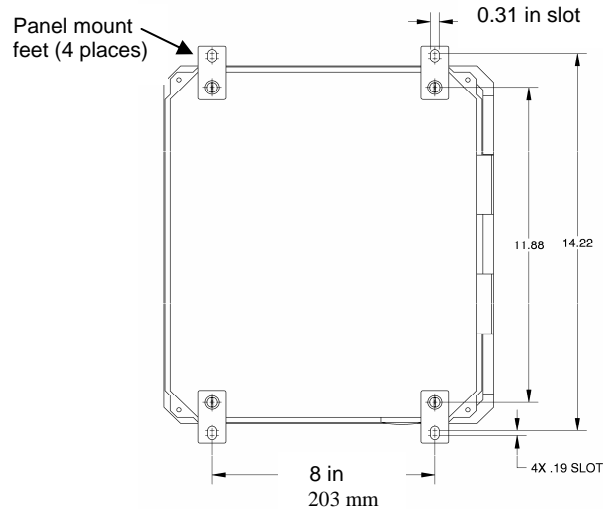
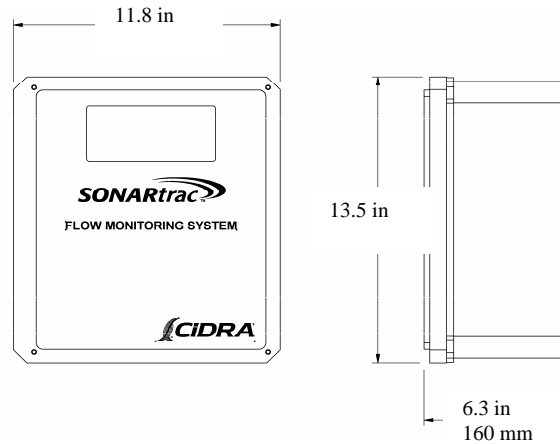


SONARtrac® - Transmitter Envelope

The dimensions of the Model VF-100, GVF-100, VF-100/GVF-100, HD VF-100, and HD VF/GVF-100 transmitters are given on the following figures.



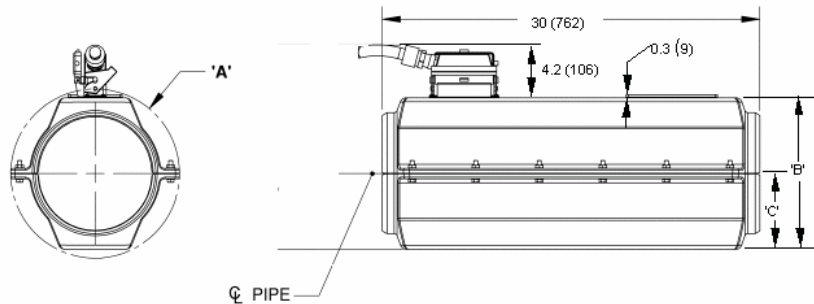
Transmitters are compatible with all sensor head assemblies, independent of pipe size.

SONARtrac[®] - Sensor Envelope

VF-100 Flow Monitoring System, GVF-100 Gas Volume Fraction System
 VF-100/GVF-100 Combined System and HD Series Process Flow Monitoring System

Fiberglass Sensor Head Cover Envelope

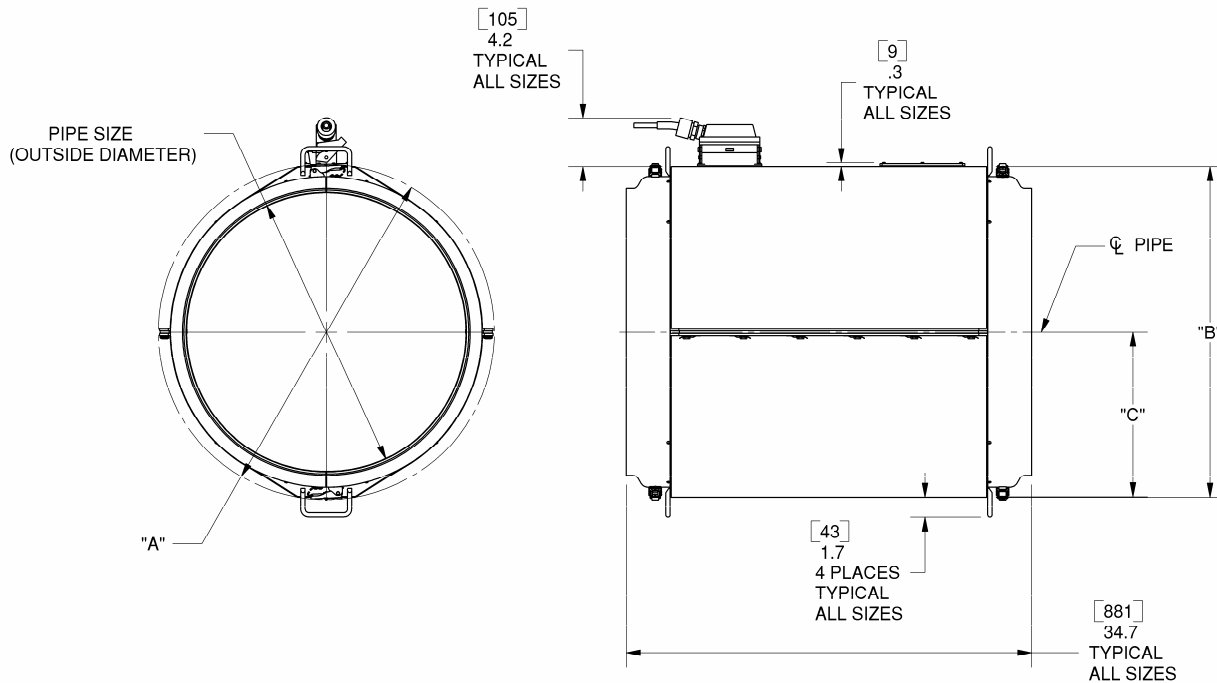
The dimensions of the 2" to 16" fiberglass sensor head are given on the following figure and table.



Fiberglass Sensor Head Envelope										
Model No	Pipe / Tube Nominal Size		Outside Dia		Dim 'A'		Dim 'B'		Dim 'C'	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
SH-E02	2	50	2.4	60	9.3	236	5.8	147	2.9	74
SH-T02	2	50	2.0	51	9.3	236	5.8	147	2.9	74
SH-D02	2.5	65	2.5	64	9.3	236	5.8	147	2.9	74
SH-E03	3	80	3.5	89	9.3	236	7.0	178	3.5	89
SH-T03	3	80	3.0	76	9.3	236	7.0	178	3.5	89
SH-E04	4	100	4.5	114	9.8	249	7.7	196	3.9	98
SH-T04	4	100	4.0	102	9.8	249	7.7	196	3.9	98
SH-T05	5	125	5.0	127	11.4	290	10.0	254	5.0	127
SH-E06	6	150	6.6	168	11.4	290	10.0	254	5.0	127
SH-T06	6	150	6.0	152	11.4	290	10.0	254	5.0	127
SH-E08	8	200	8.6	219	13.4	340	12.0	305	6.0	152
SH-E10	10	250	10.8	273	15.5	394	14.1	358	7.1	179
SH-B10	10	250	10.0	254	15.5	394	14.1	358	7.1	179
SH-E12	12	300	12.8	324	17.4	442	16.1	409	8.1	204
SH-E14	14	350	14.0	356	18.8	478	17.4	442	8.7	221
SH-E16	16	400	16.0	406	20.8	528	19.4	493	9.7	246

Stainless Steel Sensor Head Cover Envelope

The dimensions of the 18" to 36" stainless steel sensor head monitors are given on the following figure and table.

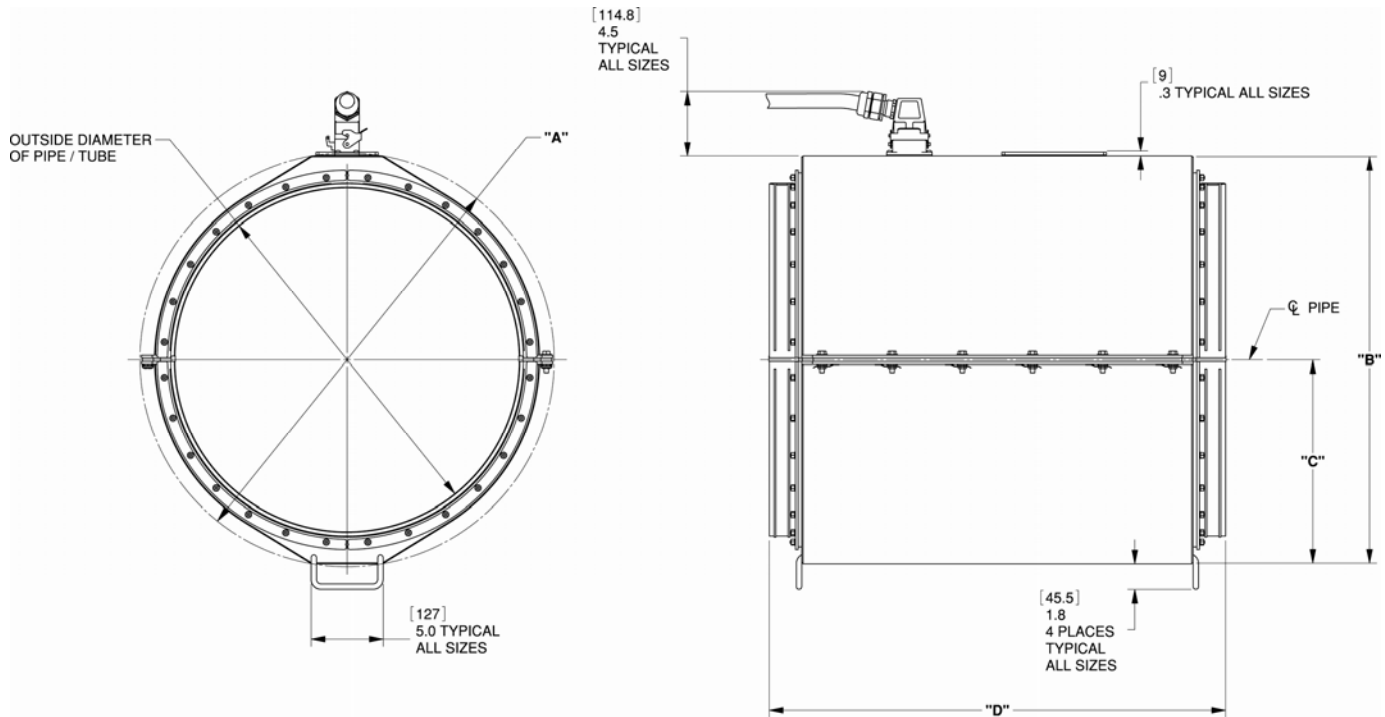


Stainless Steel Sensor Head Envelope										
Model No	Pipe / Tube Nominal Size		Outside Dia		Dim 'A'		Dim 'B'		Dim 'C'	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
SH-E18	18	450	18.0	457	22.9	581	22.4	568	11.2	284
SH-E20	20	500	20.0	508	24.8	631	24.4	619	12.1	310
SH-E24	24	600	24.0	610	28.8	731	28.4	721	14.2	361
SH-E26	26	650	26.0	660	30.8	781	30.4	772	15.2	386
SH-E28	28	700	28.0	711	32.7	831	32.4	822	16.2	411
SH-E30	30	750	30.0	762	34.7	881	34.4	873	17.2	437
SH-E36	36	900	36.0	914	40.8	1035	40.5	1028	20.2	514

The sensor band assemblies are compatible with all sensor head cover assemblies within the same pipe size diameters. A meter factor is included for each sensor band assembly. All sensor head assemblies, independent of pipe size, are compatible with all transmitters.

Stainless Steel Sensor Head Cover Envelope

The dimensions of the 40" to 60" stainless steel sensor head monitors are given on the following figure and table.

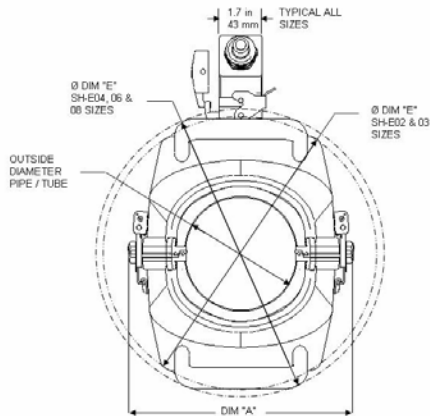


**SENSOR HEAD ENVELOPE DIMENSIONS
(STAINLESS STEEL COVERS)**

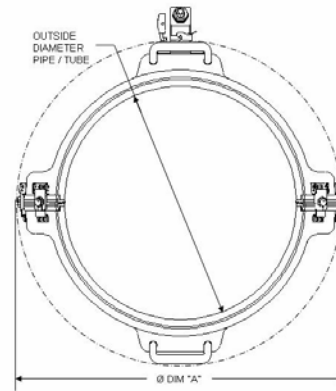
MODEL NO. SERIES	PIPE / TUBE NOMINAL SIZE		OUTSIDE DIA		DIM "A"		DIM "B"		DIM "C"		DIM "D"		WEIGHT (APPROX.)	
	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	LB	KG
SH-E40	40.0	1016	40.0	1016	44.7	1135	44.5	1130	22.2	564	51.2	1300	252	114
SH-E42	42.0	1067	42.0	1067	46.7	1186	46.5	1181	23.2	589	51.2	1300	261	118
SH-E48	48.0	1219	48.0	1219	52.7	1339	52.5	1334	26.2	665	51.2	1300	290	132
SH-E60	60.0	1524	60.0	1524	64.7	1643	64.5	1638	32.2	818	51.2	1300	348	158

The sensor band assemblies are compatible with all sensor head cover assemblies within the same pipe size diameters. A meter factor is included for each sensor band assembly. All sensor head assemblies, independent of pipe size, are compatible with all transmitters.

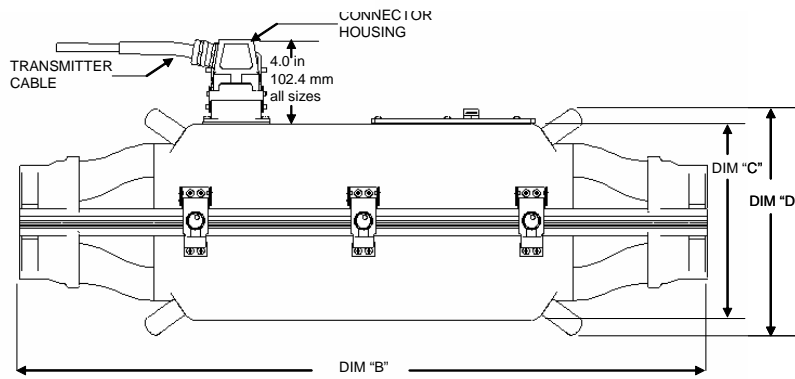
Fiberglass Sensor Head Cover Envelope (Gen 2)



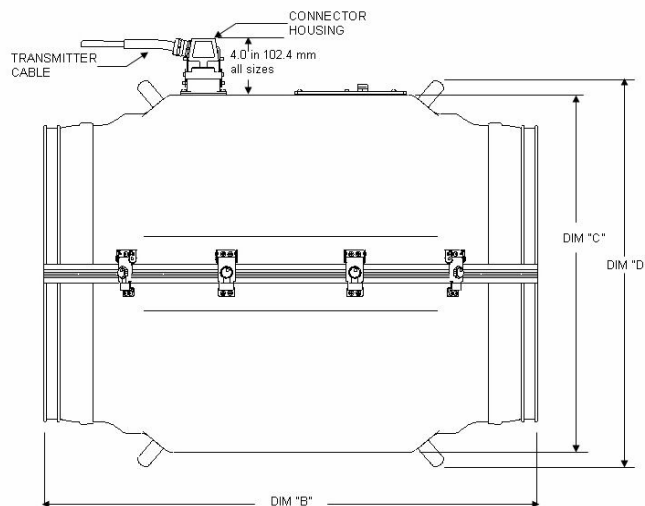
This End View Typical of 2" Through 8" Sensor Head



This End View Typical of 10" Through 30" Sensor Head



This Side View Typical of 2" Through 16" Sensor Head



This Side View Typical of 18" Through 30" Sensor Head

Fiberglass Sensor Head Envelope (Gen 2)

Model No	Pipe / Tube Nominal Size		Outside Dia		Dim 'A'		Dim 'B'		Dim 'C'		Dim 'D'		Dim 'E'		Weight	
	inch	Pipe/Tube	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	lb	kg
SH-E02	2.0	pipe	2.38	60	7.4	188	32.8	832	7.1	180	N/A	N/A	8.7	221	16.5	7.48
SH-C02	2.5	pipe	2.88	73	7.4	188	32.8	832	7.1	180	N/A	N/A	8.7	221	16.5	7.48
SH-D02	2.5	tube	2.50	64	7.4	188	32.8	832	7.1	180	N/A	N/A	8.7	221	16.5	7.48
SH-T02	2.0	tube	2.00	51	7.4	188	32.8	832	7.1	180	N/A	N/A	8.7	221	16.5	7.48
SH-E03	3.0	pipe	3.50	89	7.4	189	32.8	832	8.2	208	N/A	N/A	9.6	244	17	7.71
SH-T03	3.0	tube	3.00	76	7.4	189	32.8	832	8.2	208	N/A	N/A	9.6	244	17	7.71
SH-E04	4.0	pipe	4.50	114	8.9	226	32.8	832	9.3	237	10.8	273	11.5	292	21	9.53
SH-T04	4.0	tube	4.00	102	8.9	226	32.8	832	9.3	237	10.8	273	11.5	292	21	9.53
SH-E06	6.0	pipe	6.63	168	11.9	302	32.8	860	12.1	308	13.5	344	14.1	358	26.5	12.02
SH-T06	6.0	tube	6.00	152	11.9	302	33.9	860	12.1	308	13.5	344	14.1	358	26.5	12.02
SH-160	160mm	pipe	6.30	160	11.9	302	33.9	860	12.1	308	13.5	344	14.1	58	26.5	12.02
SH-E08	8.0	pipe	8.63	219	15.6	396	33.9	860	14.2	361	15.6	397	16.1	409	31	14.06
SH-T08	8.0	tube	8.00	203	15.6	396	33.9	860	14.2	361	15.6	397	16.1	409	31	14.06
SH-E10	10.0	pipe	10.75	273	18.1	459	34.7	881	16.3	415	17.7	451	N/A	N/A	35.5	16.10
SH-T10	10.0	tube	10.00	254	18.1	459	34.7	881	16.3	415	17.7	451	N/A	N/A	35.5	16.10
SH-250	250mm	pipe	10.75	273	18.1	459	34.7	881	16.3	415	17.7	451	N/A	N/A	35.5	16.10
SH-E12	12.0	pipe	12.75	324	20.3	516	34.7	881	18.3	466	19.7	500	N/A	N/A	39	17.69
SH-315	315mm	pipe	12.4	315	20.3	516	34.7	881	18.3	466	19.7	500	N/A	N/A	39	17.69
SH-T12	12.0	tube	12.00	305	20.3	516	34.7	881	18.3	466	19.7	500	N/A	N/A	39	17.69
SH-E14	14.0	pipe	14.00	356	21.7	550	34.7	881	19.6	497	21.0	533	N/A	N/A	41.5	18.82
SH-350	350mm	pipe	14.57	370	21.7	550	34.7	881	19.6	497	21.0	533	N/A	N/A	41.5	18.82
SH-E16	16.0	pipe	16.0	406	24.0	605	34.7	881	21.6	548	23.0	584	N/A	N/A	46	20.86
SH-E18	18	pipe	18.0	457	26.0	659	34.7	881	23.6	599	25.6	650	N/A	N/A	50.5	22.91
SH-E20	20	pipe	20.0	508	28.0	712	34.7	881	25.6	651	27.6	702	N/A	N/A	54.5	24.72
SH-E22	22	pipe	22.0	559	30.1	765	34.7	881	27.6	701	29.6	751	N/A	N/A	69	31.30
SH-E24	24	pipe	24.0	610	32.2	818	34.7	881	29.6	751	31.6	802	N/A	N/A	74	33.57
SH-E26	26	pipe	26.0	660	34.3	870	34.7	881	31.6	802	33.6	853	N/A	N/A	79	35.83
SH-E28	28	pipe	28.0	711	36.3	922	34.7	881	33.6	853	35.6	904	N/A	N/A	84	38.10
SH-E30	30	pipe	30.0	762	38.4	974	34.7	881	35.6	904	37.6	955	N/A	N/A	89.5	40.60

1. Dimensions and weights are for reference only. These may change without notice. Contact CiDRA for latest information.
2. Handles are not available on the SH-E02 and SH-E03 sizes.