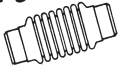
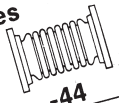
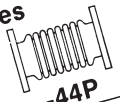
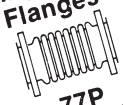
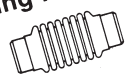
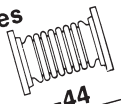
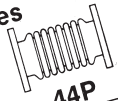
Specifications—2" Pipe Size

TYPES		ES one ply short style	EL one ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	200	80
	nippled units (see note 1)	120	50
Welding Nipples  -11	part number	215009	215409
	overall length (in.)	6⅞	10½
	approx. weight (lbs.)	1.5	2.2
Fixed Forged Steel Flanges  -44	part number	215259	215659
	overall length (in.)	6¼	9⅞
	approx. weight (lbs.)	10.5	11
Floating Forged Steel Flanges  -77	part number	—	—
	overall length (in.)	—	—
	approx. weight (lbs.)	—	—
Fixed Plate Steel Flanges  -44P	part number	216909	217109
	overall length (in.)	5 9/16	9¼
	approx. weight (lbs.)	9.8	10.5
Floating Plate Steel Flanges  -77P	part number	—	—
	overall length (in.)	—	—
	approx. weight (lbs.)	—	—
Maximum rated total Axial movement in inches for designated cycle life (see note 3)	1000 cycles	0.9	1.8
	7000 cycles	0.6	1.3
	15000 cycles	0.5	1.1
Axial Deflection Force	pounds per inch	360	175
Maximum rated total Lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.50	2.1
	7000 cycles	.31	1.3
	15000 cycles	.25	1.1
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	68	8
	.20"	107	12
	.30"	141	16
	.50"	—	22
	1.00"	—	36

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications— 2½" Pipe Size

TYPES		ES one ply short style	ES one ply short style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	200	80
	nippled units (see note 1)	120	50
Welding Nipples  -11	part number	215010	215410
	overall length (in.)	7½	11¾
	approx. weight (lbs.)	2.2	3.0
Fixed Forged Steel Flanges  -44	part number	215260	215660
	overall length (in.)	7⅛	11⅜
	approx. weight (lbs.)	15	16
Floating Forged Steel Flanges  -77	part number	—	—
	overall length (in.)	—	—
	approx. weight (lbs.)	—	—
Fixed Plate Steel Flanges  -44P	part number	216910	217110
	overall length (in.)	6¼	10½
	approx. weight (lbs.)	13.5	14.2
Floating Plate Steel Flanges  -77P	part number	—	—
	overall length (in.)	—	—
	approx. weight (lbs.)	—	—
Maximum rated total Axial movement in inches for designated cycle life (see note 3)	1000 cycles	0.9	2.0
	7000 cycles	0.6	1.3
	15000 cycles	0.5	1.0
Axial Deflection Force	pounds per inch	590	280
Maximum rated total Lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.49	2.1
	7000 cycles	.30	1.3
	15000 cycles	.25	1.1
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	108	12
	.20"	171	20
	.30"	224	26
	.50"	—	36
	1.00"	—	57

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

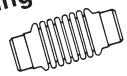
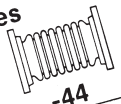
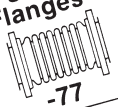
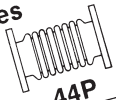
Specifications—3″ Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	140	275	575	60	120	180
	nippled units (see note 1)	120	240	575	50	100	180
Welding Nipples -11	part number	215011	215811	216311	215411	216061	216461
	overall length (in.)	8 7/8	8 7/8	11 5/8	13 1/8	13 1/8	15 7/8
	approx. weight (lbs.)	4	5.1	7.5	4.9	6.9	10.4
Fixed Forged Steel Flanges -44	part number	215261	215911	218111	215661	216161	218211
	overall length (in.)	7 5/8	7 5/8	8 1/2	11 7/8	11 7/8	11 3/4
	approx. weight (lbs.)	17	19	29	18	20	24
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216911	217311	217711	217111	217511	217911
	overall length (in.)	6 5/8	6 5/8	7 3/8	10 7/8	10 7/8	11 5/8
	approx. weight (lbs.)	15	16	28	16	18	27
Floating Plate Steel Flanges -77P	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	1.1	1.1	1.1	2.3	2.3	2.1
	7000 cycles	0.7	0.7	0.7	1.4	1.4	1.3
	15000 cycles	0.6	0.6	0.6	1.2	1.2	1.1
Axial deflection force	pounds per inch	530	1060	1590	265	530	825
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.52	.52	.52	2.0	2.0	1.8
	7000 cycles	.32	.32	.32	1.2	1.2	1.1
	15000 cycles	.26	.26	.26	1.0	1.0	0.9
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10″	111	222	333	15	29	46
	.20″	176	352	528	23	47	72
	.30″	232	464	696	32	64	99
	.50″	—	—	—	42	84	130
	1.00″	—	—	—	67	134	208

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—3½" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	150	285	575	70	130	180
	nippled units (see note 1)	120	240	575	40	80	180
Welding Nipples  -11	part number	215012	215812	216312	215412	216062	216462
	overall length (in.)	8⅞	8⅞	11⅝	12⅛	12⅛	15⅞
	approx. weight (lbs.)	4.6	5.8	8.5	5.8	8.0	11.6
Fixed Forged Steel Flanges  -44	part number	215262	215912	218112	215662	216162	218212
	overall length (in.)	7¾	7¾	8⅝	12	12	11⅞
	approx. weight (lbs.)	23	25	36	24	26	29
Floating Forged Steel Flanges  -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges  -44P	part number	216912	217312	217712	217112	217512	217912
	overall length (in.)	6⅝	6⅝	7⅜	10⅞	10⅞	11⅝
	approx. weight (lbs.)	18.3	19.5	34	19.3	21.2	32
Floating Plate Steel Flanges  -77P	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	1.1	1.1	1.1	2.3	2.3	2.1
	7000 cycles	0.7	0.7	0.7	1.4	1.4	1.3
	15000 cycles	0.6	0.6	0.6	1.2	1.2	1.1
Axial deflection force	pounds per inch	600	1200	1800	300	600	935
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.46	.46	.46	1.8	1.8	1.7
	7000 cycles	.29	.29	.29	1.1	1.1	1.0
	15000 cycles	.24	.24	.24	0.9	0.9	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	154	308	462	21	41	65
	.20"	245	490	835	32	64	99
	.30"	322	644	966	42	84	131
	.50"	—	—	—	59	118	183
	1.00"	—	—	—	94	188	293

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

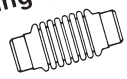
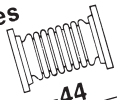
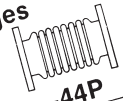
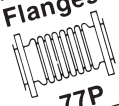
Specifications—4" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	180	360	675	75	150	245
	nippled units (see note 1)	120	240	675	40	80	245
Welding Nipples -11	part number	215013	215813	216313	215413	216063	216463
	overall length (in.)	9⅝	9⅝	11⅝	14¼	14¼	17¼
	approx. weight (lbs.)	5.4	6.7	10.1	6.6	9.1	13.6
Fixed Forged Steel Flanges -44	part number	215263	215913	218113	215663	216163	218213
	overall length (in.)	7⅝	8¼	8⅞	12¼	12⅞	12⅜
	approx. weight (lbs.)	17	28	51	19	32	33
Floating Forged Steel Flanges -77	part number	215363	216013	—	215763	216263	—
	overall length (in.)	7⅝	8¼	—	12¼	12⅞	—
	approx. weight (lbs.)	16	29	—	18	20	—
Fixed Plate Steel Flanges -44P	part number	216913	217313	217713	217113	217513	217913
	overall length (in.)	7⅝	7⅝	7⅞	12¼	12¼	12½
	approx. weight (lbs.)	23	24.2	40	24.1	27	35
Floating Plate Steel Flanges -77P	part number	217013	217413	—	217213	217613	—
	overall length (in.)	6⅞	6⅞	—	11½	11½	—
	approx. weight (lbs.)	23.1	24.6	—	24.4	27	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	1.2	1.2	1.2	2.3	2.3	2.3
	7000 cycles	0.7	0.7	0.7	1.4	1.4	1.4
	15000 cycles	0.6	0.6	0.6	1.1	1.1	1.1
Axial deflection force	pounds per inch	625	1250	1875	310	620	930
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.44	.44	.44	1.8	1.8	1.8
	7000 cycles	.27	.27	.27	1.1	1.1	1.1
	15000 cycles	.23	.23	.23	0.9	0.9	0.9
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	181	362	543	22	45	67
	.20"	286	572	858	35	71	106
	.30"	378	756	1134	46	93	140
	.50"	—	—	—	66	132	198
	1.00"	—	—	—	104	208	312

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—5″ Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	145	290	600	65	130	215
	nippled units (see note 1)	100	200	600	40	80	215
Welding Nipples  -11	part number	215014	215814	216314	215414	216064	216464
	overall length (in.)	10	10	12	15	15	18
	approx. weight (lbs.)	7.3	9	13	8.6	11	18.1
Fixed Forged Steel Flanges  -44	part number	215264	215914	218114	215664	216164	218214
	overall length (in.)	8	8⅞	9½	13	13⅞	13⅜
	approx. weight (lbs.)	22	34	61	22	36	37
Floating Forged Steel Flanges  -77	part number	215364	216014	216414	215764	216264	216564
	overall length (in.)	8	8⅞	10¼	13	13⅞	14⅛
	approx. weight (lbs.)	22	34	64	22	23	40
Fixed Plate Steel Flanges  -44P	part number	216914	217314	217714	217114	217514	217914
	overall length (in.)	8	8	8¼	13	13	13¼
	approx. weight (lbs.)	29	31	46	30	34	41
Floating Plate Steel Flanges  -77P	part number	217014	217414	217814	217214	217614	218014
	overall length (in.)	7½	7½	7¾	12½	12½	12¾
	approx. weight (lbs.)	29	31	47	32	35	41
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	1.3	1.3	1.2	2.7	2.7	2.5
	7000 cycles	0.8	0.8	0.7	1.6	1.6	1.5
	15000 cycles	0.7	0.7	0.6	1.3	1.3	1.2
Axial deflection force	pounds per inch	490	980	1575	245	490	790
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.44	.44	.40	1.8	1.8	1.6
	7000 cycles	.27	.27	.23	1.1	1.1	0.9
	15000 cycles	.23	.23	.20	0.9	0.9	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10″	177	354	562	23	47	75
	.20″	279	558	894	37	74	119
	.30″	370	740	1170	48	97	155
	.50″	—	—	—	68	136	219
	1.00″	—	—	—	108	216	348

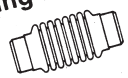
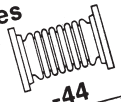
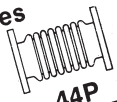
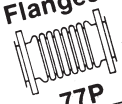
NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—6" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	105	200	525	55	110	185
	nippled units (see note 1)	80	160	525	40	80	185
Welding Nipples -11	part number	215015	215815	216315	215415	216065	216465
	overall length (in.)	10 3/8	10 3/8	12 3/8	15 5/8	15 5/8	18 5/8
	approx. weight (lbs.)	9.4	11	16.8	11	15	22.2
Fixed Forged Steel Flanges -44	part number	215265	215915	218115	215665	216165	218215
	overall length (in.)	8 7/8	9 1/2	10	14 1/8	14 3/4	14 1/4
	approx. weight (lbs.)	28	42	78.6	30	46	46
Floating Forged Steel Flanges -77	part number	215365	216015	216415	215765	216265	216565
	overall length (in.)	8 7/8	9 1/2	10 9/16	14 1/8	14 3/4	14 13/16
	approx. weight (lbs.)	28	39	79	26	30	46
Fixed Plate Steel Flanges -44P	part number	216915	217315	217715	217115	217515	217915
	overall length (in.)	8 3/8	8 3/8	8 7/8	13 5/8	13 5/8	14 1/8
	approx. weight (lbs.)	33	35	63	35	39	51
Floating Plate Steel Flanges -77P	part number	217015	217415	217815	217215	217615	218015
	overall length (in.)	7 7/8	7 7/8	8 3/8	13 1/8	13 1/8	13 5/8
	approx. weight (lbs.)	33	36	64	35	39	51
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	1.6	1.6	1.4	3.2	3.2	2.8
	7000 cycles	1.0	1.0	0.9	2.0	2.0	1.8
	15000 cycles	0.8	0.8	0.7	1.6	1.6	1.4
Axial deflection force	pounds per inch	525	1050	1785	265	530	1015
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.48	.48	.43	1.9	1.9	1.5
	7000 cycles	.30	.30	.27	1.2	1.2	0.9
	15000 cycles	.25	.25	.21	1.0	1.0	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	225	450	759	28	57	109
	.20"	354	708	1208	46	91	175
	.30"	468	936	1582	59	119	228
	.50"	—	—	—	84	168	321
	1.00"	—	—	—	133	266	509

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

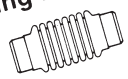
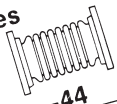
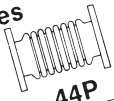
Specifications—8″ Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	100	200	500	50	100	180
	nippled units (see note 1)	80	160	500	35	70	180
Welding Nipples  -11	part number	215017	215817	216317	215417	216067	216467
	overall length (in.)	12 5/8	12 5/8	14 5/8	19 3/8	19 3/8	22 3/8
	approx. weight (lbs.)	17	21	28	20	27	38
Fixed Forged Steel Flanges  -44	part number	215267	215917	218117	215667	216167	218217
	overall length (in.)	10 1/8	11 1/8	12	16 7/8	17 7/8	17 3/8
	approx. weight (lbs.)	40	68	123	43	74	77
Floating Forged Steel Flanges  -77	part number	215367	216017	216417	215767	216267	216567
	overall length (in.)	10 1/8	11 1/8	12 5/8	16 7/8	17 7/8	17 15/16
	approx. weight (lbs.)	37	64	125	40	47	78
Fixed Plate Steel Flanges  -44P	part number	216917	217317	217717	217117	217517	217917
	overall length (in.)	9 5/8	9 5/8	10 1/8	16 3/8	16 3/8	16 7/8
	approx. weight (lbs.)	48	52	87	51	59	77
Floating Plate Steel Flanges  -77P	part number	217017	217417	217817	217217	217617	218017
	overall length (in.)	9 1/8	9 1/8	9 5/8	15 7/8	15 7/8	16 3/8
	approx. weight (lbs.)	49	53	88	52	59	78
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.0	2.0	1.7	4.0	4.0	3.4
	7000 cycles	1.2	1.2	1.0	2.5	2.5	2.1
	15000 cycles	1.0	1.0	0.8	2.0	2.0	1.7
Axial deflection force	pounds per inch	460	915	1620	230	460	810
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.59	.59	.50	2.4	2.4	1.7
	7000 cycles	.36	.36	.29	1.5	1.5	1.0
	15000 cycles	.29	.29	.23	1.2	1.2	0.9
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10″	205	410	725	25	50	88
	.20″	323	646	1154	39	79	140
	.30″	427	854	1511	53	105	184
	.50″	—	—	—	74	148	260
	1.00″	—	—	—	117	234	412

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—10″ Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	80	160	280	35	70	125
	nippled units (see note 1)	80	160	280	35	70	125
Welding Nipples  -11	part number	215019	215819	216319	215419	216069	216469
	overall length (in.)	12⅝	12⅝	14⅝	19⅜	19⅜	22⅜
	approx. weight (lbs.)	23	27	35	27	35	46
Fixed Forged Steel Flanges  -44	part number	215269	215919	218119	215669	216169	218219
	overall length (in.)	10⅛	11½	11	16⅞	18¼	17¾
	approx. weight (lbs.)	56	90	92	60	102	103
Floating Forged Steel Flanges  -77	part number						
	overall length (in.)	10⅛	11½	11	16⅞	18¼	18¼
	approx. weight (lbs.)	53	89	94	56	64	105
Fixed Plate Steel Flanges  -44P	part number	216919	217319	217719	217119	217519	217919
	overall length (in.)	9⅝	9⅝	10⅛	16⅜	16⅜	16⅞
	approx. weight (lbs.)	60	64	82	63	71	93
Floating Plate Steel Flanges  -77P	part number	217019	217419	217819	217219	217619	218019
	overall length (in.)	9⅛	9⅛	9⅝	15⅞	15⅞	16⅜
	approx. weight (lbs.)	60	65	107	64	73	95
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.3	2.3	2.3	4.5	4.5	4.5
	7000 cycles	1.4	1.4	1.4	2.8	2.8	2.8
	15000 cycles	1.2	1.2	1.2	2.3	2.3	2.3
Axial deflection force	pounds per inch	450	900	1350	225	450	675
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.53	.53	.53	2.1	2.1	2.1
	7000 cycles	.33	.33	.33	1.3	1.3	1.3
	15000 cycles	.27	.27	.27	1.1	1.1	1.1
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10″	316	632	948	39	76	116
	.20″	500	1000	1500	61	122	184
	.30″	660	1320	1980	81	162	243
	.50″	—	—	—	113	226	339
	1.00″	—	—	—	180	360	540

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—12" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	80	160	290	35	75	140
	nippled units (see note 1)	70	140	290	35	70	140
Welding Nipples -11	part number	215020	215820	216320	215420	216070	216470
	overall length (in.)	12 5/8	12 5/8	14 5/8	19 3/8	19 3/8	22 3/8
	approx. weight (lbs.)	31	35	52	34	44	60
Fixed Forged Steel Flanges -44	part number	215270	215920	218120	215670	216170	218220
	overall length (in.)	10 1/8	12	11 1/2	16 7/8	18 3/4	18 1/4
	approx. weight (lbs.)	91	142	144	94	148	152
Floating Forged Steel Flanges -77	part number	215370	216020	216420	215770	216270	216570
	overall length (in.)	10 1/8	12	12	16 7/8	18 3/4	18 3/4
	approx. weight (lbs.)	88	138	147	91	101	155
Fixed Plate Steel Flanges -44P	part number	216920	217320	217720	217120	217520	217920
	overall length (in.)	9 5/8	9 5/8	10 1/8	16 3/8	16 3/8	16 7/8
	approx. weight (lbs.)	89	96	144	91	102	152
Floating Plate Steel Flanges -77P	part number	217020	217420	217820	217220	217620	218020
	overall length (in.)	9 1/8	9 1/8	10 1/8	15 7/8	15 7/8	16 7/8
	approx. weight (lbs.)	90	98	178	92	104	155
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.8	2.8	2.6	5.5	5.5	5.1
	7000 cycles	1.7	1.7	1.6	3.4	3.4	3.1
	15000 cycles	1.4	1.4	1.3	2.8	2.8	2.6
Axial deflection force	pounds per inch	420	840	1350	210	420	675
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.55	.55	.51	2.2	2.2	1.9
	7000 cycles	.34	.34	.32	1.4	1.4	1.2
	15000 cycles	.28	.28	.26	1.1	1.1	0.6
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	404	808	1304	50	100	160
	.20"	635	1270	2074	79	158	254
	.30"	840	1680	2716	103	207	332
	.50"	—	—	—	145	290	466
	1.00"	—	—	—	231	462	742

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—14" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	60	120	225	55	110	185
	nippled units (see note 1)	50	100	225	35	70	185
Welding Nipples -11	part number	215021	215821	216321	215421	216071	216471
	overall length (in.)	14 7/8	14 7/8	16 7/8	20 7/8	20 7/8	23 7/8
	approx. weight (lbs.)	27	35	50	33	47	67
Fixed Forged Steel Flanges -44	part number	215271	215921	218121	215671	216171	218221
	overall length (in.)	11 3/8	11 3/8	13 3/8	17 3/8	17 3/8	19 3/8
	approx. weight (lbs.)	106	114	190	112	126	208
Floating Forged Steel Flanges -77	part number	215371	216021	—	215771	216271	—
	overall length (in.)	11 3/8	11 3/8	—	17 3/8	17 3/8	—
	approx. weight (lbs.)	97	106	—	103	118	—
Fixed Plate Steel Flanges -44P	part number	216921	217321	217721	217121	217521	217921
	overall length (in.)	11 5/8	11 5/8	11 7/8	17 5/8	17 5/8	17 7/8
	approx. weight (lbs.)	121	129	175	127	141	193
Floating Plate Steel Flanges -77P	part number	217021	217421	—	217221	217621	—
	overall length (in.)	10 5/8	10 5/8	—	16 5/8	16 5/8	—
	approx. weight (lbs.)	122	131	—	128	143	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.9	2.9	2.9	5.2	5.2	5.2
	7000 cycles	1.8	1.8	1.8	3.2	3.2	3.2
	15000 cycles	1.5	1.5	1.5	2.7	2.7	2.7
Axial deflection force	pounds per inch	650	1300	1950	360	720	1080
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.58	.58	.58	1.9	1.9	1.9
	7000 cycles	.35	.35	.35	1.1	1.1	1.1
	15000 cycles	.29	.29	.29	1.0	1.0	1.0
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	648	1296	1944	112	224	336
	.20"	1020	2040	3060	177	353	530
	.30"	1350	2700	4050	233	465	698
	.50"	—	—	—	325	650	975
	1.00"	—	—	—	520	1040	1560

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—16" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	50	95	210	45	95	200
	nippled units (see note 1)	45	90	210	30	60	200
Welding Nipples -11	part number	215022	215822	216323	215422	216072	216473
	overall length (in.)	1 7/8	1 7/8	1 7/8	2 0/8	2 0/8	2 3/8
	approx. weight (lbs.)	31	40	57	37	53	77
Fixed Forged Steel Flanges -44	part number	215272	215922	218122	215672	216172	218222
	overall length (in.)	1 1/8	1 1/8	1 3/8	1 7/8	1 7/8	1 7/8
	approx. weight (lbs.)	127	135	240	132	148	260
Floating Forged Steel Flanges -77	part number	215372	216022	—	215772	216272	—
	overall length (in.)	1 1/8	1 1/8	—	1 7/8	1 7/8	—
	approx. weight (lbs.)	127	137	—	133	149	—
Fixed Plate Steel Flanges -44P	part number	216922	217322	217722	217122	217522	217922
	overall length (in.)	1 1/8	1 1/8	1 1/8	1 7/8	1 7/8	1 7/8
	approx. weight (lbs.)	145	154	180	151	167	200
Floating Plate Steel Flanges -77P	part number	217022	217422	—	217222	217622	—
	overall length (in.)	1 0/8	1 0/8	—	1 6/8	1 6/8	—
	approx. weight (lbs.)	146	157	—	152	169	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.9	2.9	2.9	5.2	5.2	5.2
	7000 cycles	1.8	1.8	1.8	3.2	3.2	3.2
	15000 cycles	1.5	1.5	1.5	2.7	2.7	2.7
Axial deflection force	pounds per inch	740	1480	2220	410	820	1230
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.51	.51	.51	1.6	1.6	1.6
	7000 cycles	.31	.31	.31	1.0	1.0	1.0
	15000 cycles	.26	.26	.26	0.8	0.8	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	940	1880	2820	164	327	491
	.20"	1480	2960	4440	254	508	763
	.30"	1960	3920	5880	336	672	1008
	.50"	—	—	—	470	940	1410
	1.00"	—	—	—	745	1490	2235

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—18" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	45	90	205	45	90	205
	nippled units (see note 1)	40	80	205	30	60	205
Welding Nipples -11	part number	215023	215823	216325	215423	216073	216475
	overall length (in.)	15¾	15¾	18¾	20⅞	20⅞	23⅞
	approx. weight (lbs.)	36	48	67	42	60	86
Fixed Forged Steel Flanges -44	part number	215273	215923	218123	215673	216173	218223
	overall length (in.)	12¼	12¼	15⅛	17⅜	17⅜	20¼
	approx. weight (lbs.)	131	142	253	136	184	272
Floating Forged Steel Flanges -77	part number	215373	216023	—	215773	216273	—
	overall length (in.)	12¼	12¼	—	17⅜	17⅜	—
	approx. weight (lbs.)	131	144	—	136	157	—
Fixed Plate Steel Flanges -44P	part number	216923	217323	217723	217123	217523	217923
	overall length (in.)	12½	12½	12¾	17⅝	17⅝	17⅞
	approx. weight (lbs.)	146	158	186	153	171	206
Floating Plate Steel Flanges -77P	part number	217023	217423	—	217223	217623	—
	overall length (in.)	11½	11½	—	16⅝	16⅝	—
	approx. weight (lbs.)	148	160	—	154	174	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	3.2	3.2	3.2	5.2	5.2	5.2
	7000 cycles	2.0	2.0	2.0	3.2	3.2	3.2
	15000 cycles	1.6	1.6	1.6	2.7	2.7	2.7
Axial deflection force	pounds per inch	750	1500	2250	460	920	1380
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.56	.56	.56	1.5	1.5	1.5
	7000 cycles	.34	.34	.34	0.9	0.9	0.9
	15000 cycles	.28	.28	.28	0.8	0.8	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	963	1926	2889	224	448	672
	.20"	1520	3040	4560	358	715	1073
	.30"	2010	4020	6030	465	930	1396
	.50"	—	—	—	660	1320	1980
	1.00"	—	—	—	1040	2080	3120

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—20" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	40	85	195	40	85	195
	nippled units (see note 1)	30	60	195	20	40	195
Welding Nipples -11	part number	215024	215824	216327	215424	216074	216477
	overall length (in.)	14¼	14¼	17¼	21⅜	21⅜	24⅜
	approx. weight (lbs.)	37	48	67	47	68	98
Fixed Forged Steel Flanges -44	part number	215274	215924	218124	215674	216174	218224
	overall length (in.)	10¾	10¾	14	17⅞	17⅞	21⅛
	approx. weight (lbs.)	150	160	327	159	180	358
Floating Forged Steel Flanges -77	part number	215374	216024	—	215774	216274	—
	overall length (in.)	10¾	10¾	—	17⅞	17⅞	—
	approx. weight (lbs.)	150	162	—	160	182	—
Fixed Plate Steel Flanges -44P	part number	216924	217324	217724	217124	217524	217924
	overall length (in.)	11	11	11¼	18⅛	18⅛	18⅜
	approx. weight (lbs.)	186	197	242	196	217	273
Floating Plate Steel Flanges -77P	part number	217024	217424	—	217224	217624	—
	overall length (in.)	10¼	10¼	—	17⅜	17⅜	—
	approx. weight (lbs.)	188	200	—	198	225	—
Maximum rated total axial movement in inches for designated cycle life (see note 3)	1000 cycles	2.5	2.5	2.5	5.2	5.2	5.2
	7000 cycles	1.8	1.8	1.8	3.8	3.8	3.8
	15000 cycles	1.5	1.5	1.5	3.1	3.1	3.1
Axial deflection force	pounds per inch	430	860	1290	200	400	600
Maximum rated total lateral movement in inches for designated cycle life	1000 cycles (see note 4)	.36	.36	.36	1.5	1.5	1.5
	7000 cycles	.22	.22	.22	0.9	0.9	0.9
	15000 cycles	.18	.18	.18	0.8	0.8	0.8
Force in pounds required to achieve Lateral deflection in inches from normal centerline	.10"	1300	2600	3900	151	302	452
	.20"	2050	4100	6150	237	474	711
	.30"	2720	5440	—	310	620	931
	.50"	—	—	—	440	880	1320
	1.00"	—	—	—	695	1390	2085

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.

Specifications—24" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	40	80	180	40	80	180
	nippled units (see note 1)	25	50	180	18	36	180
Welding Nipples -11	part number	215026	215826	216331	215426	216076	216481
	overall length (in.)	14 1/4	14 1/4	17 1/4	21 3/8	21 3/8	24 3/8
	approx. weight (lbs.)	44	57	80	56	81	117
Fixed Forged Steel Flanges -44	part number	215276	215926	218126	215676	216176	218226
	overall length (in.)	11 3/4	11 3/4	14 3/4	18 7/8	18 7/8	21 7/8
	approx. weight (lbs.)	239	252	445	251	276	482
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216926	217326	217726	217126	217526	217926
	overall length (in.)	11	11	11 1/4	18 1/8	18 1/8	18 3/8
	approx. weight (lbs.)	233	246	302	245	270	339
Floating Plate Steel Flanges -77P	part number	217026	217426	—	217226	217626	—
	overall length (in.)	10 1/4	10 1/4	—	15 3/8	15 3/8	—
	approx. weight (lbs.)	238	255	—	247	274	—
Maximum rated total axial movement in inches for designated cycle life (see notes 3 and 6)	1000 cycles	2.5	2.5	1.6	5.2	5.2	3.5
	7000 cycles	1.8	1.8	1.0	3.8	3.8	2.2
	15000 cycles	1.5	1.5	0.8	3.1	3.1	1.8
Axial deflection force (see note 6)	pounds per inch	520	1040	3270	245	490	1530
Maximum rated total lateral movement in inches for designated cycle life (see note 6)	1000 cycles (see note 4)	.30	.30	.16	1.3	1.3	.74
	7000 cycles	.18	.18	.10	0.8	0.8	.46
	15000 cycles	.15	.15	.08	0.7	0.7	.38
Force in pounds required to achieve Lateral deflection in inches from normal centerline (see note 6)	.10"	1970	3940	12700	224	448	1290
	.20"	3090	6180	20200	358	715	2070
	.30"	—	—	—	465	930	2670
	.50"	—	—	—	660	1320	3800
	1.00"	—	—	—	1040	2080	6000

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.
6. These specifications do not apply to long style 77P series: refer to our Sales Office nearest you.

Specifications—30" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	40	80	165	40	80	165
	nippled units (see note 1)	24	48	165	16	32	165
Welding Nipples -11	part number	215030	215830	216337	215430	216080	216487
	overall length (in.)	14¼	14¼	17¼	21⅜	21⅜	24⅜
	approx. weight (lbs.)	56	72	100	71	102	146
Fixed Forged Steel Flanges -44	part number	215280	215930	218130	215680	216180	218230
	overall length (in.)	11¾	11¾	11¾	18⅞	18⅞	18⅞
	approx. weight (lbs.)	320	335	350	335	366	396
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216930	217330	217730	217130	217530	217930
	overall length (in.)	11¼	11¼	11¼	18⅜	18⅜	18⅜
	approx. weight (lbs.)	371	387	402	387	417	448
Floating Plate Steel Flanges -77P	part number	217030	217430	—	217230	217630	—
	overall length (in.)	10¾	10¾	—	15⅞	15⅞	—
	approx. weight (lbs.)	377	398	—	389	422	—
Maximum rated total axial movement in inches for designated cycle life (see notes 3 and 6)	1000 cycles	2.5	2.5	1.6	5.2	5.2	3.5
	7000 cycles	1.8	1.8	1.0	3.8	3.8	2.2
	15000 cycles	1.5	1.5	0.8	3.1	3.1	1.8
Axial deflection force (see note 6)	pounds per inch	665	1330	4040	310	620	1890
Maximum rated total lateral movement in inches for designated cycle life (see note 6)	1000 cycles (see note 4)	.24	.24	.13	1.0	1.0	.60
	7000 cycles	.15	.15	.08	0.6	0.6	.37
	15000 cycles	.12	.12	.06	0.5	0.5	.31
Force in pounds required to achieve Lateral deflection in inches from normal centerline (see note 6)	.10"	3460	6720	23600	396	793	2400
	.20"	5440	10900	—	629	1260	3800
	.30"	—	—	—	827	1660	5000
	.50"	—	—	—	1160	2320	7000
	1.00"	—	—	—	—	—	—

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.
6. These specifications do not apply to long style 77P series: refer to our Sales Office nearest you.

Specifications—36″ Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	35	70	150	35	70	150
	nippled units (see note 1)	20	40	150	14	28	150
Welding Nipples -11	part number	215036	215836	216343	215436	216086	216493
	overall length (in.)	14¼	14¼	17¼	21⅜	21⅜	24⅜
	approx. weight (lbs.)	67	86	121	85	122	175
Fixed Forged Steel Flanges -44	part number	215286	215936	218136	215686	216186	218236
	overall length (in.)	11¾	11¾	11¾	18⅞	18⅞	18⅞
	approx. weight (lbs.)	487	506	525	505	542	580
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216936	217336	217736	217136	217536	217936
	overall length (in.)	11¼	11¼	11¼	18⅜	18⅜	18⅜
	approx. weight (lbs.)	497	516	535	515	552	589
Floating Plate Steel Flanges -77P	part number	217036	217436	—	217236	217636	—
	overall length (in.)	10¾	10¾	—	15⅞	15⅞	—
	approx. weight (lbs.)	504	529	—	518	557	—
Maximum rated total axial movement in inches for designated cycle life (see notes 3 & 6)	1000 cycles	2.5	2.5	2.5	5.2	5.2	5.2
	7000 cycles	1.8	1.8	1.8	3.8	3.8	3.8
	15000 cycles	1.5	1.5	1.5	3.1	3.1	3.1
Axial deflection force (see note 6)	pounds per inch	800	1600	2400	375	750	1125
Maximum rated total lateral movement in inches for designated cycle life (see note 6)	1000 cycles (see note 4)	.20	.20	.20	0.9	0.9	0.9
	7000 cycles	.12	.12	.12	0.5	0.5	0.5
	15000 cycles	.10	.10	.10	0.4	0.4	0.4
Force in pounds required to achieve Lateral deflection in inches from normal centerline (see note 6)	.10″	5870	11700	17570	672	1344	2000
	.20″	9250	18500	—	1060	2120	3180
	.30″	—	—	—	1400	2800	4190
	.50″	—	—	—	1960	3920	5880
	1.00″	—	—	—	—	—	—

NOTES:

1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.
6. These specifications do not apply to long style 77P series: refer to our Sales Office nearest you.

Specifications—42" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	30	60	110	30	60	110
	nippled units (see note 1)	18	36	110	12	24	110
Welding Nipples -11	part number	215042	215842	216349	215442	216092	216499
	overall length (in.)	14¼	14¼	17¼	21⅜	21⅜	24⅜
	approx. weight (lbs.)	78	100	141	99	142	204
Fixed Forged Steel Flanges -44	part number	215292	215942	218142	215692	216192	218242
	overall length (in.)	11¾	11¾	11¾	18⅞	18⅞	18⅞
	approx. weight (lbs.)	678	700	722	699	742	785
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216942	217342	217742	217142	217542	217942
	overall length (in.)	11¼	11¼	11¼	18⅜	18⅜	18⅜
	approx. weight (lbs.)	641	663	685	662	705	748
Floating Plate Steel Flanges -77P	part number	217042	217442	—	217242	217642	—
	overall length (in.)	10¾	10¾	—	15⅞	15⅞	—
	approx. weight (lbs.)	648	678	—	665	710	—
Maximum rated total axial movement in inches for designated cycle life (see notes 3 & 6)	1000 cycles	2.5	2.5	1.6	5.2	5.2	3.5
	7000 cycles	1.8	1.8	1.0	3.8	3.8	2.2
	15000 cycles	1.5	1.5	0.8	3.1	3.1	1.8
Axial deflection force (see note 6)	pounds per inch	940	1880	5590	440	880	2610
Maximum rated total lateral movement in inches for designated cycle life (see note 6)	1000 cycles (see note 4)	.17	.17	.09	0.8	0.8	.43
	7000 cycles	.11	.11	.06	0.5	0.5	.27
	15000 cycles	.09	.09	.05	0.4	0.4	.22
Force in pounds required to achieve Lateral deflection in inches from normal centerline (see note 6)	.10"	9160	18300	61000	1060	2110	6250
	.20"	14400	28900	—	1670	3340	9900
	.30"	—	—	—	2200	4400	12900
	.50"	—	—	—	3090	6180	—
	1.00"	—	—	—	—	—	—

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.
6. These specifications do not apply to long style 77P series: refer to our Sales Office nearest you.

Specifications—48" Pipe Size

TYPES		ES one ply short style	MS two ply short style	FS three ply short style	EL one ply long style	ML two ply long style	FL three ply long style
Maximum working pressure at room temperature—PSIG (see note 2)	flanged units	25	50	75	25	50	75
	nippled units (see note 1)	15	30	75	10	20	75
Welding Nipples -11	part number	215048	215848	216355	215448	216098	216505
	overall length (in.)	14¼	14¼	17¼	21⅜	21⅜	24⅜
	approx. weight (lbs.)	89	114	161	113	162	234
Fixed Forged Steel Flanges -44	part number	215298	215948	218148	215698	216198	218248
	overall length (in.)	13¼	13¼	13¼	20⅜	20⅜	20⅜
	approx. weight (lbs.)	877	902	927	901	951	1000
Floating Forged Steel Flanges -77	part number	—	—	—	—	—	—
	overall length (in.)	—	—	—	—	—	—
	approx. weight (lbs.)	—	—	—	—	—	—
Fixed Plate Steel Flanges -44P	part number	216948	217348	217748	217148	217548	217948
	overall length (in.)	11¼	11¼	11¼	18⅜	18⅜	18⅜
	approx. weight (lbs.)	756	781	806	780	830	878
Floating Plate Steel Flanges -77P	part number	217048	217448	—	217248	217648	—
	overall length (in.)	10¾	10¾	—	15⅞	15⅞	—
	approx. weight (lbs.)	764	797	—	783	836	—
Maximum rated total axial movement in inches for designated cycle life (see notes 3 & 6)	1000 cycles	2.5	2.5	1.6	5.2	5.2	3.5
	7000 cycles	1.8	1.8	1.0	3.8	3.8	2.2
	15000 cycles	1.5	1.5	0.8	3.1	3.1	1.8
Axial deflection force (see note 6)	pounds per inch	1090	2180	6360	510	1020	4970
Maximum rated total lateral movement in inches for designated cycle life (see note 6)	1000 cycles (see note 4)	.15	.15	.08	0.7	0.7	.38
	7000 cycles	.09	.09	.05	0.4	0.4	.24
	15000 cycles	.08	.08	.04	0.3	0.3	.19
Force in pounds required to achieve Lateral deflection in inches from normal centerline (see note 6)	.10"	15150	30300	89500	1720	3450	9150
	.20"	—	—	—	2730	5460	14480
	.30"	—	—	—	3590	7170	18960
	.50"	—	—	—	5040	10080	—
	1.00"	—	—	—	—	—	—

NOTES:
1. Nippled units can be provided to equal pressure capabilities of flanged units.
2. For elevated temperatures, refer to page 7 for our pressure correction factor. For pressure in excess of those listed above, contact our Sales Office nearest you.
3. See "Movements—Axial Travel", page 8.
4. Total travel must be distributed. See "Movements—Lateral Travel", page 8.
5. Specifications here pertain to Stainless Steel type 321 only.
6. These specifications do not apply to long style 77P series: refer to our Sales Office nearest you.