

## Vena® MTD Vena® MT

Ref: DO 03.10 FT 059. Rev. 07  
Date: 20/06/2017



### Limitations

Respect the bending radius and work pressure established values.

### Regulations

The fiber glass covered with neoprene used to manufacture this product is in accordance with EU Directive 2002/95/ECC for Restriction of the use of hazardous substances (RoHS).

### Applications

These hoses are specially recommended in gas conduction at medium temperatures, engine exhaust fume extraction, electronic units cooling and welding gas aspiration

### Properties

- This reference could be manufacture with cuffed ends.
- Excellent flexibility and aging resistance
- Operational temperature range from -55°C (-67 F) to +125°C (257 F), it may reach up to 150°C (302 F) during short periods of time.
- The standard manufacturing length is 4 meters long (13.12 ft.), but in specific diameters a length of 6 meters (19.69 ft) can be manufactured.

### Construction

The Vena® MTD is manufactured with two fiber glass textile reinforcements covered with Neoprene rubber compound in black colour and coated with steel wire sandwiched between the two Neoprene layers.

The Vena® MT is manufactured with one fiber glass textile reinforcement covered with Neoprene rubber compound in black colour and coated with steel wire visible inside.

## Technical Specifications

For the MTD reference:

Inner Diameter		Wall thickness		Working Pressure ISO 1402/2009		Bursting Pressure ISO 1402/2009		Vacuum Resistance ISO 7233/2006		Bending Radius ISO 1746/2000	
mm	inch	+0.04/-0.02 mm	+1.57x10 <sup>-3</sup> / -7.87x10 <sup>-4</sup> inch	Bar at 20°C	Psi at 68 F	Bar at 20°C	Psi at 68 F	Bar at 20°C	Psi at 68 F	mm	inch
25	1	2.16	0.085	2.27	32.87	6.80	98.60	0.66	9.60	38	1.49
26	1 1/64	2.16	0.085	2.25	32.56	6.74	97.69	0.66	9.50	39	1.55
27	1 1/16	2.16	0.085	2.22	32.26	6.67	96.78	0.65	9.41	41	1.61
28	1 7/64	2.16	0.085	2.20	31.96	6.61	95.89	0.64	9.32	42	1.67
29	1 1/8	2.16	0.085	2.19	31.78	6.58	95.35	0.64	9.26	43	1.70
30	1 3/16	2.16	0.085	2.16	31.37	6.49	94.12	0.63	9.13	45	1.79
32	1 17/64	2.16	0.085	2.12	30.80	6.37	92.39	0.62	8.95	48	1.90
34	1 11/32	2.16	0.085	2.08	30.23	6.25	90.68	0.61	8.77	51	2.02
35	1 3/8	2.16	0.085	2.07	29.95	6.20	89.84	0.60	8.69	53	2.08
38	1 1/2	2.16	0.085	2.01	29.12	6.03	87.37	0.58	8.43	57	2.26
39	1 35/64	2.16	0.085	1.99	28.85	5.97	86.56	0.58	8.34	59	2.32
40	1 37/64	2.16	0.085	1.97	28.59	5.91	85.76	0.57	8.26	60	2.38
42	1 21/32	2.16	0.085	1.94	28.06	5.81	84.18	0.56	8.10	63	2.50
43	1 11/16	2.16	0.085	1.92	27.80	5.75	83.40	0.55	8.02	65	2.56
44	1 47/64	2.16	0.085	1.90	27.54	5.70	82.63	0.55	7.94	66	2.62
45	1 49/64	2.16	0.085	1.88	27.29	5.65	81.87	0.54	7.86	68	2.68
46	1 13/16	2.16	0.085	1.86	27.04	5.59	81.11	0.54	7.78	69	2.74
47	1 55/64	2.16	0.085	1.85	26.79	5.54	80.36	0.53	7.70	71	2.79
48	1 57/64	2.16	0.085	1.83	26.54	5.49	79.61	0.53	7.63	72	2.85
50	1 31/32	2.16	0.085	1.80	26.05	5.39	78.15	0.52	7.48	75	2.97
51	2 1/64	2.16	0.085	1.78	25.81	5.34	77.42	0.51	7.40	77	3.03
52	2 3/64	2.16	0.085	1.76	25.57	5.29	76.71	0.51	7.33	79	3.09
53	2 3/32	2.16	0.085	1.75	25.33	5.24	76.00	0.50	7.25	80	3.15
54	2 1/8	2.16	0.085	1.73	25.10	5.19	75.29	0.50	7.18	82	3.21
55	2 11/64	2.16	0.085	1.71	24.87	5.14	74.60	0.49	7.11	83	3.27
56	2 13/64	2.16	0.085	1.70	24.64	5.10	73.91	0.49	7.04	85	3.33
57	2 15/64	2.16	0.085	1.68	24.41	5.05	73.22	0.48	6.97	86	3.39
59	2 21/64	2.16	0.085	1.65	23.96	4.96	71.87	0.47	6.83	89	3.51
60	2 23/64	2.16	0.085	1.64	23.74	4.91	71.21	0.47	6.76	91	3.57
62	2 7/16	2.16	0.085	1.61	23.30	4.82	69.89	0.46	6.63	94	3.68
63	2 31/64	2.50	0.098	1.59	23.08	4.78	69.25	0.45	6.56	95	3.74
64	2 1/2	2.50	0.098	1.58	22.98	4.75	68.93	0.45	6.53	96	3.77
65	2 9/16	2.50	0.098	1.56	22.66	4.69	67.97	0.44	6.43	98	3.86
69	2 23/32	2.50	0.098	1.51	21.83	4.52	65.49	0.43	6.18	104	4.10
70	2 49/64	2.50	0.098	1.49	21.63	4.47	64.88	0.42	6.12	106	4.16
73	2 7/8	2.50	0.098	1.45	21.03	4.35	63.10	0.41	5.94	110	4.34
75	2 61/64	2.50	0.098	1.42	20.64	4.27	61.93	0.40	5.82	113	4.46

Inner Diameter		Wall thickness		Working Pressure ISO 1402/2009		Bursting Pressure ISO 1402/2009		Vacuum Resistance ISO 7233/2006		Bending Radius ISO 1746/2000	
<i>mm</i>	<i>inch</i>	<i>+0.04/ -0.02 mm</i>	<i>+1.57x10<sup>-3</sup>/ -7.87x10<sup>-4</sup> inch</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>mm</i>	<i>inch</i>
76	3	2.50	0.098	1.41	20.45	4.23	61.36	0.40	5.76	115	4.51
80	3 5/32	2.80	0.110	1.36	19.71	4.08	59.12	0.38	5.54	121	4.75
83	3 17/64	2.80	0.110	1.32	19.16	3.97	57.49	0.37	5.37	125	4.93
85	3 23/64	2.80	0.110	1.30	18.81	3.89	56.43	0.36	5.27	128	5.05
87	3 7/16	2.80	0.110	1.27	18.46	3.82	55.39	0.36	5.16	131	5.17
90	3 35/64	2.80	0.110	1.24	17.96	3.72	53.87	0.35	5.01	136	5.35
95	3 47/64	2.80	0.110	1.18	17.14	3.55	51.42	0.33	4.77	143	5.64
100	3 15/16	2.80	0.110	1.13	16.36	3.39	49.09	0.31	4.53	151	5.94
101	4	2.80	0.110	1.12	16.21	3.35	48.63	0.31	4.49	152	6.00
102	4 1/64	2.80	0.110	1.11	16.06	3.32	48.18	0.31	4.44	154	6.06
105	4 1/8	2.80	0.110	1.08	15.62	3.23	46.86	0.30	4.31	158	6.24
110	4 21/64	2.80	0.110	1.03	14.91	3.08	44.73	0.28	4.10	166	6.53
114	4 1/2	2.80	0.110	0.99	14.32	2.96	42.97	0.27	3.93	172	6.79
115	4 17/32	2.80	0.110	0.98	14.23	2.94	42.70	0.27	3.90	173	6.83
120	4 23/32	2.80	0.110	0.94	13.59	2.81	40.76	0.26	3.71	181	7.13
127	5	2.80	0.110	0.88	12.73	2.63	38.19	0.24	3.46	192	7.54
130	5 1/8	2.80	0.110	0.85	12.38	2.56	37.14	0.23	3.36	196	7.72
134	5 9/32	2.80	0.110	0.82	11.93	2.47	35.78	0.22	3.23	202	7.96
140	5 1/2	2.80	0.110	0.78	11.28	2.33	33.84	0.21	3.04	211	8.31
150	5 29/32	2.80	0.110	0.71	10.28	2.13	30.83	0.19	2.75	226	8.91
152	6	2.80	0.110	0.69	10.05	2.08	30.15	0.19	2.68	230	9.05
160	6 19/64	3.00	0.118	0.65	9.36	1.94	28.09	0.17	2.49	241	9.50
170	6 11/16	3.00	0.118	0.59	8.53	1.77	25.60	0.16	2.25	256	10.09
180	7 3/32	3.00	0.118	0.54	7.78	1.61	23.33	0.14	2.04	271	10.69
200	7 7/8	3.00	0.118	0.45	6.46	1.34	19.37	0.12	1.67	302	11.87
203	8	3.00	0.118	0.43	6.28	1.30	18.83	0.11	1.62	306	12.05
220	8 21/32	3.00	0.118	0.37	5.36	1.11	16.08	0.09	1.37	332	13.06
250	9 27/32	3.00	0.118	0.28	4.06	0.84	12.17	0.07	1.01	377	14.84
254	10	3.00	0.118	0.27	3.91	0.81	11.72	0.07	0.97	383	15.08
300	11 13/16	3.00	0.118	0.18	2.55	0.53	7.64	0.04	0.61	452	17.81

For the MT reference:

Inner Diameter		Wall thickness		Working Pressure ISO 1402/2009		Bursting Pressure ISO 1402/2009		Vacuum Resistance ISO 7233/2006		Bending Radius ISO 1746/2000	
<i>mm</i>	<i>inch</i>	<i>+0.04/ -0.02 mm</i>	<i>+1.57x10<sup>-3</sup>/ -7.87x10<sup>-4</sup> inch</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>mm</i>	<i>inch</i>
25	1	1.56	0.061	1,76	25,53	5,28	76,59	0,54	7,77	34,47	1,36
26	1 1/64	1.56	0.061	1,75	25,31	5,24	75,94	0,53	7,69	35,81	1,41
27	1 1/16	1.56	0.061	1,73	25,10	5,19	75,31	0,52	7,60	37,14	1,46
28	1 7/64	1.56	0.061	1,72	24,89	5,15	74,68	0,52	7,52	38,48	1,51
29	1 1/8	1.56	0.061	1,71	24,77	5,12	74,30	0,52	7,47	39,28	1,55
30	1 3/16	1.56	0.061	1,69	24,48	5,06	73,44	0,51	7,36	41,15	1,62
32	1 17/64	1.56	0.061	1,66	24,07	4,98	72,21	0,50	7,21	43,82	1,73
34	1 11/32	1.56	0.061	1,63	23,67	4,90	71,01	0,49	7,05	46,49	1,83
35	1 3/8	1.56	0.061	1,62	23,47	4,86	70,42	0,48	6,98	47,83	1,88
38	1 1/2	1.56	0.061	1,58	22,89	4,74	68,66	0,47	6,76	51,84	2,04
39	1 35/64	1.56	0.061	1,57	22,70	4,70	68,09	0,46	6,69	53,17	2,09
40	1 37/64	1.56	0.061	1,55	22,51	4,66	67,52	0,46	6,62	54,51	2,15
42	1 21/32	1.56	0.061	1,53	22,13	4,58	66,39	0,45	6,48	57,18	2,25
43	1 11/16	1.56	0.061	1,51	21,95	4,54	65,84	0,44	6,41	58,52	2,30
44	1 47/64	1.56	0.061	1,50	21,76	4,50	65,29	0,44	6,34	59,85	2,36
45	1 49/64	1.56	0.061	1,49	21,58	4,46	64,74	0,43	6,27	61,19	2,41
46	1 13/16	1.56	0.061	1,48	21,40	4,43	64,20	0,43	6,20	62,53	2,46
47	1 55/64	1.56	0.061	1,46	21,22	4,39	63,66	0,42	6,14	63,86	2,51
48	1 57/64	1.56	0.061	1,45	21,04	4,35	63,13	0,42	6,07	65,20	2,57
50	1 31/32	1.56	0.061	1,43	20,69	4,28	62,08	0,41	5,94	67,87	2,67
51	2 1/64	1.56	0.061	1,42	20,52	4,25	61,56	0,41	5,88	69,21	2,72
52	2 3/64	1.56	0.061	1,40	20,35	4,21	61,04	0,40	5,82	70,54	2,78
53	2 3/32	1.56	0.061	1,39	20,18	4,17	60,53	0,40	5,76	71,88	2,83
54	2 1/8	1.56	0.061	1,38	20,01	4,14	60,03	0,39	5,70	73,21	2,88
55	2 11/64	1.56	0.061	1,37	19,84	4,11	59,53	0,39	5,63	74,55	2,94
56	2 13/64	1.56	0.061	1,36	19,68	4,07	59,03	0,38	5,57	75,89	2,99
57	2 15/64	1.56	0.061	1,35	19,51	4,04	58,53	0,38	5,52	77,22	3,04
59	2 21/64	1.56	0.061	1,32	19,19	3,97	57,56	0,37	5,40	79,89	3,15
60	2 23/64	1.56	0.061	1,31	19,03	3,94	57,08	0,37	5,34	81,23	3,20
62	2 7/16	1.56	0.061	1,29	18,71	3,87	56,13	0,36	5,23	83,90	3,30
63	2 31/64	1.90	0.075	1,28	18,55	3,84	55,66	0,36	5,17	85,24	3,36
64	2 1/2	1.90	0.075	1,27	18,47	3,82	55,42	0,35	5,14	85,91	3,38
65	2 9/16	1.90	0.075	1,26	18,24	3,77	54,73	0,35	5,06	87,91	3,46
69	2 23/32	1.90	0.075	1,22	17,64	3,65	52,92	0,33	4,85	93,25	3,67
70	2 49/64	1.90	0.075	1,21	17,49	3,62	52,48	0,33	4,80	94,59	3,72
73	2 7/8	1.90	0.075	1,18	17,06	3,53	51,17	0,32	4,65	98,60	3,88
75	2 61/64	1.90	0.075	1,16	16,77	3,47	50,32	0,31	4,55	101,27	3,99

Inner Diameter		Wall thickness		Working Pressure ISO 1402/2009		Bursting Pressure ISO 1402/2009		Vacuum Resistance ISO 7233/2006		Bending Radius ISO 1746/2000	
<i>mm</i>	<i>inch</i>	<i>+0.04/ -0.02 mm</i>	<i>+1.57x10<sup>-3</sup>/ -7.87x10<sup>-4</sup> inch</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>Bar at 20°C</i>	<i>Psi at 68 F</i>	<i>mm</i>	<i>inch</i>
76	3	1.90	0.075	1,15	16,63	3,44	49,90	0,31	4,50	102,61	4,04
80	3 5/32	1.90	0.075	1,11	16,08	3,33	48,25	0,30	4,31	107,95	4,25
83	3 17/64	1.90	0.075	1,08	15,68	3,24	47,05	0,29	4,18	111,96	4,41
85	3 23/64	2.20	0.087	1,06	15,42	3,19	46,27	0,28	4,09	114,63	4,51
87	3 7/16	2.20	0.087	1,05	15,17	3,14	45,50	0,28	4,00	117,30	4,62
90	3 35/64	2.20	0.087	1,02	14,79	3,06	44,36	0,27	3,87	121,31	4,78
95	3 47/64	2.20	0.087	0,98	14,18	2,93	42,54	0,25	3,67	127,99	5,04
100	3 15/16	2.20	0.087	0,94	13,60	2,81	40,79	0,24	3,48	134,67	5,30
101	4	2.20	0.087	0,93	13,48	2,79	40,45	0,24	3,44	136,01	5,35
102	4 1/64	2.20	0.087	0,92	13,37	2,77	40,11	0,24	3,41	137,34	5,41
105	4 1/8	2.20	0.087	0,90	13,04	2,70	39,11	0,23	3,30	141,35	5,56
110	4 21/64	2.20	0.087	0,86	12,50	2,59	37,50	0,22	3,13	148,03	5,83
114	4 1/2	2.20	0.087	0,83	12,06	2,49	36,17	0,21	2,99	153,77	6,05
115	4 17/32	2.20	0.087	0,83	11,99	2,48	35,96	0,20	2,97	154,71	6,09
120	4 23/32	2.20	0.087	0,79	11,49	2,38	34,48	0,19	2,81	161,39	6,35
127	5	2.20	0.087	0,75	10,84	2,24	32,51	0,18	2,61	170,74	6,72
130	5 1/8	2.20	0.087	0,73	10,57	2,19	31,70	0,17	2,53	174,75	6,88
134	5 9/32	2.20	0.087	0,70	10,22	2,11	30,66	0,17	2,42	180,09	7,09
140	5 1/2	2.20	0.087	0,67	9,72	2,01	29,15	0,16	2,27	188,11	7,41
150	5 29/32	2.20	0.087	0,62	8,93	1,85	26,80	0,14	2,04	201,47	7,93
152	6	2.20	0.087	0,60	8,76	1,81	26,27	0,14	1,99	204,68	8,06
160	6 19/64	2.40	0.094	0,57	8,21	1,70	24,64	0,13	1,83	214,83	8,46
170	6 11/16	2.40	0.094	0,52	7,55	1,56	22,66	0,11	1,65	228,19	8,98
180	7 3/32	2.40	0.094	0,48	6,94	1,44	20,83	0,10	1,48	241,55	9,51
200	7 7/8	2.40	0.094	0,40	5,87	1,21	17,61	0,08	1,19	268,27	10,56
203	8	2.40	0.094	0,39	5,72	1,18	17,17	0,08	1,16	272,28	10,72
220	8 21/32	2.40	0.094	0,34	4,96	1,03	14,89	0,07	0,96	294,99	11,61
250	9 27/32	2.40	0.094	0,27	3,86	0,80	11,57	0,05	0,70	335,07	13,19
254	10	2.40	0.094	0,26	3,73	0,77	11,19	0,05	0,67	340,41	13,40
300	11 13/16	2.40	0.094	0,17	2,53	0,52	7,60	0,03	0,41	401,87	15,82