SILICONE HOSES

FOR INDUSTRIAL VEHICLES

VENAIR

TECHNOSIL

VENA SIL 200 / VENA SIL 240

SILICONE HOSE WITH POLYESTER REINFORCEMENT FOR HEATING AND COOLING EQUIPMENT

GENERAL CHARACTERISTICS:

The VENA SIL 200/240 product line is made with Vinyl Methyl Quality (VMQ) silicone with a plain outer and inner appearance.
Temperature range is -76ºF to +356ºF.

SIL 200: 3 ply polyester reinforcement
(standard for ID < 2.0") with wall thickness of 4.2mm.
SIL 240: 4 ply polyester reinforcement
(standard for ID > 2.0") with wall thickness of 5.2mm.

Other types of textile reinforcement, such as NOMEX (1) and fiberglass, are available upon request.

STRAIGHT HOSE

Standard Length: From 1 to 4 m (3' to 13'). Can be cut to smaller lengths upon request.
Applications: Suitable for use in straight lengths, with no bending requirements.
Other dimensions are available by special order.

(1) NOMEX is a registered trademark of Dupont.

Inner Diameter		Working Pressure				Bursting Pressure			
inches	mm	psi Sil200	psi Sil240	bar Sil200	bar Sil240	psi Sil200	psi Sil240	bar Sil200	bar Sil240
1/4"	6	214	307	14.8	21.2	642	920	44.3	63.4
5/16"	8	172	249	11.9	17.2	517	749	35.6	51.6
3/8"	10	146	213	10.1	14.7	438	638	30.2	44.0
1/2"	13	120	177	8.3	12.2	360	529	24.8	36.5
5/8"	16	103	152	7.1	10.5	307	455	21.2	31.4
3/4"	19	90	134	6.2	9.2	270	403	18.6	27.8
7/8"	22	80	120	5.5	8.3	240	362	16.5	25.0
1"	25	72	110	5.0	7.6	217	330	15.0	22.8
1 1/8"	28	67	101	4.6	7.0	200	304	13.8	21.0
1 3/16"	30	62	97	4.3	6.7	188	290	13.0	20.0
1 1/4"	32	59	92	4.1	6.3	180	277	12.4	19.1
1 3/8"	35	55	87	3.8	6.0	176	259	12.1	17.9
1 1/2"	38	52	81	3.6	5.6	156	245	10.8	16.9
1 9/16"	40	50	78	3.4	5.4	150	236	10.3	16.3
1 3/4"	45	45	72	3.1	5.0	136	217	9.4	15.0
1 7/8"	48	43	70	3.0	4.8	130	207	9.0	14.3
2"	51	40	66	2.8	4.6	123	198	8.5	13.7
2 1/8"	55	39	62	2.7	4.3	116	187	8.0	12.9
2 1/4"	57	37	61	2.6	4.2	113	182	7.8	12.5
2 3/8"	60	36	59	2.5	4.1	109	177	7.5	12.2
2 1/2"	63	34	56	2.3	3.9	104	169	7.2	11.7
2 5/8"	67	33	55	2.3	3.8	101	166	7.0	11.4
2 3/4"	70	32	52	2.2	3.6	95	158	6.5	10.9
3"	76	29	49	2.0	3.4	88	149	6.1	10.3
3 1/8"	80	29	47	2.0	3.2	85	143	5.9	9.9
3 1/2"	90	26	43	1.8	3.0	76	132	5.2	9.1
4"	102	23	40	1.6	2.8	69	121	4.8	8.3
4 1/8"	105		37		2.6		115		7.9
4 1/3"	110		34		2.3		105		7.3
4 1/2"	114		32		2.2		99		6.8
4 3/4"	121		29		2.0		90		6.2
5"	127		27		1.9		84		5.8
6"	152		24		1.7		74		5.1
8"	204		21		1.4		65		4.5

STRAIGHT REDUCER

Inner Diameter		Length	
inches	mm	inches	mm
5/8" > 1/2"	16 > 13	4"	102
3/4" > 1/2"	19 > 13	4"	102
3/4" > 5/8"	19 > 16	4"	102
7/8" > 5/8"	22 > 16	4"	102
1" > 3/4"	25 > 19	4"	102
7/8" > 3/4"	22 > 19	4"	102
1 1/8" > 3/4"	28 > 19	4"	102
1 1/8" > 7/8"	28 > 22	4"	102
1 1/8" > 1"	28 > 25	4"	102
1 1/4" > 1"	32 > 25	4"	102
1 3/8" > 1"	35 > 25	4"	102
1 3/8" > 1 1/8"	35 > 28	4"	102
1 3/8" > 1 1/4"	35 > 32	4"	102
1 1/2" > 1 7/8"	38 > 48	4"	102
1 1/2" > 1"	38 > 25	4"	102
1 1/2" > 1 1/8"	38 > 28	4"	102
1 1/2" > 1 1/4"	38 > 32	4"	102
1 1/2" > 1 3/8"	38 > 35	4"	102

Inner Diameter		Length	
inches	mm	inches	mm
1 5/8" > 1 3/8"	42 > 35	4"	102
1 3/4" > 1 1/4"	45 > 32	4"	102
1 3/4" > 1 3/8"	45 > 35	4"	102
1 3/4" > 1 1/2"	45 > 38	4"	102
2" > 1 1/2"	51 > 38	4"	102
2" > 1 3/4"	51 > 45	4"	102
2 1/8" > 2"	55 > 51	4"	102
2 1/4" > 2"	57 > 51	4"	102
2 3/8" > 2"	60 > 51	5"	127
2 1/2" > 2"	63 > 51	5"	127
2 3/4" > 2"	70 > 51	5"	127
2 3/4" > 2 1/4"	70 > 57	5"	127
2 3/4" > 2 3/8"	70 > 60	5"	127
3" > 2"	76 > 51	5"	127
3" > 2 1/2"	76 > 63	5"	127
3 1/8" > 2 3/4"	80 > 70	5"	127
3 1/2" > 3 1/8"	90 > 80	6"	152
4" > 3"	102 > 76	6"	152

ELBOW 45º/ 90º/ 135º

Inner Diameter		Arm Length	
inches	mm	inches	mm
1/4"	6	4"	102
5/16"	8	4"	102
3/8"	10	4"	102
1/2"	13	4"	102
5/8"	16	4"	102
3/4"	19	6"	127
7/8"	22	8"	152
1"	25	8"	152
1 1/8"	28	8"	152
1 3/16"	30	8"	152
1 1/4"	32	8"	152
1 3/8"	35	4"	102
1 1/2"	38	4"	102
1 9/16"	40	4"	102
1 5/8"	41	4"	102
1 3/4"	45	4"	102
1 7/8"	48	6"	127

Inner Diameter		Arm Length	
inches	mm	inches	mm
2"	51	8"	152
2 1/8"	55	8"	152
2 1/4"	57	8"	152
2 3/8"	60	8"	152
2 1/2"	63	8"	152
2 5/8"	67	4"	102
2 3/4"	70	4"	102
3"	76	4"	102
3 1/8"	80	4"	102
3 1/2"	90	4"	102
3 3/4"	95	6"	127
4"	102	8"	152
4 1/8"	105	8"	152
4 1/2"	110	8"	152
4 3/4"	114	8"	152
5"	127	8"	152

REDUCER ELBOW 90º

Inner Diameter		Arm Length	
inches	mm	inches	mm
1" > 3/4"	25 > 19	4"	102
1 1/4" > 1"	32 > 25	4"	102
1 1/2" > 1"	38 > 25	4"	102
1 1/2 > 1 1/4	38 > 25	6"	152
1 1/2 > 1 3/8	38 > 35	6"	152
2 > 1 3/4	51>45	6"	152
2 3/8 > 2	60>51	4"	102
2 1/2 > 2	63>51	4"	102
2 3/4 > 2	70>51	4"	102
2 3/4 > 2 3/8	70>60	6"	152
3 > 2	76>51	6"	152
3 > 2 1/2	76>63	6"	152

VENA SIL 700

HIGHLY FLEXIBLE SILICONE HOSE WITH POLYESTER REINFORCEMENT FOR HEATING AND COOLING EQUIPMENT

Material: Silicone VMQ (Vinyl Methyl Quality).
Structure: Spiral steel wire between 3 sheets of polyester fabric covered in blue silicone.
Temperature range: - 76°F to + 356°F
Standard wall thickness: 4.6mm.
Length: From 1 to 4 m. Can be cut to smaller lengths upon request.
Main advantage: High flexibility due to the wire spiral.
Apperance: Plain outer and inner appearance.
Suitable for use where a small bending radius is required.

Inner Diameter*		Working Pressure		Bursting Pressure		Bending Radius	
inches	mm	psi	bar	psi	bar	inches	mm
1/2"	13	164	11.48	491	34.37	3"	76
5/8"	16	151	10.57	452	31.64	3 1/4"	82
3/4"	19	139	9.73	419	29.33	3 1/2"	90
7/8"	22	130	9.1	391	27.37	3 3/4"	95
1"	25	122	8.54	367	25.69	4 1/4"	108
1 1/8"	28	114	7.98	345	24.15	4 1/2"	115
1 3/16"	30	110	7.7	332	23.24	4 3/4"	120
1 1/4"	32	103	7.21	309	21.63	5 1/2"	140
1 3/8"	35	101	7.07	303	21.21	5 3/4"	146
11/2"	38	95	6.65	287	20.09	6 1/4"	158
1 9/16"	40	93	6.51	277	19.39	6 1/2"	165
1 5/8"	42	87	6.09	259	18.13	7 1/4"	184
1 3/4"	4	85	5.95	255	17.85	7 1/2"	190
1 7/8"	48	81	5.67	242	16.94	8 1/4"	210
2"	51	78	5.46	235	16.45	8 3/4"	222

* Maximum diameter is 4.3"

VENA SIL 800

HIGHLY FLEXIBLE SILICONE HOSE WITH POLYESTER REINFORCEMENT FOR HEATING AND COOLING EQUIPMENT

Material: Silicone VMQ (Vinyl Methyl Quality).
Structure: Spiral steel wire between 3 sheets of polyester fabric covered in blue silicone.
Temperature range: - 76°F to + 356°F
Standard wall thickness: 4.6mm.
Length: From 1 to 4 m.
Can be cut to smaller lengths upon request.
Main advantage: High flexibility due to spiral wiring.
Apperance: Corrugated outer and inner appearance. Suitable for use where a very small bending radius is required.

Inner Diameter*		Working Pressure		Bursting Pressure		Bending Radius	
inches	mm	psi	bar	psi	bar	inches	mm
1"	25	100	7	300	21	2 1/4"	57
1 1/8"	28	93	6.51	280	19.6	2"	51
1 3/16"	30	90	6.3	268	18.76	2 3/4"	70
1 1/4"	32	85	5.95	258	18.06	2 3/4"	70
1 3/8"	35	81	5.67	242	16.94	3"	76
1 1/2"	38	75	5.25	227	15.89	3 1/4"	82
1 9/16"	40	72	5.04	219	15.33	3 1/2"	90
1 5/8"	42	71	4.97	211	14.77	3 3/4"	95
1 3/4"	45	68	4.76	203	14.21	4"	102
2"	51	59	4.13	178	12.46	4 3/4"	120
2 1/8"	55	55	3.85	165	11.55	5 1/4"	133
2 1/4"	57	53	3.71	159	11.13	5 3/4"	146
2 3/8"	60	50	3.5	1151	80.57	6 1/4"	158
2 1/2"	63	48	3.36	1142	79.94	6 3/4"	171

* Maximum diameter is 4.3"

VENA SIL 200/240 R/A

OIL-RESISTANT SILICONE HOSE
WITH POLYESTER REINFORCEMENTS

External material: Silicone VMQ (Vinyl Methyl Quality).
Internal material: Silicone R/A (Oil-Resistant).
Textile reinforcement: 3-ply polyester
(Sil 200) / 4ply polyester (SII 240)
Temperature range: - 76°F to + 356°F
Standard wall thickness: 4.2mm.
Length: From 1 to 4 m.
Can be cut to smaller lengths upon request.
Apperance: Plain outer and inner appearance.
Application: Suitable for engine oils and other mineral oils up to + 302° F service temperature. Suitable for use in straight lengths with no bending requirements.

Inner Diameter		Working Pressure		Bursting Pressure	
inches	mm	psi	bar	psi	bar
1/4"	6	214	14.98	642	44.94
5/16"	8	172	12.04	517	36.19
3/8"	10	146	10.22	438	30.66
1/2"	13	120	8.4	360	25.2
5/8"	16	103	7.21	307	21.49
3/4"	19	90	6.3	270	18.9
7/8"	22	80	5.6	240	16.8
1"	25	72	5.04	217	15.19
1 1/8"	28	67	4.69	200	14
1 3/16"	30	62	4.34	188	13.16
1 1/4"	32	59	4.13	180	12.6
1 3/8"	35	55	3.85	176	12.32
1 1/2"	38	52	3.64	156	10.92
1 9/16"	40	50	3.5	150	10.5

Inner Diameter		Working Pressure		Bursting Pressure	
inches	mm	psi	bar	psi	bar
1 3/4"	45	45	3.15	136	9.52
1 7/8"	48	43	3.01	130	9.1
2"	51	40	2.8	123	8.61
2 1/8"	55	39	2.73	116	8.12
2 1/4"	57	37	2.59	113	7.91
2 3/8"	60	36	2.52	109	7.63
2 1/2"	63	34	2.38	104	7.28
2 5/8"	67	33	2.31	101	7.07
2 3/4"	70	32	2.24	95	6.65
3"	76	29	2.03	88	6.16
3 1/8"	80	29	2.03	85	5.95
3 1/2"	90	26	1.82	76	5.32
4"	102	23	1.61	69	4.83

VENA SIL GLASS

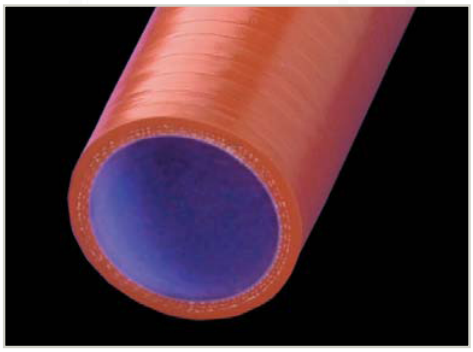
STRAIGHT SILICONE HOSE REINFORCED WITH
FIBERGLASS FOR HIGH TEMPERATURES

Material: High temperature resistant silicone.
Textile reinforcement: 3 ply of fiberglass
Temperature range: -76° to + 455°F
(up to + 482°F for short periods of time).
Standard wall thickness: 2.8mm.
Length: From 1 to 4 m.
Can be cut to smaller lengths upon request.
Apperance: Plain outer and inner appearance.
Suitable for use in straight lengths, with no bending requirements.

Special shapes available upon request (e.g. elbow, reducer, etc.).

VENA SIL TURBO

SILICONE HOSE FOR TURBOCHARGER SYSTEMS



External material: Silicone VMQ (Vinyl Methyl Quality).
Internal material: Silicone FVMQ (Fluor Vinyl Methyl Quality).
Textile reinforcement: 3 plies of NOMEX
Temperature range: - 76° to + 392°F
(up to 428°F for short periods of time).
Standard wall thickness: 3.7mm.
Length: From 1 to 4 m. Can be cut to smaller lengths upon request.
Appearance: Plain outer and inner appearance.
Application: Mainly used in the turbocharger system for industrial vehicles, due to its high capacity to withstand hydrocarbons and/or oil particles in the cooled, pressurized air. Can also be used in other areas where hydrocarbons and/or oil particles are present. Suitable for use in straight lengths, with no bending requirements.

Special shapes available upon request (e.g. elbow, reducer, etc.).

CUSTOM SHAPES and HOSES

NON-STANDARD SILICONE HOSES

We also design and manufacturer custom shaped hoses to meet your specific needs.

CERTIFICATION

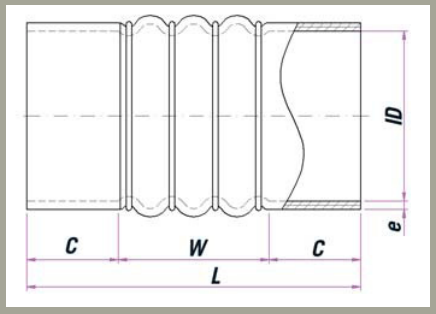
UNE EN ISO 9001:2000

UNE EN ISO 14001:1996

EMAS

TURBOLOADER

CORRUGATED SILICONE HOSE FOR TURBOCHARGER SYSTEMS



External material:
Silicone VMQ (Vinyl Methyl Quality).
Internal material:
Silicone FVMQ (Fluor Vinyl Methyl Quality).
Textile reinforcement: NOMEX
Temperature range: - 76° to + 392°F (up to 428°F for short periods of time).

Standard Wall thickness: 3.7mm.
Standard length: (See table below).
Apperance: Corrugated outer and inner appearance.
Application: Specifically used in turbocharger systems for industrial vehicles, due to its high capacity to withstand hydrocarbons and/or oil particles in cooled, pressurized air.
Options: Also available without the FVMQ (Fluor Vinyl Methyl Quality) silicone. The standard VMQ (Vinyl Methyl Quality) silicone is used instead.

Inner Diameter		Number of Humps	Number of Rings	Total Length of Humps (W)		Cuff length (C)		Total Length	
inches	mm			inches	mm	inches	mm	inches	mm
2”	51	2	3	2 1/2”	63	1 7/8”	48	6 1/4"	158
2”	51	4	5	4 1/2"	115	1 5/8”	42	8”	204
2 3/8”	60	2	3	2 1/2"	63	1 7/8”	48	6 1/4"	158
2 3/8”	60	4	5	4 1/2"	115	1 5/8”	42	8”	204
2 1/2”	63	3	4	3 1/2"	90	2 1/4"	57	8”	204
2 3/4"	70	2	3	2 1/2"	63	1 7/8”	48	6 1/4"	158
2 3/4"	70	4	5	4 1/2"	115	1 5/8”	42	8”	204
3”	76	2	3	2 1/2"	63	1 7/8”	48	6 1/4"	158
3”	76	4	5	4 1/2"	115	1 5/8”	42	8”	204
3 1/8”	80	3	4	3 1/2"	90	2 1/4"	57	8”	204
3 1/8”	80	6	7	6 3/4"	171	2 3/4"	70	12”	306
3 1/4”	82	3	4	3 1/2"	90	2 1/4"	57	8”	204
3 1/4”	82	6	7	6 3/4"	171	2 3/4"	70	12”	306
3 1/2"	90	1	2	1 1/2"	38	1 1/4"	32	4”	102
3 1/2"	90	2	3	2 1/2"	63	1 7/8”	48	6 1/4"	158
3 1/2"	90	4	5	4 1/2"	115	1 7/8”	48	8 1/4"	210
3 1/2"	90	5	6	5 1/2"	140	2 1/4"	57	10”	255
3 1/2"	90	6	7	6 3/4"	171	2 3/4"	70	12”	306
3 3/4"	95	4	5	5”	127	1 9/16”	40	8 1/4"	210
3 3/4"	95	6	7	6 3/4"	171	2 3/4"	70	12”	306
4”	102	1	2	1 1/2"	38	1 1/4"	32	4”	102
4”	102	2	3	2 1/2”	63	1 7/8”	48	6 1/4"	158
4”	102	4	5	4 1/2"	115	1 7/8”	48	8 1/4"	210
4”	102	5	6	5 1/2"	140	2 1/4"	57	10”	255
4”	102	6	7	6 3/4"	171	2 3/4"	70	12”	306
4 1/2"	115	3	4	3 1/2"	90	2 1/4"	57	8”	204

Available TURBOLOADERS (consult for other dimensions)

SELF-TENSIONING STEPLESS SCREW CLAMPS

VENAIR's Self-Tensioning Stepless Screw Clamps are size adjustable and were specifically developed for use with silicone hoses in motor vehicle cooling systems.
The narrow width of these clamps in comparison with alternative clamps of similar design, coupled with the low installation torque, combine to ensure a precisely defined clamping pressure on the hose.

Material:
These Self-Tensioning Stepless Screw Clamps are made from austenitic stainless steel. The primary material employed is a nickel alloy designated DIN 1.4301 / UNS S30400, and contains ca. 18% chromium and ca. 8% nickel. This alloy acquires additional strength through cold working in the course of strip and clamp manufacture.

Features:
- Compression spring reacts to diameter changes caused by thermal expansion and contraction, ensuring continual all-season sealing and a permanent system against leakage.
- 360° stepless design- no steps or overlaps around the internal circumference.
- Specially formed strip edges prevent damage to adjacent hose.
- Reusable.
- Narrow band width provides localized clamping force.
- Conforms to: SAE J1508 Type SSPC, TMC RP332 Type SSPC.

Design:
- Material is 9 mm wide and 0.6 mm thick, ensuring optimum sealing capabilities with silicone hoses, while taking into account the necessary radial force, the compressibility of the hose, the sealing/ retaining properties, and the environmental conditions.

These Self-Tensioning Stepless Screw Clamps are available for our entire range of industrial silicone hoses, from inner diameters as small as 1/4 “ to as large as 8”.