NEOTECHA NEOSEAL NSA LINED BUTTERFLY VALVES

THIS VARIANT IS NOW DISCONTINUED (EFFECTIVE OCTOBER 2019)

This is a technical bulletin for OBSOLETE Neoseal NSA lined butterfly valve variant

GENERAL APPLICATION

The valves are ideally suited for corrosive applications, requiring reliable performance, tight shutoff, constant torque and no maintenance. The valves successfully handle a multitude of corrosive applications in industries such as chemical, petro-chemical, pulp and paper, semiconductor (UPW), foundries and mining.

TECHNICAL DATA

Sizes:	DN 40 - 900 (NPS 1½ - 36)
Pressure:	10 bar (DN 40 - 600) / 145 psi (NPS 1½ - 24) 6 bar (DN 700, DN 800 and DN 900) / 87 psi (NPS 28, 32 and 36) 2.5 bar (DN 750) / 36 psi (NPS 30)
Temperature:	-40°C to +200°C (-40°F to +392°F)
Flange accommodation:	DIN PN 10/(16) ASME 150, JIS 10K Bubble tight shut-off in both directions, in accordance with EN-12266-1 leakrate A (UHMWPE leakrate B).

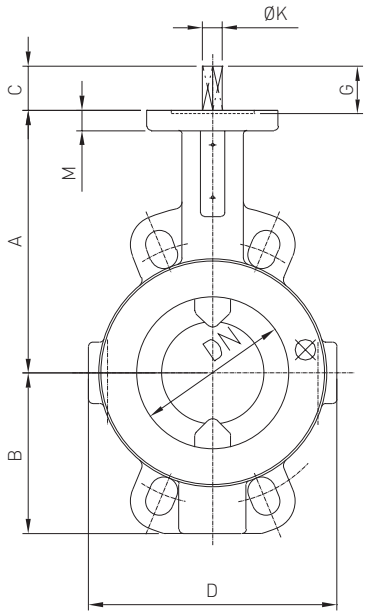
FEATURES

- The pressure to keep the two sealing surfaces of the stem seal together is provided by an upper and lower set of Belleville springs resulting in a superior stem seal, which is TA-Luft / VDI 2440 approved.
- The elastomer back-up pads behind the liner ensure a tight fit around the disc, for a bubble tight shut-off.
- The liner provides a wide flange sealing surface.
- A one piece thin disc stem lined with 3 mm molded PFA providing high K_v values.
- The liner and disc are the only two valve parts in contact with the medium.
- Primary shaft sealing by preloaded contact between disc and liner hub.
- Secondary shaft seal by oversizing the shaft diameter in relation to the shaft hole in the liner.
- The liner and disc are molded and machined to close tolerances to provide:
  - low torque
  - less stress and deformation during opening and closing
- Vacuum tests with helium with pressures less than 20 Pa absolute (0.2 mbarA).
- Optional TFM lining available for extremely demanding applications.
- Integral body locating holes to ensure perfect centering of the valve.
- Actuator flange and stem dimensions acc. ISO 5211.
- Anti blow-out proof shaft.

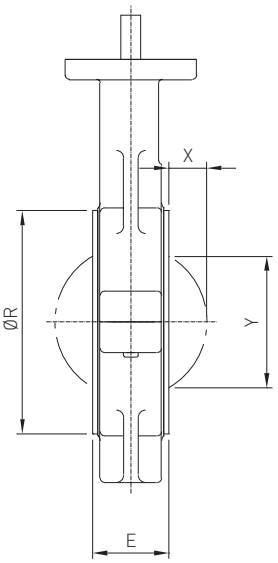
NEOTECHA NEOSEAL NSA LINED BUTTERFLY VALVES

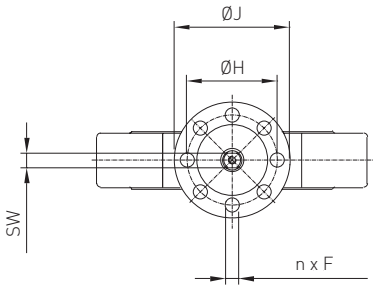
WAFER AND LUGGED/NEOTECHA SHAFT CONNECTION/DN 40-300 - METRIC DATA

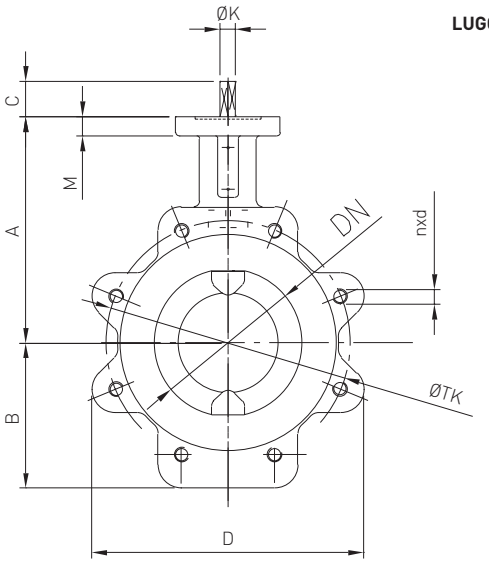
NeoSeal with Neotecha shaft connection



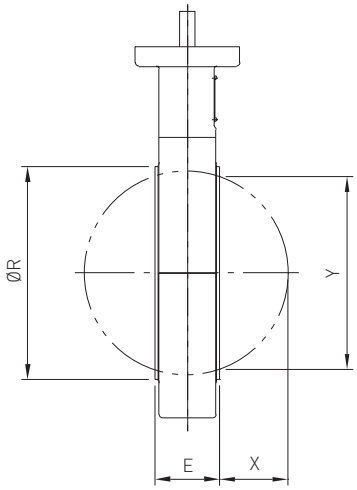
WAFER VERSION







LUGGED VERSION



VALVE DIMENSIONS WAFER AND LUGGED (mm)

Size		Overall dimensions																	Wide FTF **		Weight (kg)	
			W*	L*		W*	L*															
(DN)	Type	A	B	B	C	D	D	E	n x F	M	G	øH	øJ	øK	øR	S	X	Y	N/SW	E	Y	W*	L*
40	F05	110	50.0	55.0	26	108	145	33	8 x Ø7	14	27	50	65	14	80	31	3.5	23	▢ 10	-	-	1.9	2.4
50	F05	135	65.0	65.0	26	130	160	43	8 x Ø7	14	27	50	65	14	95	38	5	31	▢ 10	-	-	2.8	3.4
65	F07	150	85.0	85.0	27	144	176	46	4 x Ø9	14	28	70	90	14	120	41	11.5	52	▢ 10	-	-	3.9	4.6
80	F07	160	93.5	93.5	29	155	188	46	4 x Ø9	14	30	70	90	14	132	41	18.5	69	▢ 10	64	53	4.7	6.1
100	F07	180	113.0	105.0	29	180	210	52	4 x Ø9	14	30	70	90	14	153	45	26.5	91	▢ 10	64	82	5.7	7.9
125	F07	195	130.0	125.0	46	211	234	56	4 x Ø9	17	47	70	90	18	183	50	35.5	114	▨ 14/14	70	CF	8.7	10.6
150	F07	210	140.0	140.0	46	240	269	56	4 x Ø9	17	47	70	90	20	209	50	48.5	143	▨ 16/16	76	133	11.6	13.5
200	F10	240	175.0	170.0	21	310	360	60	4 x Ø11	20	22	102	125	24	259	56	71.5	196	▨ 19/19	89	185	21.0	23.3
250	F12	275	205.0	205.0	23	350	435	68	8 x Ø13	20	24	125	150	28	309	64	91.5	243	▨ 22/22	114	226	31.5	32.1
300	F12	310	250.0	250.0	28	420	500	78	8 x Ø13	20	29	125	150	35	364	74	111.5	293	▨ 27/27	114	281	45.0	49.9

NOTES

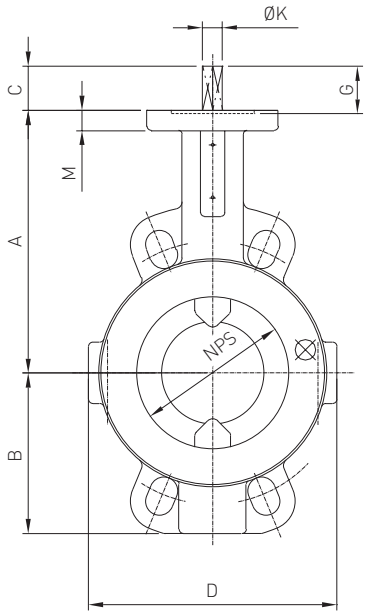
Slotted locating holes for wafer and lugged version according following flange accommodation:
Lugged DIN PN 10/16 (DN 40-150), DIN PN 10 (DN 200-300), ASME 150 (DN 40-300), JIS 10 K (DN 40-150).

FTF = Face to face
** Optional wide FTF according EN 558-1/15 (column 16).
W* Wafer
L* Lugged

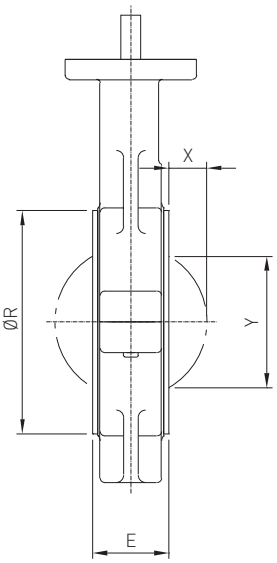
NEOTECHA NEOSEAL NSA LINED BUTTERFLY VALVES

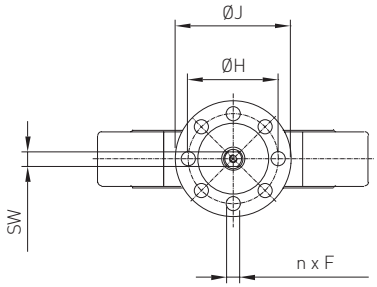
WAFER AND LUGGED/NEOTECHA SHAFT CONNECTION/NPS 1½-12 - IMPERIAL DATA

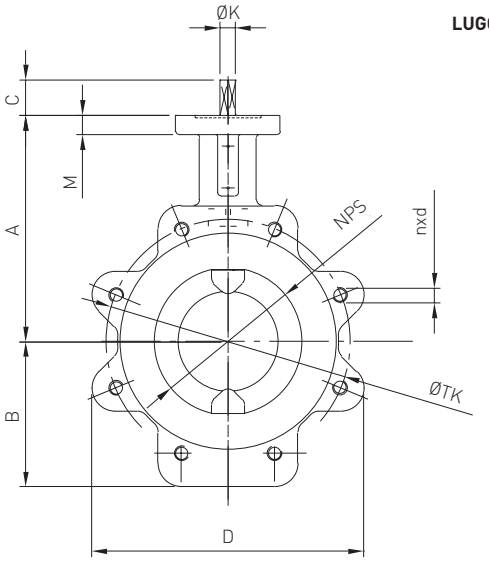
NeoSeal with Neotecha shaft connection



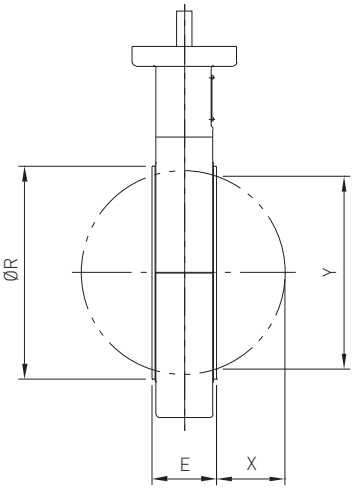
WAFER VERSION







LUGGED VERSION



VALVE DIMENSIONS WAFER AND LUGGED (inch)

		Overall dimensions																		Wide FTF **		Weight (lbs)	
			W*	L*		W*	L*																
S[1]	Type	A	B	B	C	D	D	E	n x F	M	G	øH	øJ	øK	øR	S	X	Y	N/SW	E	Y	W*	L*
1½	F05	4.33	1.97	2.17	1.02	4.25	5.71	1.30	8 x ø0.28	0.55	1.06	1.97	2.56	0.55	3.15	1.22	0.14	0.91	▢ 0.39	-	-	4.2	5.3
2	F05	5.31	2.56	2.56	1.02	5.12	6.30	1.69	8 x ø0.28	0.55	1.06	1.97	2.56	0.55	3.74	1.50	0.20	1.22	0.39	-	-	6.2	7.5
2½	F07	5.91	3.35	3.35	1.06	5.67	6.93	1.81	4 x ø0.35	0.55	1.10	2.76	3.54	0.55	4.72	1.61	0.45	2.05	▢ 0.39	-	-	10.4	9.3
3	F07	6.30	3.68	3.68	1.14	6.10	7.40	1.81	4 x ø0.35	0.55	1.18	2.76	3.54	0.55	5.20	1.61	0.73	2.72	0.39	2.52	2.09	10.4	13.4
4	F07	7.09	4.45	4.13	1.14	7.09	8.27	2.05	4 x ø0.35	0.55	1.18	2.76	3.54	0.55	6.02	1.77	1.04	3.58	▢ 0.39	2.52	3.23	12.6	17.4
5	F07	7.68	5.12	4.92	1.81	8.31	9.21	2.20	4 x ø0.35	0.67	1.85	2.76	3.54	0.71	7.20	1.97	1.40	4.49	0.55/0.55	2.76	CF	19.2	23.4
6	F07	8.27	5.51	5.51	1.81	9.45	10.59	2.20	4 x ø0.35	0.67	1.85	2.76	3.54	0.79	8.23	1.97	1.91	5.63	▨ 0.63/0.63	2.99	5.24	25.6	29.8
8	F10	9.45	6.89	6.69	0.83	12.20	14.17	2.36	4 x ø0.43	0.79	0.87	4.02	4.92	0.94	10.20	2.20	2.81	7.72	0.75/0.75	3.50	7.28	46.3	51.4
10	F12	10.83	8.07	8.07	0.91	13.78	17.13	2.68	8 x ø0.51	0.79	0.94	4.92	5.91	1.10	12.17	2.52	3.60	9.57	▨ 0.87/0.87	4.49	8.90	69.4	70.8
12	F12	12.20	9.84	9.84	1.10	16.54	19.69	3.07	8 x ø0.51	0.79	1.14	4.92	5.91	1.38	14.33	2.91	4.39	11.54	1.06/1.06	4.49	11.06	99.2	110.0

NOTES

Slotted locating holes for wafer and lugged version according following flange accommodation:
Lugged DIN PN 10/16 (NPS 1½ - 6), DIN PN 10 (NPS 8 - 12),
ASME 150 (NPS 1½ - 12), JIS 10 K (NPS 1½ - 6).

1. Size (NPS) FTF = Face to face
** Optional wide FTF according EN 558-1/15 (column 16).
W* Wafer
L* Lugged

MAXIMUM ALLOWABLE SHAFT TORQUES NSA TOP SHAFT CONNECTION (Nm) *

	Size (DN)									
Disc material	**40**	**50**	**65**	**80**	**100**	**125**	**150**	**200**	**250**	**300**
PFA [1]	100	100	160	160	180	260	362	630	950	1280
UHMWPE [2]	100	100	160	160	160	250	362	630	950	1280
SS [3]	100	100	80	150	150	245	362	625	900	1300

MAXIMUM ALLOWABLE SHAFT TORQUES NSA TOP SHAFT CONNECTION (lbs.inch) *

	Size (NPS)									
Disc material	**1.5**	**2**	**2.5**	**3**	**4**	**5**	**6**	**8**	**10**	**12**
PFA [1]	885	885	1416	1416	1593	2301	3204	5576	8408	11329
UHMWPE [2]	885	885	1416	1416	1416	2213	3204	5576	8408	11329
SS [3]	885	885	1195	1328	1328	2168	3204	5532	7966	11506

NOTES

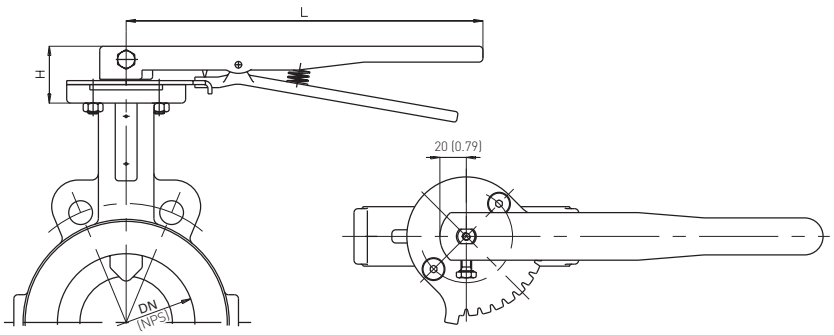
* Hastelloy and titanium: contact factory

1. PFA covered
2. UHMWPE covered
3. Stainless steel

NEOTECHA NEOSEAL NSA LINED BUTTERFLY VALVES

HANDLES SUITABLE FOR STANDARD NEOTECHA SHAFT CONNECTION

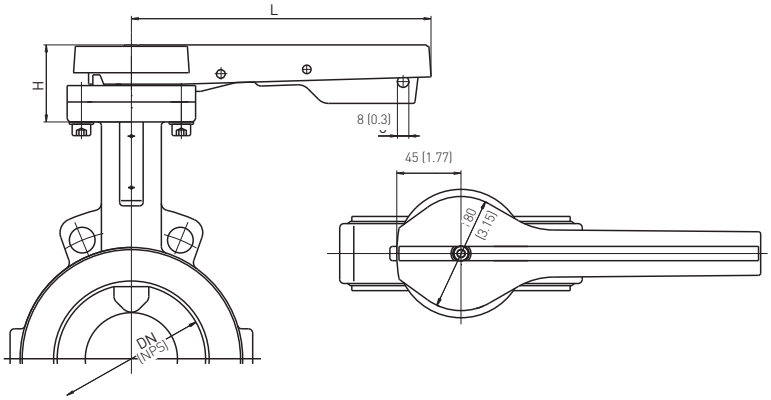
TYPE C



DIMENSIONS (mm)

Size	Handle lever			
	Type C		Type Z	
(DN)	L	H	L	H
40	267	46	210	51
50	267	46	210	51
65	267	46	210	54
80	267	46	210	54
100	267	46	210	54
125	356	49	300	54
150	356	54	300	54

TYPE Z



DIMENSIONS (inch)

Size	Handle lever			
	Type C		Type Z	
(NPS)	L	H	L	H
1½	10.51	1.81	8.27	2.01
2	10.51	1.81	8.27	2.01
2½	10.51	1.81	8.27	2.13
3	10.51	1.81	8.27	2.13
4	10.51	1.81	8.27	2.13
5	14.02	1.93	11.81	2.13
6	14.02	2.13	11.81	2.13

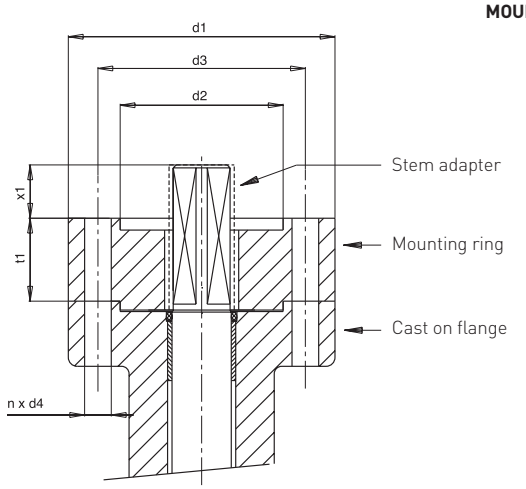
HANDLE LEVER MATERIAL LIST

Part name	Material	DIN designation	DIN mat.no	Remarks
Type C				
Handle bar	Ductile iron	EN-GJS-400-15 (GGG 40)	0.7040	-
Handle lever	Ductile iron	EN-GJS-400-15 (GGG 40)	0.7040	-
Spring	Stainless steel	X 5 CrNiMo 17 12 2	1.4401	-
Groove pin	Stainless steel	X 10 CrNiS 18 9	1.4305	-
Throttling plate	Stainless steel	X 5 CrNI 18 10	1.4301	-
Handle screw	Stainless steel	X 5 CrNI 18 10	1.4301	-
Screw	Stainless steel	X 5 CrNI 18 10	1.4301	-
Type Z				
Handle bar	Technopolymer	-	-	-
Nut	Stainless steel	X 5 CrNiMo 17 13 3	1.4436	-
Spring	Stainless steel	X 12 CrNi 17 7	1.4310	-
Short handle	Stainless steel	X 5 CrNi 18 8	1.4301	-
Plate	Investment cast	G-X 6 CrNi 18 6	1.4308	-
Screw	Stainless steel	DIN 912	-	Zn-plated
Spring pin	Stainless steel	X 5 CrNi 18 8	1.4301	-

Mounting ring for NSA

Required when an actuator acc. ISO 5211 with the same flange size is to be mounted.
Not required for an actuator or gear with a hollow shaft and the same flange size.

MOUNTING RING



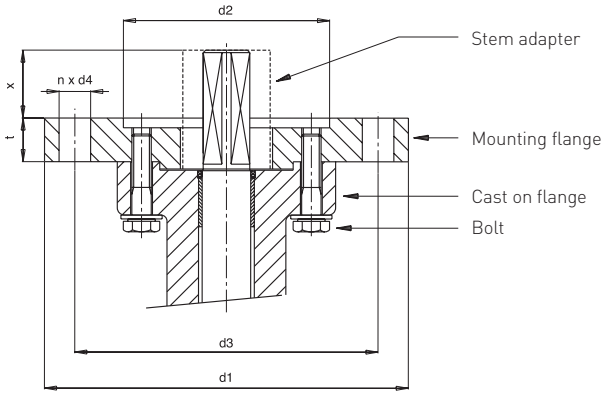
ISO-DIMENSIONS mm (inch)

ISO-no.	d1	d2	d3	n * d4
F05	65 (2.56)	35 (1.38)	50 (1.97)	4 x 7 (0.28)
F07	90 (3.54)	55 (2.17)	70 (2.76)	4 x 9 (0.35)
F10	125 (4.92)	70 (2.76)	102 (4.02)	4 x 11 (0.43)
F12	150 (5.91)	85 (3.35)	125 (4.92)	4 x 13 (0.51)
F14	175 (6.89)	100 (3.94)	140 (5.51	4 x 17 (0.67)
F16	210 (8.27)	130 (5.12)	165 (6.5)	4 x 22 (0.87)
F25	300 (11.81)	200 (7.87)	254 (10)	8 x 17 (0.67)
F30	350 (13.78)	230 (9.06)	298 (11.73)	8 x 22 (0.87)

Mounting flange for NSA

Three oversized mounting flanges per size valve are available to direct mount a larger actuator acc. ISO 5211 complete with all hardware.

MOUNTING FLANGE



STANDARD MOUNTING FLANGE FOR NSA (mm)

					Optional oversizes mounting flange											
Valve size (DN)	Cast on flange	x_1	t_1	Stem adapter	Oversize flange [1] #1	x	t	Stem adapter	Oversize flange [1] #2	x	t	Stem adapter	Oversize flange [1] #3	x	t	Stem adapter
40	F05	14	16	14/14	F07	17	16	17/17	F10	19	18	22/22	F12	21	20	27/27
50	F05	14	16	14/14	F07	17	16	17/17	F10	19	18	22/22	F12	21	20	27/27
65	F07	16	18	17/17	F10	20	18	22/22	F12	22	20	27/27	F14	30	14	36/36
80	F07	18	18	17/17	F10	22	18	22/22	F12	24	20	27/27	F14	32	14	36/36
100	F07	18	18	17/17	F10	22	18	22/22	F12	24	20	27/27	F14	32	14	36/36
125	F07	18	28	17/17	F10	22	24	22/22	F12	20	26	27/27	F14	28	18	36/36
150	F07	18	28	17/17	F10	22	24	22/22	F12	20	26	27/27	F14	28	18	36/36

STANDARD MOUNTING FLANGE FOR NSA (inch)

					Optional oversizes mounting flange											
Valve size (NPS)	Cast on flange	x_1	t_1	Stem adapter	Oversize flange [1] #1	x	t	Stem adapter	Oversize flange [1] #2	x	t	Stem adapter	Oversize flange [1] #3	x	t	Stem adapter
1½	F05	0.55	0.63	0.55/0.55	F07	0.67	0.63	0.67/0.67	F10	0.75	0.71	0.87/0.87	F12	0.83	0.79	1.06/1.06
2	F05	0.55	0.63	0.55/0.55	F07	0.67	0.63	0.67/0.67	F10	0.75	0.71	0.87/0.87	F12	0.83	0.79	1.06/1.06
2½	F07	0.63	0.71	0.67/0.67	F10	0.79	0.71	0.87/0.87	F12	0.87	0.79	1.06/1.06	F14	1.18	0.55	1.42/1.42
3	F07	0.71	0.71	0.67/0.67	F10	0.87	0.71	0.87/0.87	F12	0.94	0.79	1.06/1.06	F14	1.26	0.55	1.42/1.42
4	F07	0.71	0.71	0.67/0.67	F10	0.87	0.71	0.87/0.87	F12	0.94	0.79	1.06/1.06	F14	1.26	0.55	1.42/1.42
5	F07	0.71	1.10	0.67/0.67	F10	0.87	0.94	0.87/0.87	F12	0.79	1.02	1.06/1.06	F14	1.10	0.71	1.42/1.42
6	F07	0.71	1.10	0.67/0.67	F10	0.87	0.94	0.87/0.87	F12	0.79	1.02	1.06/1.06	F14	1.10	0.71	1.42/1.42

NOTE

1. All oversized flanges and adapters are subject to a surcharge.

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