

## AISI ANGLE STIFFENER DATA FOR $45^\circ < A \leq 60^\circ$

Table S5.5-1; Rod Stiffener Angle Code Designation and Design Data

Rod Stiffener Code	AISI Angle Designation	Weight per Foot (lbs)	Section Area (in <sup>2</sup> )	$I_{X-X}$ or $I_{Y-Y}$ (in <sup>4</sup> )	Radius of Gyration Z-Z (in)	$I_{Z-Z}$ (in <sup>4</sup> )
A	L 1 x 1 x 1/8	0.80	0.234	0.022	0.196	0.0090
B	L 1-1/4 x 1-1/4 x 1/4	1.92	0.563	0.077	0.243	0.0332
C	L 1-1/2 x 1-1/2 x 1/4	2.34	0.688	0.139	0.292	0.0587
D	L 1-3/4 x 1-3/4 x 1/4	2.77	0.813	0.227	0.341	0.0945
E	L 2 x 2 x 1/4	3.19	0.938	0.348	0.391	0.1434
F	L 2 x 2 x 3/8	4.70	1.36	0.479	0.389	0.2058
G	L 2-1/2 x 2-1/2 x 1/4	4.10	1.19	0.703	0.491	0.2869
H <sup>1</sup>	L 2-1/2 x 2-1/2 x 3/8	5.90	1.73	0.984	0.487	0.4103
I <sup>1</sup>	L 2-1/2 x 2-1/2 x 1/2	7.70	2.25	1.230	0.487	0.5336

<sup>1</sup> These rod stiffener angles may be used with the Kinetics Noise Control Model KHRC-C rod stiffener clamp. Not all hanger rod sizes may work with these arrangements. Check with Kinetics Noise Control Engineering for your particular application.

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### SECTION – A5.5

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**Table A5.5-2; Maximum Allowable Rod Stiffener Length: Horizontal Force Class I, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	68	126	173	220	240	240	240	240	240
10	72	135	186	236	240	240	240	240	240
15	79	146	202	240	240	240	240	240	240
25	98	182	240	240	240	240	240	240	240
50	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
100	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
150	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
200	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
250	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
300	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

**Table A5.5-3; Maximum Allowable Rod Stiffener Length: Horizontal Force Class II, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	46	86	119	151	186	223	240	240	240
10	48	89	122	156	192	230	240	240	240
15	49	92	127	161	198	238	240	240	240
25	53	99	137	174	214	240	240	240	240
50	69	128	177	225	240	240	240	240	240
100	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
150	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
200	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
250	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
300	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

**AISI ANGLE STIFFENER DATA FOR  $45^\circ < A \leq 60^\circ$**

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**Table A5.5-4; Maximum Allowable Rod Stiffener Length: Horizontal Force Class III, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	32	60	82	105	129	155	183	219	240
10	32	61	84	106	131	157	186	222	240
15	33	62	85	108	133	160	189	226	240
25	34	64	88	112	138	165	195	233	240
50	37	70	96	123	151	181	214	240	240
100	49	91	125	159	196	235	240	240	240
150	87	161	223	240	240	240	240	240	240
200	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
250	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
300	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

**Table A5.5-5; Maximum Allowable Rod Stiffener Length: Horizontal Force Class IV, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	22	42	58	73	91	109	128	154	175
10	22	42	58	74	91	109	129	155	176
15	23	42	59	75	92	110	130	156	178
25	23	43	60	76	93	112	132	158	181
50	24	45	62	79	97	117	138	165	188
100	26	49	68	87	107	128	151	181	206
150	30	55	76	97	120	143	169	203	231
200	34	64	88	112	139	166	196	235	240
250	42	79	109	139	171	205	240	240	240
300	61	114	157	200	240	240	240	240	240

## AISI ANGLE STIFFENER DATA FOR $45^\circ < A \leq 60^\circ$

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**Table A5.5-6; Maximum Allowable Rod Stiffener Length: Horizontal Force Class V, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	14	26	36	46	57	68	81	96	110
10	14	26	36	46	57	68	81	97	110
15	14	26	36	46	57	69	81	97	111
25	14	26	37	47	58	69	82	98	111
50	14	27	37	47	58	70	83	99	113
100	15	28	38	49	60	72	85	102	117
150	15	29	40	51	62	75	88	106	121
200	16	30	41	52	65	78	92	110	125
250	16	31	43	55	67	81	95	114	130
300	17	32	45	57	70	84	100	119	136

**Table A5.5-7; Maximum Allowable Rod Stiffener Length: Horizontal Force Class VI, Single Hanger Rod Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	-----	18	25	32	40	48	57	68	78
10	-----	18	25	32	40	48	57	68	78
15	-----	18	25	32	40	48	57	68	78
25	-----	18	26	33	40	48	57	68	78
50	-----	19	26	33	41	49	58	69	79
100	-----	19	26	33	41	49	58	70	80
150	-----	19	27	34	42	50	59	71	81
200	-----	19	27	34	42	51	60	72	82
250	-----	20	27	35	43	52	61	73	84
300	-----	20	28	36	44	53	62	75	85

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Table A5.5-8; Maximum Allowable Rod Stiffener Length: Horizontal Force Class I, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	65	122	168	213	240	240	240	240	240
10	68	126	173	220	240	240	240	240	240
15	70	130	179	228	240	240	240	240	240
25	75	140	193	240	240	240	240	240	240
50	98	182	240	240	240	240	240	240	240
100	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
150	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
200	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
250	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
300	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

Table A5.5-9; Maximum Allowable Rod Stiffener Length: Horizontal Force Class II, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	45	85	117	148	183	219	240	240	240
10	46	86	119	151	186	223	240	240	240
15	47	87	120	153	189	226	240	240	240
25	48	90	125	158	195	234	240	240	240
50	53	99	137	174	214	240	240	240	240
100	69	128	177	225	240	240	240	240	240
150	123	229	240	240	240	240	240	240	240
200	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
250	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.
300	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.	N.R.

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Table A5.5-10; Maximum Allowable Rod Stiffener Length: Horizontal Force Class III, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	32	59	82	104	128	154	182	217	240
10	32	60	82	105	129	155	183	219	240
15	32	60	83	106	130	156	184	221	240
25	33	61	84	107	132	158	187	224	240
50	34	64	88	112	138	165	195	233	240
100	37	70	96	123	151	181	214	240	240
150	42	78	108	137	169	203	240	240	240
200	49	91	125	159	196	235	240	240	240
250	60	112	154	196	240	240	240	240	240
300	87	161	223	240	240	240	240	240	240

Table A5.5-11; Maximum Allowable Rod Stiffener Length: Horizontal Force Class IV, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	22	42	58	73	90	108	128	153	175
10	22	42	58	73	91	109	128	154	175
15	22	42	58	74	91	109	129	154	176
25	23	42	58	74	92	110	130	155	177
50	23	43	60	76	93	112	132	158	181
100	24	45	62	79	97	117	138	165	188
150	25	47	65	82	102	122	144	172	197
200	26	49	68	87	107	128	151	181	206
250	28	52	72	91	113	135	159	191	218
300	30	55	76	97	120	143	169	203	231

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**Table A5.5-12; Maximum Allowable Rod Stiffener Length: Horizontal Force Class V, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	14	26	36	46	57	68	80	96	110
10	14	26	36	46	57	68	81	96	110
15	14	26	36	46	57	68	81	97	110
25	14	26	36	46	57	68	81	97	111
50	14	26	37	47	58	69	82	98	111
100	14	27	37	47	58	70	83	99	113
150	14	27	38	48	59	71	84	101	115
200	15	28	38	49	60	72	85	102	117
250	15	28	39	50	61	74	87	104	119
300	15	29	40	51	62	75	88	106	121

**Table A5.5-13; Maximum Allowable Rod Stiffener Length: Horizontal Force Class VI, Trapeze Supported Pipe & Duct, 10 ft Hanger Spacing, and an Installation Angle = 60°**

Supported Weight (lbs/ft)	Maximum Rod Stiffener Length (in) Rod Stiffener Code for AISI Angles								
	A	B	C	D	E	F	G	H	I
5	-----	18	25	32	40	48	57	68	78
10	-----	18	25	32	40	48	57	68	78
15	-----	18	25	32	40	48	57	68	78
25	-----	18	25	32	40	48	57	68	78
50	-----	18	26	33	40	48	57	68	78
100	-----	19	26	33	41	49	58	69	79
150	-----	19	26	33	41	49	58	69	79
200	-----	19	26	33	41	49	58	70	80
250	-----	19	26	34	41	50	59	70	80
300	-----	19	27	34	42	50	59	71	81

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