used for fuel feed (gasoline up to 85% ethanol blended fuels/diesel/all bio-diesel blends). It meets USCG Type A1 – 15 requirements for pleasure boats and meets SAE J1527 Type A1-15, ISO 7840 Type A1, and NMMA/CE type accepted standards. The temperature ranges from -20°F to 212°F.



I.D.	mm	O.D.	mm	Max WP	Wt. C	Bulk Pack 250' reel Code #	50' R/O Ctn. Code #	25' R/O Ctn Code #	10' Polypac Code #
1/4"	6.4	35/64"	13.72	100	11	16-368-0140	16-368-0146	16-368-0145	16-368-0143
5/16"	7.9	5/8"	15.49	100	13	16-368-0560	16-368-0566	16-368-0565	16-368-0563
3/8"	9.5	11/16"	17.27	100	16	16-368-0380	16-368-0386	16-368-0385	16-368-0383
1/2"	12.7	13/16"	20.83	100	20	16-368-0120	16-368-0126	16-368-0125	16-368-0123



SHIELDS FIRE-ACOL FUEL VENT



Shields Fire-Acol Fuel Vent hose resists gasoline/alcohol blended fuel and is fire resistant. It features a weather/UV resistant NBR/PVC cover. This hose is primarily used for fuel vent lines (gasoline up to 85% ethanol blended fuels/diesel fuels). It meets USCG Type A2 requirements for pleasure boats and meets SAE J1527 Type A2, ISO 7840 Type A2 and NMMA/CE Type accepted standards. The temperature ranges from -20°F to 160°F.



I.D.	mm	O.D.	mm	Max WP	Wt. C	Bulk Pack 250' reel Code #	50' R/O Ctn. Code #	25' R/O Ctn Code #	10' Polypac Code #
5/8"	15.9	31/32"	24.38	50	25	16-369-0580	16-369-0586	16-369-0585	16-369-0583

See P. 40 for Brass Couplers



FUEL FILTERS



Compact

30 GPH for up to 115 HP motors
(Use with N-187774S head.)



Standard



Extra Capacity



Drain Bowl

AquaVue™ drain bowl style filters with see through plastic bowl or fire resistant metal bowl for below deck installation.

Part #	Description	Rating
18-7928	Filter w/ AquaVue™ bowl	10 Micron
18-7929	Filter w/ Metal bowl	10 Micron
18-7866	Extra Capacity - 6"	10 Micron
18-7944	Short - 3.88"	10 Micron
18-7945	Long - 4.35"	10 Micron
18-7844	Short - 3.88"	21 Micron
18-7845	Long - 4.35"	21 Micron
18-7865	Compact Filter	10 Micron

Filters available in standard packs of 12.

FILTER FEATURES

Ethanol blended fuel absorbs more water and loosens more particulates than regular fuels. Proper filtration is required for every horsepower engine.

Sierra fuel water separators remove over 98.8% of emulsified water from your gasoline. Sierra's 10 micron filters are over 90% efficient at removing particles as small as 10 micron. All filters flow at 90 GPH to feed even the hungriest motor. Sierra 10 micron filters are recommended to prevent damage to sensitive inboard and outboard fuel injection systems.

PRIMER BULBS

Sierra is a leading supplier of primer bulbs to the marine aftermarket. Our bulbs are molded in house. We use double check valves with viton balls and stainless steel springs.



Part #	Description
18-8002EP-1	Primer bulb for 1/4" hose
18-8004EP-1	Primer bulb for 5/16" hose
18-8005EP-1	Primer bulb for 3/8" hose

CUSTOM FUEL LINE ASSEMBLIES

- Sierra can fabricate custom assemblies for OEM applications.
- Any combination of hose and fittings is possible.
- Use type A hose to the splash well and type B hose to the engine.
- Customizable length.
- Inlet can be 3/8" with 5/16" outlet.
- Numerous OEM connectors available.



BRACKETS

Sierra brackets are precision machined powder coated aluminum or marine grade stainless steel. They are available with 3/8" or 1/4" inlets.



Part # Bulk	Part # Boxed	Description	Standard Pack
N-187776	18-7776	3/8" Thread Stainless Steel	14
N-187777	18-7777	1/4" Thread Stainless Steel	14
N-187775	18-7775	3/8" Thread Aluminum	48
SUB-187852-1	18-7853-1	1/4" Thread Aluminum	48
N-187774S	18-7774	1/4" Thread Aluminum (Compact)	60
N-184264	18-4264	3/8" Pipe Plugs	—
5153R	18-4256	1/4" Pipe Plugs	—



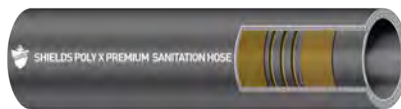
SHIELDS SANITATION HOSE

Shields Sanitation Hose is kink resistant and flexible. It has an EPDM tube and cover, it is wire reinforced and has two fabric plies. This sanitation hose is resistant to toilet chemicals, odor permeation, ozone, salt water and heat. This hose is primarily used for toilet to holding tank, holding tank pump out, and maximum resistance to odor permeation.



I.D.	mm	O.D.	Ply	Burst Pressure	Wt. "C"	Bulk Pack 50' (15.2m) Coil Code #	Dist. Pkg. 12 1/2' (3.8m) Length Code #	25" (7.6mm) Coil Code #
1"	25	1 5/16"	2	200#	38	16-101-1000	16-101-1004	—
1 1/2"	38	1 55/64"	2	150#	55	16-101-1120	16-101-1124	16-101-1125

SHIELDS POLY X SANITATION HOSE



Shields Poly X Sanitation Hose has a lifetime warranty against odor permeation. This ultimate sanitation hose combines the flexibility of a rubber hose with the permeation resistance of polyurethane. Poly X can easily be slipped over most fittings and the polyurethane cover is extremely abrasion resistant. This hose has a glossy cover for easy clean up. This hose is primarily used for head to holding tank and holding tank pump out.

The tube is made of smooth, white NBR and is chemical and detergent resistant. The cover is comprised of smooth polyurethane and has a glossy cover. It is heat, weather, ozone and abrasion resistant.

I.D.	mm	O.D.	mm	Ply	Vac Rating	Wt "C"	50' (15.2m) coil Code #	12 1/2' (3.8m) lgth Code #	10' (3.1m) Box Code #
1"	25	1 21/64"	33.7	2	28	51	16-105-1000	16-105-1004	16-105-1003BX
1 1/2"	38	1 27/32"	46.8	2	28	74	16-105-1120	16-105-1124	16-105-1123BX

SHIELDS SANITATION HOSE FITTINGS

Fiberglass reinforced nylon fittings designed to fit Series 101, Series 105 and Series 144 and 148 hoses without heating or special tools. For use in sanitation systems, deck drain systems and water tank fill. Fittings are durable, chemical and fuel resistant, will not rust or cause electrolysis.

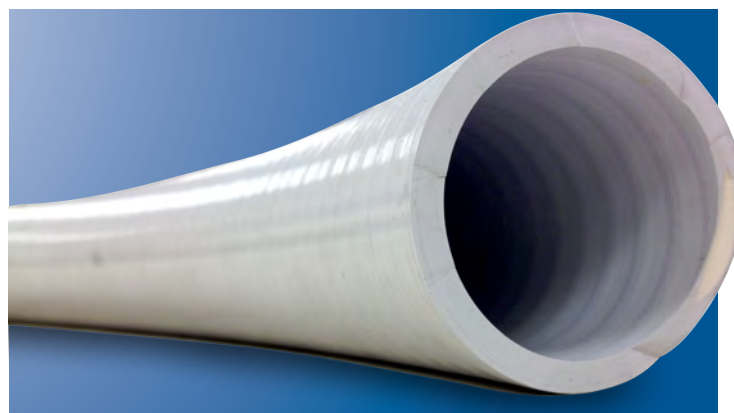
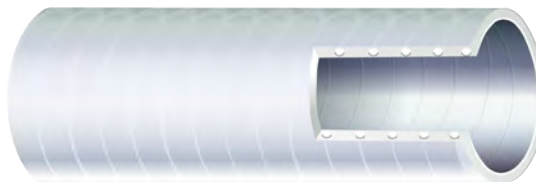
Style	Bulk Code #	Blister Pack Code #	Hose I.D.	mm	Thread
Straight Male	N800-0340	—	3/4"	19.1	3/4" MP
Straight Male	N800-1000	—	1"	25.4	1" MP
Straight Male	N800-1180	—	1 1/8"	28.6	1" MP
Straight Male	N800-1140	—	1 1/4"	31.8	1 1/4" MP
Straight Male	N800-1120	18-800-1120	1 1/2"	38.1	1 1/2" MP
Straight Female	N801-1120	18-801-1120	1 1/2"	38.1	1 1/2" FP
90 Degree Male	N802-1120	18-802-1120	1 1/2"	38.1	1 1/2" MP
90 Degree Female	N803-1120	18-803-1120	1 1/2"	38.1	1 1/2" FP
Hose Tee	N806-1120	18-806-1120	1 1/2"	38.1	N/A





SHIELDS SUPER PVC SANITATION HOSE

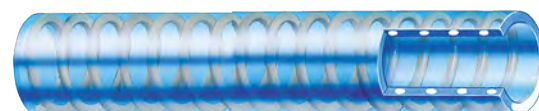
Shields Super PVC Sanitation Hose is smooth off white PVC with a vinyl helix. It contains an anti-fungus /bacterial agent to inhibit odor causing growth. It is resistant to mild chemicals, saltwater, and permeation. This hose is primarily used for toilet to holding tank (self draining lines) and holding tank pump out. It has a five year limited warranty. **Do not use ethylene glycol based anti-freeze in hose.** **CAUTION - Do not use for potable water.**



I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
1"	25.4	3	76.2	28	27	16-144-1000	16-144-1006①
1 1/2"	38.1	5	127.3	28	40	16-144-1120	16-144-1126①

① **WARNING:** Lines containing raw sewage should be plumbed to be self-draining.

SHIELDS VAC EXTRA HEAVY DUTY - INDUSTRIAL GRADE

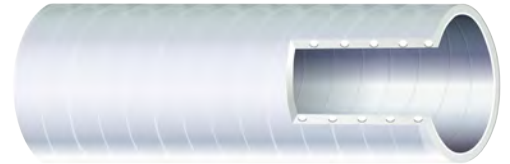
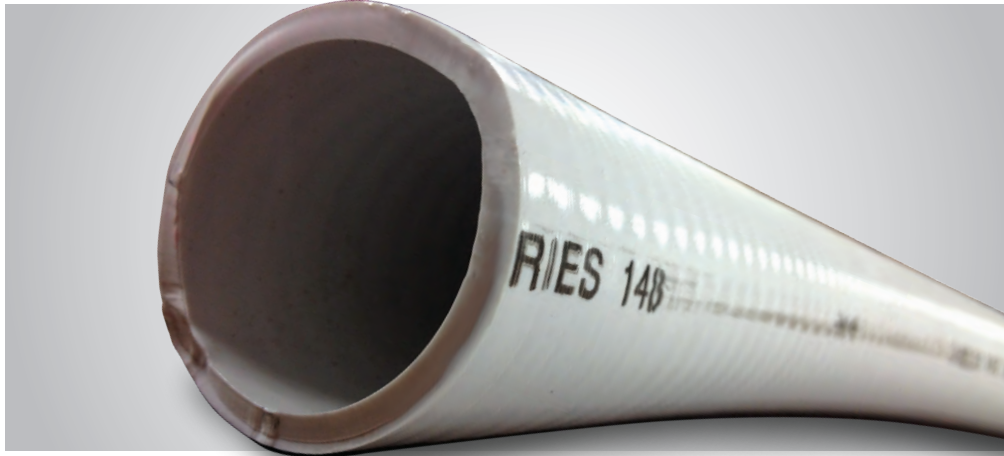


Shields Vac Extra Heavy Duty/Commercial Grade Hose has a smooth cover and clear FDA formula PVC with a white vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, potable water tank fill, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake, vent and pump out). This hose is utilized for below the waterline connections. **Do not use ethylene glycol based antifreeze in hose.** **Do not use in pressurized water systems.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	50' (15.2m) R/O Ctn. Code #	Dist. Pkg. 10' (3.1m) Length Code #
5/8"	15.9	3	76.2	28	15	16-146-0580	16-146-0586	—
3/4"	19.1	3	76.2	28	16	16-146-0340	16-146-0346	—
1"	25.4	3	76.2	28	27	16-146-1000	16-146-1006	—
1 1/8"	28.6	4	101.6	28	25	16-146-1180	16-146-1186	—
1 1/4"	31.8	3	76.2	28	30	16-146-1140	16-146-1146	—
1 1/2"	38.1	4	101.6	28	40	16-146-1120	16-146-1126	—
2"	50.8	5	127.0	28	57	16-146-2000	—	16-146-2003
2 1/2"	63.5	7	177.8	28	74	16-146-2120	—	16-146-2123
3"	76.2	9	228.6	28	94	16-146-3000	—	16-146-3003



SHIELDS VAC EXTRA HEAVY DUTY/FDA

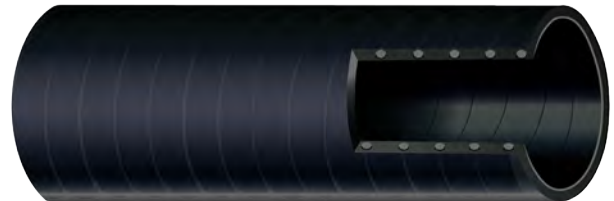


Shields Vac Extra Heavy Duty/FDA Hose has a smooth white FDA grade PVC with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals, permeation, and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, potable water tank fill, and sanitation (toilet to holding tank, intake, self draining lines vent and pump out). This hose is resistant to odor permeation. **Do not use ethylene glycol based antifreeze in hose. Do not use in pressurized water systems.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #	25' (7.6m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-148-0580W	16-148-0586W	—
3/4"	19.1	3	76.2	28	20	16-148-0340W	16-148-0346W	—
1"	25.4	3	76.2	28	27	16-148-1000W	16-148-1006W ①	—
1 1/8"	28.6	4	101.6	28	29	16-148-1180W	16-148-1186W	—
1 1/4"	31.8	4	101.6	28	31	16-148-1140W	16-148-1146W	—
1 1/2"	38.1	5	127.0	28	40	16-148-1120W	16-148-1126W ①	16-148-1125W

① **WARNING:** Lines containing raw sewage should be plumbed to be self-draining.

SHIELDS LIVEWELL HOSE



Shields Livewell Hose has a black smooth cover with vinyl helix. It is rated for full vacuum and is resistant to mild chemicals and saltwater. This hose is primarily used for bilge pump intake and discharge, drains (sinks, shower, and scupper), livewell intake and drain, and sanitation (intake and vent). This hose is utilized for below the waterline connections. **Do not use ethylene glycol based antifreeze in hose.**

I.D.	mm	Bend Radius	mm	Vac Rating	Wt. "C"	Bulk Pack 100' (30.5m) Coil Code #	Dist. Pkg. 50' (15.2m) R/O Ctn. Code #
5/8"	15.9	3	76.2	28	15	16-149-0580	16-149-0586
3/4"	19.1	3	76.2	28	16	16-149-0340	16-149-0346
1"	25.4	3	76.2	28	24	16-149-1000	16-149-1006
1 1/8"	28.6	4	101.6	28	25	16-149-1180	16-149-1186
1 1/4"	31.8	4	101.6	28	28	16-149-1140	16-149-1146
1 1/2"	38.1	5	127.0	28	39	16-149-1120	16-149-1126

Ventilation Hose/ AC Duct



SHIELDS 400/402 VINYLVENT



Shields Vinylvent Ducting Hose is PVC supported by anodized wire helix. It is resistant to UV and the ozone. This hose is primarily used for venting of bilge fumes.



I.D.	mm	O.D.	mm	Wt/ "C"	Bulk Pack 50' (76.2m) Length Code # White	Dist. Pkg. 10' (3.1m) Polypac Code # White
3"	76.2	3 1/8"	79.4	8	16-400-3000	16-400-3003
4"	101.6	4 1/8"	104.8	10	16-400-4000	16-400-4003
3"	76.2	3 1/8"	79.4	8	16-402-3000	16-402-3003
4"	101.6	4 1/8"	104.8	10	16-402-4000	16-402-4003

SHIELDS EXTRA HEAVY DUTY VINYLVENT



Shields Extra Heavy Duty Vinylvent has an extra heavy PVC wall. It is supported by vinyl coated helical wire and is resistant to ozone, UV, and corrosion. It is flame resistant and meets the UL 94V standard. This hose is primarily used for venting of bilge fumes.

I.D.	mm	O.D.	mm	Wt. "C"	Code No.
3"	76	3 1/8"	79.4	17	16-420-3000
4"	102	4 1/8"	104.8	25	16-420-4000
Bulk Pack: 3" 6 x 50		4" 4 x 50			



SHIELDS FIBERVENT



Shields Fibervent is vinyl coated, woven fiberglass hose. It is supported by vinyl coated helical wire and is resistant to ozone, UV, and corrosion. The hose is flame resistant and meets the UL 181 Class 1 standard. This hose is primarily used for venting of bilge fumes and A/C ducting hose. The temperature ranges from -20° F to +250° F.



Bulk	m	I.D.	mm	O.D.	mm	Rating	Vac Wt. "C"	Code No.
6 x 25'	1.8x7.6	3"	76.2	3 1/4"	82.6	20	13	16-450-3000
8 x 25'	2.4x7.6	4"	101.6	4 1/4"	108	20	15	16-450-4000
8 x 25'	2.4x7.6	5"	127	5 1/4"	133.4	20	17	16-450-5000
4 x 25'	1.2x7.6	6"	152.4	6 1/4"	158.8	20	19	16-450-6000

SHIELDS AIR CONDITIONER DUCTING HOSE



Bulk	m	I.D.	mm	O.D.	mm	Wt. "C"	Code No.
5 x 25'	1.5x7.6	3"	76	3 1/4"	82.5	22	16-460-3000
6 x 25'	1.8x7.6	4"	102	4 1/4"	108	24	16-460-4000
5 x 25'	1.5x7.6	5"	127	5 1/4"	133.4	32	16-460-5000
4 x 25'	1.2x7.6	6"	152	6 1/4"	158.8	36	16-460-6000
2 x 25'	.6x7.6	7"	178	7 1/4"	184.2	44	16-460-7000

Shields Air Conditioner Ducting Hose has a smooth tube for maximum airflow. This is a vinyl coated, woven fiberglass hose and is supported by vinyl coated helical wire. It is resistant to ozone, UV, and corrosion. The hose is flame resistant and meets the UL 94-V-0 standard. This hose is primarily used for venting of bilge fumes and A/C ducting hose. The temperature ranges from -20° – +200°F

Wet Exhaust System



SHIELDS MARINE EXHAUST/WATER HOSE (No Wire)



Shields Marine Exhaust / Water Hose is reinforced with 2 or 4 plies of synthetic cord and is made of black, heavy-walled synthetic rubber. This hose is primarily used for straight connections in wet exhaust systems and engine water circulation lines. It is resistant to engine heat, exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose also has double the ozone resistance required by SAEJ2006. The temperature ranges from -20°F – +200°F continuous, +250°F intermittent. The hose meets SAE J2006 Type R1 standards.



Now double the ozone resistance required by SAEJ2006

I.D.	mm	O.D.	Ply	Wt. "C"	50' Coil Code #	12 1/2' Length Code #	6 1/4' Length Code #
1/2"	13	7/8"	2	24	16-200-0120	16-200-0124	16-200-0121
5/8"	16	1 1/32"	2	33	16-200-0580	16-200-0584	16-200-0581
3/4"	19	1 9/64"	2	37	16-200-0340	16-200-0344	16-200-0341
7/8"	22	1 17/64"	2	42	16-200-0780	16-200-0784	16-200-0781
1"	25	1 3/8"	2	48	16-200-1000	16-200-1004	16-200-1001
1 1/8"	28	1 1/2"	2	52	16-200-1180	16-200-1184	16-200-1181
1 1/4"	32	1 45/64"	2	60	16-200-1140	16-200-1144	16-200-1141
1 5/16"	33	1 47/64"	2	62	16-200-1560	16-200-1564	16-200-1561
1 3/8"	35	1 13/16"	2	66	16-200-1380	16-200-1384	16-200-1381
1 1/2"	38	1 15/16"	2	70	16-200-1120	16-200-1124	16-200-1121
1 5/8"	42	2 3/32"	2	77	16-200-1580	16-200-1584	16-200-1581
1 3/4"	45	2 13/64"	2	82	16-200-1340	16-200-1344	16-200-1341
1 7/8"	48	2 23/64"	2	96	16-200-1780	16-200-1784	16-200-1781
2"	51	2 31/64"	2	102	16-200-2000	16-200-2004	16-200-2001
2 1/8"	54	2 19/32"	2	107	16-200-2180	16-200-2184	16-200-2181
2 1/4"	58	2 3/4"	2	114	16-200-2140	16-200-2144	16-200-2141
2 3/8"	60	2 7/8"	2	132	16-200-2380	16-200-2384	—
2 1/2"	63	3"	2	136	16-200-2120	16-200-2124	16-200-2121
2 5/8"	67	3 3/32"	2	147	—	16-200-2584	16-200-2581
2 3/4"	70	3 17/64"	2	152	—	16-200-2344	16-200-2341
2 7/8"	73	3 7/16"	2	174	16-200-2780	16-200-2784	16-200-2781
3"	76	3 9/16"	2	182	16-200-3000	16-200-3004	16-200-3001
3 1/8"	80	3 45/64"	2	190	—	16-200-3184	16-200-3181
3 1/2"	90	4 3/32"	2	198	—	16-200-3124	16-200-3121
3 3/4"	95	4 9/32"	2	221	—	16-200-3344	16-200-3341
4"	102	4 17/32"	4	229	—	16-200-4004	16-200-4001
4 1/2"	114	5 1/8"	2	300	—	16-200-4124	16-200-4121
5"	127	5 5/8"	2	332	—	16-200-5004	16-200-5001
5 1/2"	140	5 9/16"	2	396	—	16-200-5124	16-200-5121
6"	152	6 11/16"	2	427	—	16-200-6004	16-200-6001
8"	203	8 25/32"	4	670	—	16-200-8004	—
10"	254	10 7/8"	4	934	—	16-200-10004	—
12"	305	12 7/8"	4	1095	—	16-200-12004	—
14"	350	14 7/8"	4	1430	—	16-200-14004*	—

* Special Order



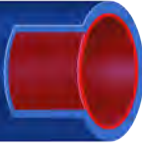
This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.



Wet Exhaust System

SHIELDS NAUTIFLEX SILICONE EXHAUST HOSE

Wet Exhaust Hose SAE J2006 Type R1



I.D.	mm	O.D.	Wt. "C"	3' (.9m) Length Code No.	6' (1.8m) Length Code No.	12' (3.7m) Length Code No.
1"	25	1 3/8"	33.1	16-202-1000-36	16-202-1001	16-202-1004
1 1/8"	28	1 1/2"	37.2	16-202-1180-36	16-202-1181	—
1 1/4"	32	1 5/8"	41.3	16-202-1140-36	16-202-1141	16-202-1144
1 3/8"	35	1 3/4"	45.4	16-202-1380-36	16-202-1381	—
1 1/2"	38	1 7/8"	49.6	16-202-1120-36	16-202-1121	16-202-1124
1 3/4"	45	2 1/8"	57.8	16-202-1340-36	16-202-1341	—
2"	51	2 3/8"	66.1	16-202-2000-36	16-202-2001	16-202-2004
2 3/8"	60	2 3/4"	78.5	16-202-2380-36	16-202-2381	16-202-2384
2 1/2"	63	2 7/8"	82.6	16-202-2120-36	16-202-2121	16-202-2124
2 5/8"	67	2 63/64"	86.8	16-202-2580-36	16-202-2581	16-202-2584
2 3/4"	70	3 1/8"	90.9	16-202-2340-36	16-202-2341	—
2 7/8"	73	3 1/4"	94.1	16-202-2780-36	16-202-2781	—
3"	76	3 3/8"	99.2	16-202-3000-36	16-202-3001	16-202-3004
3 1/4"	82	3 1/2"	103.4	16-202-3140-36	16-202-3141	16-202-3144
3 1/2"	90	3 7/8"	115.7	16-202-3120-36	16-202-3121	16-202-3124
4"	102	4 3/8"	132	16-202-4000-36	16-202-4001	16-202-4004
5"	127	5 3/8"	165	16-202-5000-36	16-202-5001	16-202-5004
5 1/2"	140	5 7/8"	181.5	16-202-5120-36	—	—
6"	152	6 3/8"	198	16-202-6000-36	16-202-6001	16-202-6004
8"	203	8 3/8"	264	16-202-8000-36	—	—
10"	254	10 3/8"	330	16-202-10000-36	—	—
12"	305	12 3/8"	396	16-202-12000-36	—	—
14"	350	14 5/8"	462	16-202-14000-36	—	—

Shields Nautiflex Silicone Exhaust Hose has a blue silicone cover with a smooth finish for easy clean up. This hose is flexible, easy to install and has four plies of synthetic fabric. It also remains stable at elevated temperatures. This hose is primarily used for straight connections in the wet exhaust system and engine water circulation lines. The temperature ranges from - 20°F - +350°F. The hose meets SAE J2006 Type R1 and ISO 13363:2004 - Type 2 - Class B standards.



Wet Exhaust System



SHIELDSFLEX II MARINE WATER/EXHAUST HOSE (w/ Wire)



Shieldsflex II Marine Water/Exhaust Hose has a black synthetic rubber tube and cover. It is reinforced with wire helix imbedded between plies of HD synthetic cord. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. This hose is abrasion and odor permeation resistant. It now has double the ozone resistance required by the SAEJ2006. Shieldsflex II is primarily used for engine intake, wet exhaust connections (use where bends or long lengths are required), bilge pump intake/discharge, scupper lines, toilet intake/discharge, and holding tank vent/pump out. The temperature ranges from -20°F – +200°F continuous, +250°F intermittent. The hose meets SAE J2006 Type R2 standards.

I.D.	mm	O.D.	Ply	Wt. "C"	50' (15.2m) Coil Code #	25' (7.6m) Cartons	12 1/2' (3.8m) Length Code #	6 1/4' (1.9m) Length Code #
1/2"	13	27/32"	2	24	16-250-0120	16-250-0125	16-250-0124	16-250-0121
5/8"	16	61/64"	2	28	16-250-0580	16-250-0585	16-250-0584	16-250-0581
3/4"	19	1 1/16"	2	32	16-250-0340	16-250-0345	16-250-0344	16-250-0341
7/8"	22	1 3/16"	2	36	16-250-0780	16-250-0785	16-250-0784	16-250-0781
1"	25	1 5/16"	2	40	16-250-1000	16-250-1005	16-250-1004	16-250-1001
1 1/8"	28	1 7/16"	2	44	16-250-1180	16-250-1185	16-250-1184	16-250-1181
1 1/4"	32	1 19/32"	2	50	16-250-1140	16-250-1145	16-250-1144	16-250-1141
1 5/16"	33	1 5/8"	2	51	16-250-1560	—	16-250-1564	16-250-1561
1 3/8"	35	1 23/32"	2	58	16-250-1380	16-250-1385	16-250-1384	16-250-1381
1 1/2"	38	1 53/64"	2	62	16-250-1120	16-250-1125	16-250-1124	16-250-1121
1 5/8"	42	2"	2	80	16-250-1580	—	16-250-1584	16-250-1581
1 3/4"	45	2 1/8"	2	88	16-250-1340	—	16-250-1344	16-250-1341
1 7/8"	48	2 19/64"	2	93	16-250-1780	—	16-250-1784	16-250-1781
2"	51	2 13/32"	2	99	16-250-2000	—	16-250-2004	16-250-2001
2 1/8"	54	2 17/32"	2	107	16-250-2180	—	16-250-2184	16-250-2181
2 1/4"	58	2 11/16"	2	127	16-250-2140	—	16-250-2144	16-250-2141
2 3/8"	60	2 3/4"	2	132	16-250-2380	—	16-250-2384	16-250-2381
2 1/2"	63	2 7/8"	2	137	16-250-2120	—	16-250-2124	16-250-2121
2 5/8"	67	3 1/16"	2	147	—	—	16-250-2584	16-250-2581
2 3/4"	70	3 3/16"	2	164	16-250-2340	—	16-250-2344	16-250-2341
2 7/8"	73	3 5/16"	2	170	16-250-2780	—	16-250-2784	16-250-2781
3"	76	3 7/16"	2	177	16-250-3000	—	16-250-3004	16-250-3001
3 1/8"	80	3 5/8"	2	200	16-250-3180	—	16-250-3184	16-250-3181
3 1/2"	90	4"	2	223	16-250-3120	—	16-250-3124	16-250-3121
4"	102	4 5/8"	2	269	16-250-4000	—	16-250-4004	16-250-4001
4 1/8"	105	4 47/64"	2	276	—	—	—	—
4 1/2"	114	5 3/32"	2	319	16-250-4120	—	16-250-4124	16-250-4121
5"	127	5 5/8"	2	398	16-250-5000	—	16-250-5004	16-250-5001
5 1/8"	130	5 3/4"	2	417	—	—	—	—
5 1/2"	140	6 3/16"	2	443	—	—	—	—
6"	152	6 21/32"	2	482	—	—	16-250-6004	16-250-6001
8"	203	8 25/32"	2	780	—	—	16-250-8004	—



This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.

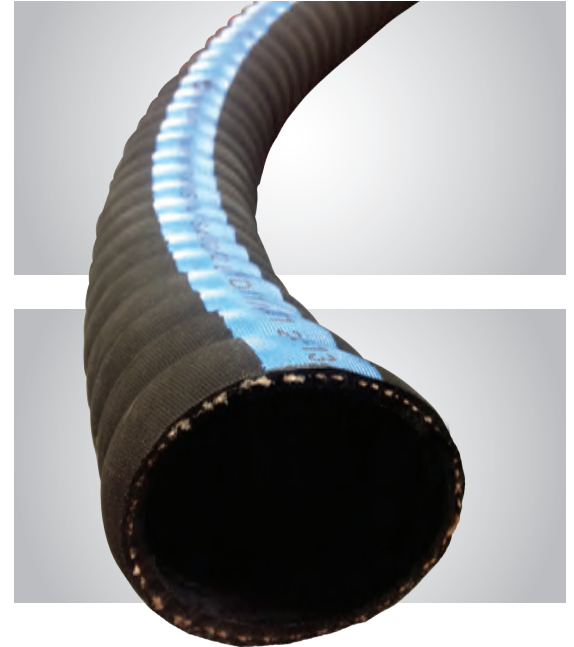


Now double the ozone resistance required by SAEJ2006



Wet Exhaust System

SHIELDSAUST-C



Now double the ozone resistance required by SAEJ2006



Shieldsaust – C Hose has a black synthetic rubber tube and cover. It is reinforced with double wire helix imbedded between plies of synthetic cord and is abrasion resistant. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze, and saltwater. This hose is primarily used for wet exhaust connections with significant bends, engine intake and scupper lines. The temperature ranges from -20°F to +200°F continuous, +250°F intermittent. The hose now has double the ozone resistance required by SAEJ2006. This hose meets SAE J2006 Type R2 standards.

I.D.	mm	O.D.	Ply	Wt. "C"	50' (15.2m) Coil Code #	12 1/2' (3.8m) Length Code #	6 1/4' (1.9m) Length Code #
3/4"	19	1 1/8"	2	27	16-252-0340	16-252-0344	16-252-0341
1"	25	1 11/32"	2	33	16-252-1000	16-252-1004	16-252-1001
1 1/4"	32	1 39/64"	2	45	16-252-1140	16-252-1144	16-252-1141
1 1/2"	38	1 15/16"	2	70	16-252-1120	16-252-1124	16-252-1121
1 5/8"	42	2 3/32"	2	80	16-252-1580	16-252-1584	16-252-1581
1 3/4"	45	2 7/32"	2	85	16-252-1340	16-252-1344	16-252-1341
1 7/8"	48	2 21/64"	2	91	16-252-1780	16-252-1784	16-252-1781
2"	51	2 7/16"	2	95	16-252-2000	16-252-2004	16-252-2001
2 1/8"	54	2 9/16"	2	100	—	16-252-2184	—
2 1/4"	58	2 23/32"	2	107	16-252-2140	16-252-2144	16-252-2141
2 3/8"	60	2 51/64"	2	110	16-252-2380	16-252-2384	16-252-2381
2 1/2"	63	2 59/64"	2	115	16-252-2120	16-252-2124	16-252-2121
2 3/4"	70	3 1/16"	2	126	16-252-2340	16-252-2344	16-252-2341
2 7/8"	73	3 5/16"	2	137	16-252-2780	16-252-2784	16-252-2781
3"	76	3 7/16"	2	143	16-252-3000	16-252-3004	16-252-3001
3 1/8"	80	3 19/32"	2	150	16-252-3180	16-252-3184	16-252-3181
3 1/2"	90	4 1/16"	2	200	16-252-3120	16-252-3124	16-252-3121
4"	102	4 9/16"	2	231	16-252-4000	16-252-4004	16-252-4001
4 1/8"	105	4 11/16"	2	238	—	16-252-4184	16-252-4181
4 1/2"	114	5 1/8"	2	278	—	16-252-4124	16-252-4121
5"	127	5 9/16"	2	300	16-252-5000	16-252-5004	16-252-5001
6"	152	6 9/16"	2	394	16-252-6000	16-252-6004	16-252-6001
8"	203	8 11/16"	2	607	—	16-252-8004	16-252-8001



This certification provides unbiased, third party confirmation worldwide that these Shields hoses meet the highest standards of production quality. Certification ensures the proper level of product safety and inspires user confidence.

Wet Exhaust System



SHIELDS NAUTIFLEX CORRUGATED SILICONE EXHAUST HOSE



ID	mm	OD	WT "C"	10' (3.1m) length Code No.	12 1/2' (3.8m) Length Code No.	50' (15.2m) coil Code No.
3/4"	19	1 3/8"	34	—	16-262-0344	16-262-0340
1"	25	1 27/64"	42	—	16-262-1004	16-262-1000
1 1/8"	28	1 1/2"	46	—	16-262-1184	16-262-1180
1 1/4"	32	1 45/64"	52	—	16-262-1144	16-262-1140
1 3/8"	35	1 55/64"	60	—	16-262-1384	16-262-1380
1 1/2"	38	2"	71	—	16-262-1124	16-262-1120
1 5/8"	42	2 11/64"	74	—	16-262-1584	16-262-1580
1 3/4"	45	2 19/64"	78	—	16-262-1344	16-262-1340
1 7/8"	48	2 13/32"	82	—	16-262-1784	16-262-1780
2"	51	2 17/32"	87	—	16-262-2004	16-262-2000
2 1/8"	54	2 5/8"	94	—	16-262-2184	—
2 3/8"	60	2 7/8"	101	—	16-262-2384	16-262-2380
2 1/2"	63	3 3/64"	113	—	16-262-2124	16-262-2120
2 5/8"	67	3 13/64"	120	—	16-262-2584 *	—
2 3/4"	70	3 5/16"	125	—	16-262-2344 *	—
2 7/8"	73	3 7/16"	134	—	16-262-2784	16-262-2780
3"	76	3 35/64"	139	—	16-262-3004	16-262-3000
3 1/2"	90	4 19/64"	227	—	16-262-3124	16-262-3120
4"	102	4 49/64"	255	—	16-262-4004	16-262-4000
5"	127	5 3/4"	310	16-262-5003	—	16-262-5000
6"	152	6 15/16"	484	16-262-6003	—	—
8"	203	9 7/64"	768	16-262-8003	—	—
10"	254	11 17/64"	1136	16-262-10003	—	—

* Special Order

Shields Nautiflex Corrugated Silicone Exhaust Hose has a blue silicone tube and cover with a smooth finish for easy cleaning. The hose is wire reinforced and will not collapse under suction or in a bend. The corrugated cover allows the hose to bend for easy installation. The Nautiflex, two ply construction, has wire captured between fabric plies. This hose is primarily used for main engine exhaust, generator exhaust, engine coolant circulation, engine intake and generator intake. It is resistant to exhaust fumes, ozone, mild chemicals, antifreeze and saltwater. The hose remains stable at elevated temperatures. The temperatures ranges from -20°F – +350°F. This hose meets SAEJ2006 Type R2 and ISO 13362:2004 – Type 1 – Class B standards.



Wet Exhaust System

SHIELDS SILICONE COUPLERS - SINGLE & DOUBLE HUMP W/ Reinforced Fabric



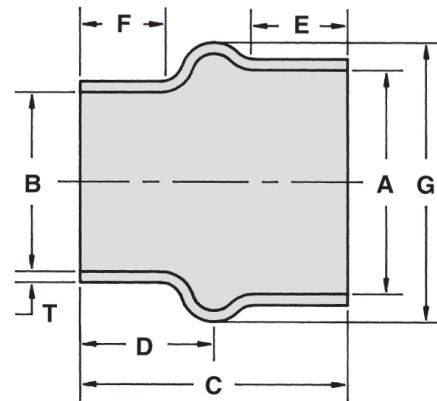
SINGLE HUMP

DOUBLE HUMP

Shields Single and Double Hump Couplers have a blue silicone cover with a smooth finish for easy clean up and are fabric reinforced. The couplers remain stable at elevated temperatures and provide angular and longitudinal vibration absorption in wet exhaust systems. Shields couplers correct slight offsets in pipes. They are resistant to exhaust fumes, ozone, mild chemicals, anti-freeze and saltwater. The temperature range is -20°F to +350°F. It meets SAE J2006 Type R1 standards.

	I.D.	mm	Length	mm	Wt. Ea. (lbs)	Code No.
SINGLE	4"	102	6"	152	2	16-272-4000
	5"	127	6"	152	2	16-272-5000
	6"	152	8"	203	2	16-272-6000
	8"	203	8"	203	3	16-272-8000
	10"	254	12"	305	4	16-272-10000
DOUBLE	6"	152.4	14"	356	3	16-274-6000
	8"	203.2	14"	356	3	16-274-8000
	10"	254	14"	356	4	16-274-10000

SHIELDS SILICONE COUPLERS - SINGLE & DOUBLE HUMP



Hump Hose

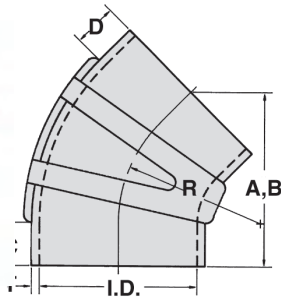
Shields Silicone Single and Double Hump Couplers are very high temperature silicone exhaust connectors. The maximum operating temperature is 450°F (232°C). It meets SAE J2006 Type R1 standards.

Part Number	A	mm	B	mm	C	mm	D	mm	E	mm	F	mm	G	mm	T	mm
16-220S4000	4.00	102	4.00	102	5.25	133	2.63	67	2.00	51	2.00	51	5.25	133	.25	6
16-220S5000	5.00	127	5.00	127	6.00	152	3.00	76	2.25	57	2.25	57	6.10	155	.25	6
16-220S6000	6.00	152	6.00	152	6.00	152	3.00	76	2.25	57	2.25	57	7.38	188	.25	6

Wet Exhaust System



SHIELDS SILICONE ELBOWS - 45°

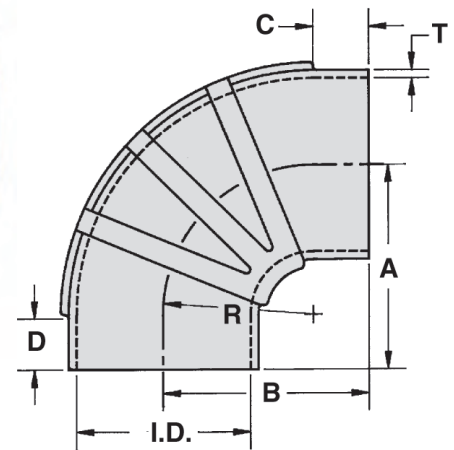


45° Elbow



Part Number	ID	mm	A	mm	B	mm	C	mm	D	mm	R	mm	T	mm
16-245S3000	3.0	76	5.5	140	5.5	140	1.6	41	1.6	41	3.75	95	.25	6
16-245S4000	4.0	102	5.5	140	5.5	140	1.46	37	1.46	37	4.25	108	.25	6
16-245S5000	5.0	127	5.5	140	5.5	140	1.36	35	1.36	35	4.5	114	.25	6
16-245S6000	6.0	152	6.5	165	6.5	165	1.74	44	1.74	44	5.0	127	.25	6

SHIELDS SILICONE ELBOWS - 90°



90° Elbow

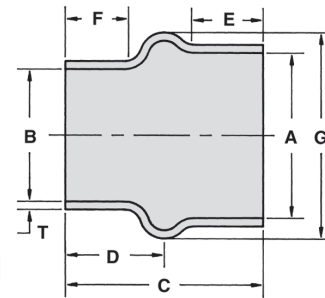
Part Number	ID	mm	A	mm	B	mm	C	mm	D	mm	R	mm	T	mm
16-290S2000	2.0	51	3.5	88.9	3.5	89	1.5	38	1.5	38	2.0	51	.25	6
16-290S3000	3.0	76	5.45	138	5.25	133	1.5	38	1.5	38	3.75	95	.25	6
16-290S4000	4.0	102	5.75	146	5.75	146	1.25	32	1.25	32	4.5	114	.25	6
16-290S5000	5.0	127	6.12	155	6.12	155	1.75	45	1.75	45	4.74	120	.25	6
16-290S6000	6.0	152	6.75	171	6.75	171	1.75	45	1.75	45	5.0	127	.25	6
16-290S8000	8.0	203	8.5	216	8.5	216	2.0	51	2.0	51	6.5	165	.37	9



Wet Exhaust System

SHIELDS EPDM COUPLERS - SINGLE & DOUBLE HUMP

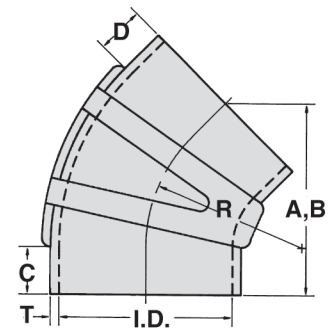
100% High temperature EPDM rubber. Maximum operating temperature 250° F (120° C).



Hump Hose

Part Number	A	mm	B	mm	C	mm	D	mm	E	mm	F	mm	G	mm	T	mm
16-220-3000	3.00	76	3.00	76	5.25	133	2.62	67	1.87	48	1.87	48	4.50	114	.25	6
16-220-3120	3.50	89	3.50	89	5.25	133	3.00	76	2.25	57	2.25	57	5.00	127	.25	6
16-221-400x300	4.00	102	3.00	76	5.25	133	2.00	51	2.00	51	3.00	76	5.25	133	.25	6
16-220-4000	4.00	102	4.00	102	5.25	133	2.63	67	2.00	51	2.00	51	5.25	133	.25	6
16-220-4120	4.50	114	4.50	114	6.00	152	3.00	76	2.25	57	2.25	57	6.00	152	.25	6
16-221-500x400	5.00	127	4.00	102	6.00	152	3.00	76	2.12	54	1.81	46	6.25	159	.25	6
16-220-5000	5.00	127	5.00	127	6.00	152	3.00	76	2.25	57	2.25	57	6.10	155	.25	6
16-221-600x500	6.00	152	5.00	127	6.00	152	3.00	76	2.13	54	1.88	48	7.50	191	.25	6
16-220-6000	6.00	152	6.00	152	6.00	152	3.00	76	2.25	57	2.25	57	7.38	188	.25	6
16-221-800x600	8.00	203	6.00	152	6.00	152	1.75	45	1.95	50	3.00	76	9.50	241	.25	6
16-220-8000	8.00	203	8.00	203	8.00	203	4.00	102	3.00	76	3.00	76	10.37	263	.31	8
16-221-1000x800	10.00	254	8.00	203	6.00	152	3.00	76	2.00	51	1.75	45	11.50	292	.25	6
16-220-10000	10.00	254	10.00	254	6.00	152	3.00	76	2.00	51	2.00	51	11.50	292	.25	6

SHIELDS EPDM ELBOWS - 45°



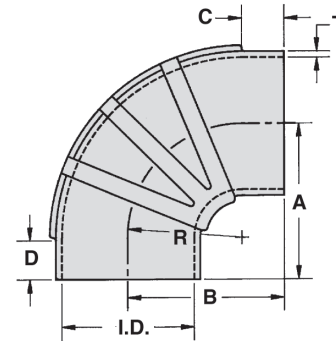
45° Elbow

Part Number	ID	mm	A	mm	B	mm	C	mm	D	mm	R	mm	T	mm
16-245-3000	3.0	76	5.5	140	5.5	140	1.6	41	1.6	41	3.75	95	.25	6
16-245-3120	3.5	89	5.5	140	5.5	140	2.0	51	2.0	51	4.0	102	.25	6
16-245-4000	4.0	102	5.5	140	5.5	140	1.46	37	1.46	37	4.25	108	.25	6
16-245-4120	4.5	114	5.06	129	5.06	129	1.5	38	1.5	38	3.5	89	.25	6
16-245-5000	5.0	127	5.5	140	5.5	140	1.36	35	1.36	35	4.5	114	.25	6
16-245-6000	6.0	152	6.5	165	6.5	165	1.74	44	1.74	44	5.0	127	.25	6
16-245-8000	8.0	203	8.06	205	8.06	205	2.0	51	2.0	51	6.5	165	.37	9
16-245-10000	10.0	254	10.5	267	10.5	267	2.25	57	2.75	70	8.5	216	.37	9

Wet Exhaust System



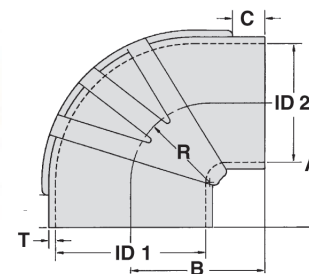
SHIELDS EPDM ELBOWS - 90°



90° Elbow

Part Number	ID	mm	A	mm	B	mm	C	mm	D	mm	R	mm	T	mm
16-290-2000	2.0	51	3.5	88.9	3.5	89	1.5	38	1.5	38	2.0	51	.25	6
16-290-2120	2.5	64	4.0	102	4.0	102	1.5	38	1.5	38	2.5	64	.25	6
16-290-3000	3.0	76	5.45	138	5.25	133	1.5	38	1.5	38	3.75	95	.25	6
16-290-3120	3.5	89	5.5	140	5.5	140	1.5	38	1.5	38	4.0	102	.25	6
16-290-4000	4.0	102	5.75	146	5.75	146	1.25	32	1.25	32	4.5	114	.25	6
16-290-4120	4.5	114	5.5	140	5.5	140	2.0	51	2.0	51	3.5	89	.25	6
16-290-5000	5.0	127	6.12	155	6.12	155	1.75	45	1.75	45	4.74	120	.25	6
16-290-6000	6.0	152	6.75	171	6.75	171	1.75	45	1.75	45	5.0	127	.25	6
16-290-8000	8.0	203	8.5	216	8.5	216	2.0	51	2.0	51	6.5	165	.37	9

SHIELDS EPDM ELBOWS - 90° REDUCING ELBOW



90° Reducing Elbow

Part Number	ID1	mm	ID2	mm	A	mm	B	mm	C	mm	D	mm	R	mm	T	mm
16-291-500x400	5.50	140	4.00	102	8.00	203	3.63	92	1.25	32	2.25	57	.20	5		
16-291-600x500	6.00	152	5.00	127	5.00	127	5.00	127	1.50	38	1.50	38	3.50	89	.25	6

Also available with series 720 T-bolt clamps. Order part number with "Kit" Suffix.



SHIELDS EXHAUST PROTECTOR VALVES

Specially compounded rubber flapper valves designed to prevent water from entering the exhaust system in following seas or when backing down. Made with weather resistant EPDM with U/V stabilizer.



Code #	Pipe Size	mm	O.E.M.	O.E. #
18-4456*	3"	76.2	Mercury	34765A1
18-4457*	4"	101.6	Mercury	12644A1
18-4458* ^①	5" or 6"	127 or 152.4	—	—
N-184456	3"	76.2	—	—
N-184457	4"	101.6	—	—
N-184458 ^①	5" or 6"	127 or 152.4	—	—

* Display Packaged

^① Must be cut at marks to fit 5" pipe

18-#'s include stainless steel hose clamp.

N-#'s are bulk flappers only

SHIELDS HOSE CLAMPS

All components are manufactured from marine grade 316 stainless steel. These clamps are designed to fit many applications from 5/16" to 7" diameter hoses.



Sierra No.	Bulk No.	Diameter Size	Std. No.
18-7307	N-187307	5/16" to 7/8"	006
18-7308	N-187308	9/16" to 1 1/16"	010
18-7309	N-187309	9/16" to 1 1/4"	012
18-7310	N-187310	1 1/16" to 1 1/2"	016
18-7311	N-187311	3/4" to 1 3/4"	020
18-7312	N-187312	1 1/16" to 2"	024
18-7313	N-187313	1 9/16" to 2 1/2"	032
18-7314	097R	2 9/16" to 3 1/2"	048
18-7315	590R	2 1/2" to 4 1/2"	064
18-7316 ^③	096R	3" to 5"	072
18-7317	N-187317	5" to 7"	104

^③ PKG OF 2

SHIELDS EXHAUST HOSE CLAMPS T-BOLT BAND CLAMPS

These exhaust hose clamps are designed to fit Shields series 200, 201, 210, 250, 252, and are perfect for any application below the water line. The band is 316 stainless steel and is .025 thick by .75 wide. Other hardware includes an extra long 1/4" bolt and a nylon inset locknut. Maximum torque of 75 inch pounds.

Diameter Range	mm	Hose I.D.	mm	Wt. "C"	Code No.
1.18 - 1.47	30.0 - 37.3	1"	25.4	9.4	18-720-1000 ^②
1.70 - 2.03	43.2 - 51.6	1 1/2"	38.1	12.5	18-720-1120 ^②
2.27 - 2.67	57.7 - 67.8	2"	50.8	12.8	18-720-2000
2.68 - 3.34	68.1 - 84.8	2 1/2"	63.5	15.6	18-720-2120
3.10 - 3.76	78.7 - 95.5	3"	76.2	15.8	18-720-3000
3.59 - 4.25	91.2 - 108	3 1/2"	88.9	17.2	18-720-3120
4.18 - 4.84	106.2 - 122.9	4"	101.6	18.8	18-720-4000
4.25 - 4.91	108.0 - 124.7	4 1/8"	104.8	18.9	18-720-4180
4.75 - 5.41	120.7 - 137.4	4 1/2"	114.3	20	18-720-4120
4.68 - 5.34	118.9 - 135.6	4 1/2"	114.3	20	18-720-4120S *
5.30 - 5.96	134.6 - 151.4	5"	127.0	22	18-720-5000
5.18 - 5.84	131.6 - 148.3	5"	127.0	22	18-720-5000S *
5.75 - 6.41	146.1 - 162.8	5 1/2"	139.7	25	18-720-5120
5.68 - 6.34	144.3 - 161.0	5 1/2"	139.7	25	18-720-5120S *
6.38 - 7.04	162.1 - 178.8	6"	152.4	27	18-720-6000
6.18 - 6.84	157.0 - 173.7	6"	152.4	27	18-720-6000S *
8.42 - 9.08	213.9 - 230.6	8"	203.2	29	18-720-8000
8.18 - 8.84	207.8 - 224.5	8"	203.2	29	18-720-8000S *
10.45 - 11.11	265.4 - 282.2	10"	254.0	31	18-720-10000
10.18 - 10.84	258.6 - 275.3	10"	254.0	31	18-720-10000S *
12.38 - 13.04	314.5 - 331.2	12"	304.8	33	18-720-12000
12.18 - 12.84	309.4 - 326.1	12"	304.8	33	18-720-12000S *
14.50 - 15.16	368.3 - 385.1	14"	355.6	41.1	18-720-14000
14.30 - 14.96	363.2 - 380.0	14"	355.6	41.1	18-720-14000S *

^② Clamps for 1" and 1 1/2" are 5/8" wide

* Designed to fit Series 202 silicone exhaust hose





FERRULE VISE/DIES

Hand operated vise for making fuel line assemblies without clamps. Vise uses ordinary barbed fittings with series 700 solid brass ferrules. Makes professional looking leak proof fuel lines. Furnished with removable handle. Dies must be ordered separately. When ordering dies, please consult chart under brass ferrules to determine proper size.

Part #	Description
No. 18-J-662-xxx	Dies give longitudinal crimp.
No. 18-J-664-xxx	Dies give circular and longitudinal crimp.
No. 18-J-VISE	Vise (w/o dies)

* Special Order Only

45° SAE FEMALE SWIVEL



Code No.	Hose I.D.	Tube	Thread
18-502-1476	1/4"	1/4"	7/16-20
18-502-1412	1/4"	5/16"	1/2-20
18-502-5612	5/16"	5/16"	1/2-20
18-502-5658	5/16"	3/8"	5/8-18
18-502-3858	3/8"	3/8"	5/8-18
18-502-3834	3/8"	1/2"	3/4-16
18-502-1234	1/2"	1/2"	3/4-16
18-502-1278	1/2"	5/8"	7/8-14

Standard Package: 100 pieces

ADAPTER — MALE PIPE TO SAE 45° FLARE



Code No.	Tube	Pipe
18-600-1418	1/4"	1/8"
18-600-1414	1/4"	1/4"
18-600-5618	5/16"	1/8"
18-600-5614	5/16"	1/4"
18-600-3818	3/8"	1/8"
18-600-3814	3/8"	1/4"
18-600-3838	3/8"	3/8"
18-600-1212	1/2"	1/2"

Standard Package: 100 pieces

ADAPTER — MALE PIPE TO SAE 45° FLARE 90°



Code No.	Tube	Pipe
18-601-3814	3/8"	1/4"

MALE PIPE



Bulk Pack Code No.	Hose Barb Sierra No.	Hose I.D.	Thread
18-500-1418	18-8043	1/4"	1/8"
18-500-1414	18-8042	1/4"	1/4"
18-500-5618	18-8054	5/16"	1/8"
18-500-5614	18-8055	5/16"	1/4"
18-500-3812	—	3/8"	1/2"
18-500-3818	18-8073	3/8"	1/8"
18-500-3814	18-8074	3/8"	1/4"
18-500-3838	18-8044	3/8"	3/8"
18-500-1238	—	1/2"	3/8"
18-500-1212	—	1/2"	1/2"
18-500-5838	18-8041	5/8"	3/8"
18-500-5834	—	5/8"	3/4"

STD. PKG. 100

STD. CTN. 12
(1 PER CARD)

SOLID BRASS FERRULES



Code No.	Hose Type	Die Set	Wt. "M"
18-700-5500	16-368-0140	550	—
18-700-6250	16-368-0560	625	—
18-700-6750	16-360-0140	675	—
18-700-7000	16-368-0380	700	—
18-700-7250	16-360-0560	725	—
18-700-7750	16-365-0380	775	—
18-700-8000	16-360-0380	775	—
18-700-8250	16-368-0120	825	—
18-700-9250	16-360-0120	900	—
18-700-1025	16-360-0580	1025	39.5



SHIELDS FLAME RETARDANT SPLIT WIRE CONDUIT



Flame retardant polypropylene is black with a blue stripe. It provides chafing protection for wiring systems and is split longitudinally for easy access to harness. It has a temperature range of +275°F. It meets ABYC standard 8.15.19. and UL 94 V2.



I.D.	mm	Wt. "C"	Code #	Pack	m	Dist. Pkg.		50' (15.2m) Box Code #
						100' (30.1m) R/O Ctn. Code #	50' (15.2m) R/O Ctn. Code #	
1/4"	6.4	1.26	16-128-0140B	3200'	975	16-128-0147B	16-128-0146B	16-128-0146B-1
3/8"	9.5	1.58	16-128-0380B	1800'	549	16-128-0387B	16-128-0386B	16-128-0386B-1
1/2"	12.7	2.31	16-128-0120B	1100'	335	16-128-0127B	16-128-0126B	16-128-0126B-1
5/8"	15.9	2.94	16-128-0580B	750'	229	16-128-0587B	16-128-0586B	16-128-0586B-1
3/4"	19.1	3.47	16-128-0340B	450'	137	16-128-0347B	16-128-0346B	16-128-0346B-1
1"	25.4	5.78	16-128-1000B	300'	91	16-128-1007B	16-128-1006B	16-128-1006B-1
1 1/4"	31.8	9.24	16-128-1140B	200'	61	16-128-1147B	16-128-1146B	—
1 1/2"	38.1	15.23	16-128-1120B	100'	31	—	16-128-1126B	—
2"	50.8	21.00	16-128-2000B	100'	31	—	—	—

SHIELDS STERNFLEX



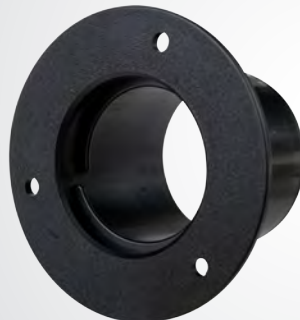
Shields Sternflex has a polyethylene co-polymer wall with an integral polyethylene helix. It is resistant to abrasion, crushing and UV. This hose is primarily used as a cover for the harness and for the hoses on the bracket mounted on outboard engines.



I.D.	mm	Bend Radius	mm	Wt. "C"	Bulk Pack 50' (15.2m) Length Code No.	Dist. Pkg. 10' (3.1m) Box Code No.
2"	50.8	3	76.2	39	16-126-2000B	16-126-2003B

RIGGING FLANGE

- 18-9761 - Part No.
N-189761 - Bulk Part No.
- U/V stabilized black plastic flange
 - Use with Shields 2" Sternflex P/N 16-126-2000B



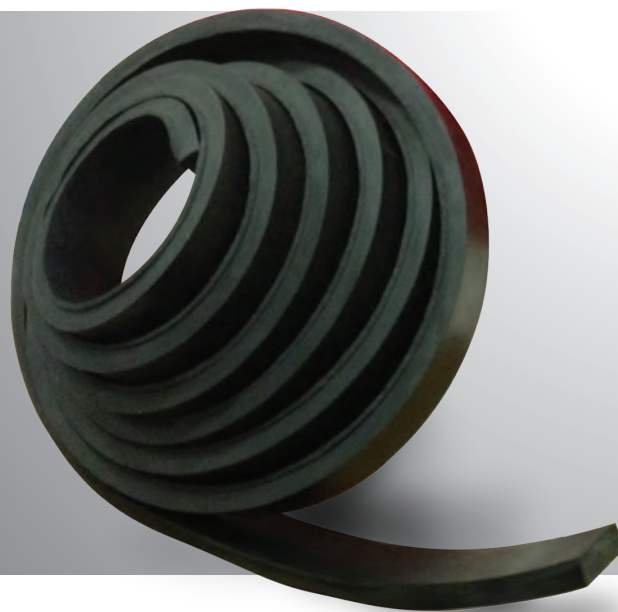
RIGGING HOSE KIT

- 18-9883 - Part No.
- Hides all engine cables and hoses
 - Can be added to any style outboard
 - Contains:
 - (1) U/V stabilized flange
 - 5' 2" Black Sternflex



SHIELDS NEOPRENE SHEET RUBBER

Solid Neoprene sheet rubber is designed for use under fuel tanks to comply with USCG requirements for air space. Also for gaskets, component padding and under wire straps. It can be custom cut to a variety of strips and shapes. It is offered in bulk rolls 36" wide x 10' long.



BULK SHEET

Thickness	mm	Width	mm	Length	mm	Code No.
1/8"	3.2	36"	914.4	10'	3.1	N18NEO60
3/16"	4.8	36"	914.4	10'	3.1	N316NEO60
1/4"	6.4	36"	914.4	10'	3.1	N14NEO60
3/8"	9.5	36"	914.4	10'	3.1	N38NEO60

DISTRIBUTOR BOXES

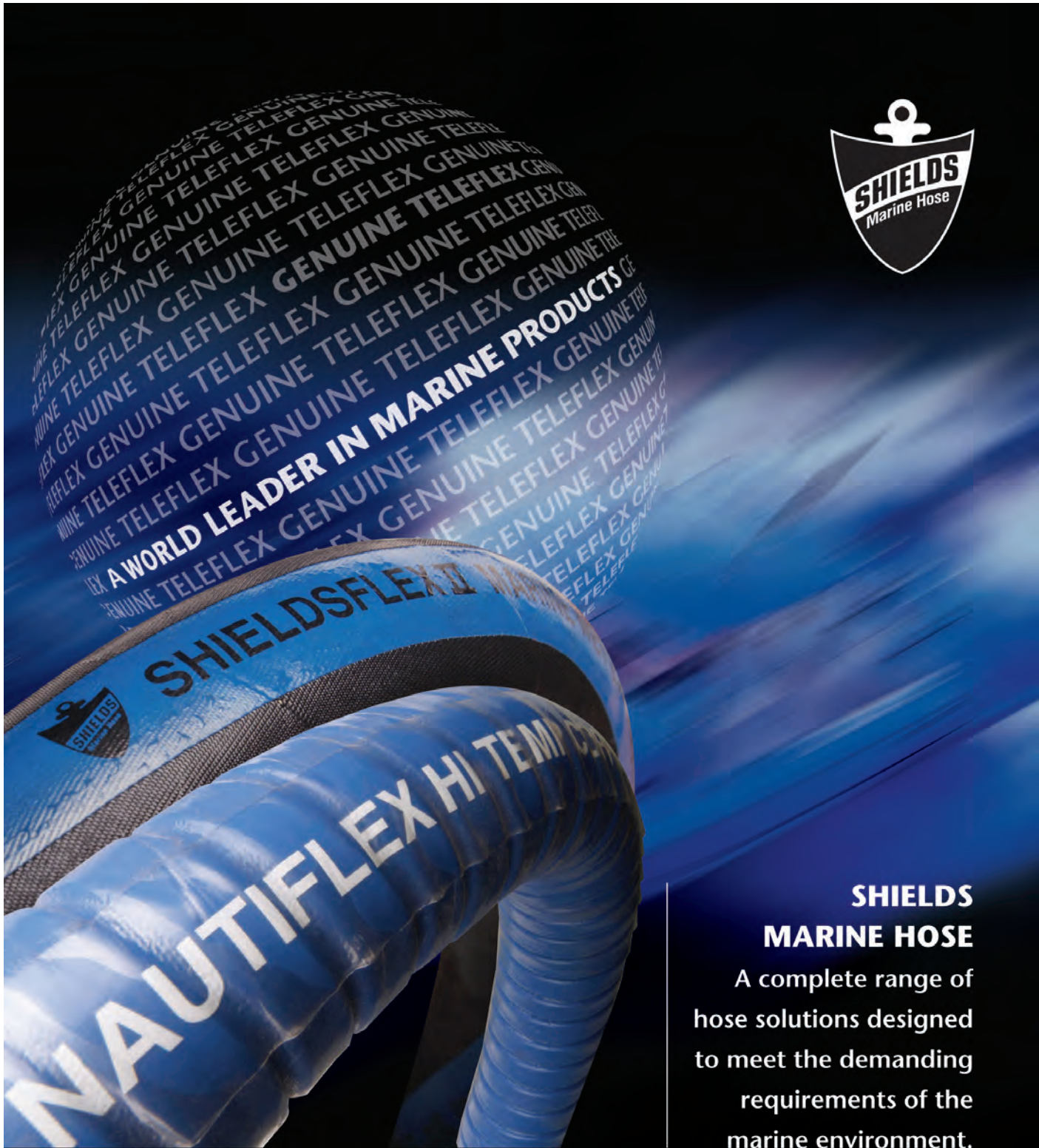
Thickness	mm	Width	mm	Length	mm	Code No.
1/8"	3.2	2"	50.8	10'	3.1	16-18X2X10
1/4"	4.8	2"	50.8	10'	3.1	16-14X2X10
3/8"	9.5	2"	50.8	10'	3.1	16-38X2X10
1/8"	3.3	1"	25.4	10'	3.1	16-18X1X10
1/4"	6.4	1"	25.4	10'	3.1	16-14X1X10
3/8"	9.7	1"	25.4	10'	3.1	16-38X1X10



SHIELDS SPEEDOMETER PITOT TUBING

This black vinyl tubing is HW reinforced with a polyester braid and provides a tight connection between your speedometer pickup (Pitot) and your speedometer.

Nominal I.D.	mm	Braid	Wt. "C"	Code #	Bulk Pack	mm	Dist. Pkg. 25' (7.6m) Polypac Code #
1/8" (.125")	3.2	0	2.2	16-151-0180	1500'	457.2	16-151-0185
4 mm (.157")	4.0	1	4.3	16-151-0180H.W.	300'	91.4	16-151-0185 H.W.



SHIELDS MARINE HOSE

A complete range of hose solutions designed to meet the demanding requirements of the marine environment.

ENGINE & DRIVE PARTS - CONTROLS & CABLES - INSTRUMENTATION - STEERING SYSTEMS

www.teleflexmarine.com

Teleflex[®]
MARINE



**THERE ARE NO SURPRISES WITH
THE SIERRA WARRANTY.**

We are dedicated to protecting you and
your investment.
We've got you covered because we believe
your boat should always be running.

the best in the business



Sierra[®]

WARRANTY

ENGINE & DRIVE PARTS - CONTROLS & CABLES - INSTRUMENTATION - STEERING SYSTEMS

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Teleflex[®]
MARINE

SIERRA CUSTOMER SATISFACTION WARRANTY

Limited Warranty:

SIERRA INTERNATIONAL INC. ("SIERRA") warrants its products to be free of defects in workmanship and materials for the useful life of the product (the "Warranty"). If a SIERRA product fails to comply with the Warranty, SIERRA will repair or replace the defective product free of charge. The Warranty is subject to the additional terms, conditions and limitations set forth below.

Warranty Claims for Professionally Installed Products:

For any SIERRA product that was originally installed on a vessel by a dealer or other professional installer that fails to comply with the Warranty, in addition to repairing or replacing the product free of charge, SIERRA will also reimburse the customer for reasonable labor charges incurred to replace the product, and reasonable towing and other similar incidental expenses incurred as a result of the failure of the product to comply with the Warranty. Labor will be calculated based on the installer's posted shop rate that is competitive with their local market rates. The original work order along with the original invoice and a copy of the new re-work order must be provided to SIERRA to file a claim for reimbursement of labor expenses. Towing charges will also be paid based on reasonable and customary rates in the local trading area. A copy of the original invoice for the towing service must be provided to SIERRA to file a claim for reimbursement of towing expenses.

ALL PROFESSIONAL INSTALLER WARRANTY CLAIMS MUST BE SUBMITTED IN ACCORDANCE WITH THE FOLLOWING PROCEDURE:

WITHOUT LABOR CLAIM – The dealer must return any allegedly defective SIERRA product to the distributor from whom it was purchased for analysis. The product shall be tagged with the SIERRA part number, date of purchase and the alleged cause of failure. The distributor will then forward the product to SIERRA with a request for credit. If SIERRA determines that the part failed to comply with the Warranty and otherwise qualifies for Warranty coverage under the terms hereof, SIERRA will issue credit for the product to the distributor. The distributor will reimburse the dealer. SIERRA will not issue credit for any products that are not returned to SIERRA. Products not manufactured or distributed by SIERRA will be held for disposition for 30 days.

WITH LABOR CLAIM – All warranty claims for which reimbursement of labor and/or towing expenses is sought are subject to prior authorization. Please call 217-324-9428 to discuss any such claim with a SIERRA representative. In order to process all claims quickly and efficiently, the following must be shipped directly to SIERRA via a traceable and insurable method (i.e. UPS, Federal Express, Registered U.S. Mail, etc.):

1. The allegedly defective product and any related damaged parts.
2. A written estimate detailing the following information:
 - a. A complete list, including part numbers of all products required for the warranty repair.
 - b. The shop labor rate and a breakdown of the time required for the repair.
 - c. The year, model and serial number of the warranted engine or drive.
 - d. The name and address of the distributor the products were purchased from.
 - e. The name, address and phone number of the customer.
3. The original work order or receipt detailing the initial installation of the allegedly defective product.
4. Any receipts detailing additional expenses.

Failure to provide required documentation and information may void all or part of the Warranty coverage.

Proof of delivery will be required on all lost shipments.

NOTE: Concerning labor claims on older products that cannot be rectified due to the unavailability of OEM replacement parts; SIERRA reserves the right to extend only the market value of the OEM product.

Send claims to:

TECHNICAL SERVICE
SIERRA INTERNATIONAL INC.
1 Sierra Place
Litchfield, IL 62056-3029
(217) 324-9428

Limitations:

THE EXPRESS WARRANTY SET FORTH ABOVE IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SIERRA does not warrant against, and the Warranty shall be void with respect to, damages or defects arising out of any of the following:

- improper or abnormal use or handling of SIERRA's products;
- installation or use of a SIERRA product in a manner that is inconsistent with SIERRA's application information, guidelines, instructions and/or specifications;
- defects in products or components not manufactured by SIERRA;
- non-SIERRA made products or components;
- SIERRA products transferred from a vessel on which they were originally installed;
- SIERRA products transferred from the engine on which they were originally installed;
- failure to maintain SIERRA products in accordance with SIERRA's application information, guidelines, instructions and/or specifications;
- ordinary wear and tear resulting from the operation and/or use of the SIERRA product.

This warranty also does not apply to products which have been altered or upon which repairs have been affected or attempted by persons other than pursuant to written authorization by SIERRA.

THIS STATEMENT OF LIMITED WARRANTY IS NOT A STATEMENT OF THE USEFUL LIFE OF ANY SIERRA PRODUCT. WHEN SIERRA WARRANTS ITS PRODUCTS FOR THE USEFUL LIFE OF THE PRODUCT, THIS DOES NOT GUARANTEE THAT THE PRODUCT WILL LAST FOREVER OR FOR THE LIFE OF THE VESSEL. THE LENGTH OF THE USEFUL LIFE OF SIERRA'S PRODUCTS WILL VARY DEPENDING ON THE TYPE OF PRODUCT, AS SPECIFIED IN SIERRA'S APPLICATION INFORMATION, GUIDELINES, INSTRUCTIONS AND SPECIFICATIONS FOR EACH PARTICULAR PRODUCT. PLEASE REFER TO THE INFORMATION PROVIDED WITH YOUR SIERRA PRODUCT IN ORDER TO DETERMINE THE USEFUL LIFE OF THAT PRODUCT.

The sole and exclusive obligation of SIERRA shall be to repair or replace the defective products in the manner set forth above. SIERRA shall not have any other obligation with respect to the products or any part thereof, whether based on contract, tort, strict liability or otherwise. Under no circumstances, whether based on this Warranty or otherwise, shall SIERRA be liable for any special, punitive or consequential damages.

SIERRA's employees or representatives' ORAL OR OTHER WRITTEN STATEMENTS DO NOT CONSTITUTE WARRANTIES, shall not be relied upon by customer, and are not a part of the warranty stated herein.

If any part of this Limited Warranty is determined to be void or illegal, the remainder shall remain in full force and effect.

WARRANTY

