



A-T Controls, Inc.



Manual and Automated Resilient Seated Butterfly Valves

Featuring the KE Series actuator for electric automation on butterfly valves up to 4"



AS Series: Lined Butterfly Valves

OS/OC Series: Wafer and Lug Style, Class 150 Resilient Seated Butterfly Valves

NS Series: NSF/ANSI 61 & 372 Certified and Dead-End Service Butterfly Valves



Canada Registration Numbers (CRN)



VALVE NSF/ANSI 61 ALSO CERTIFIED TO NSF/ANSI 372 <SD20>



Featuring **TRIAO** CONTROLS Actuators and Accessories



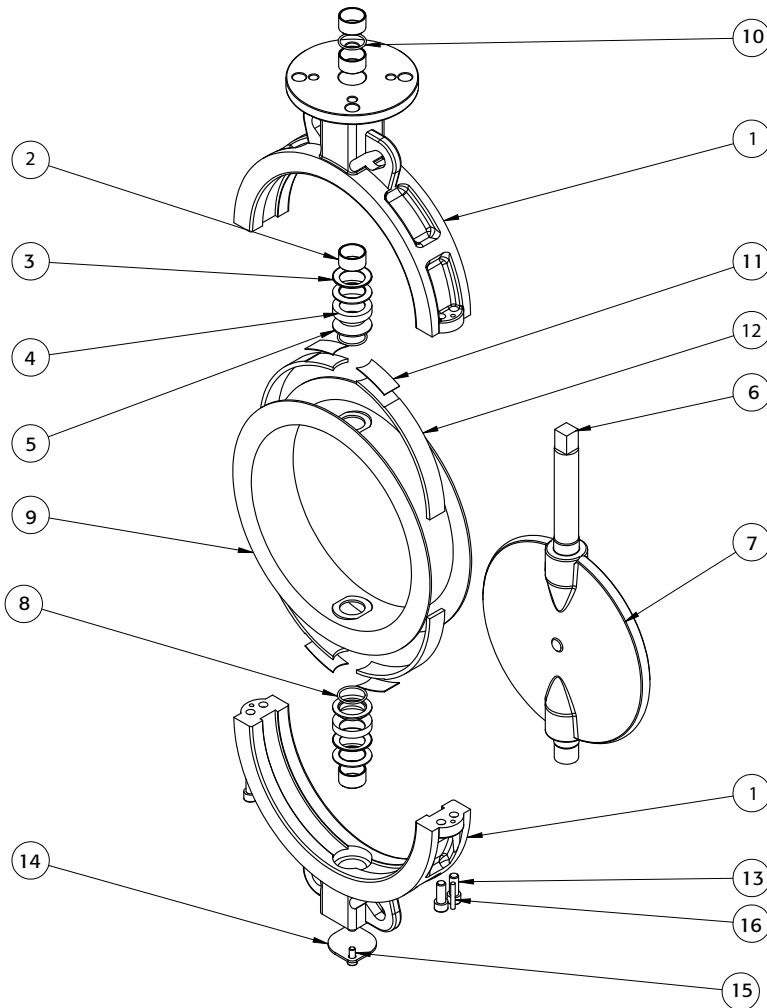
AS Series butterfly valves are PFA lined (encapsulated) for superior corrosion resistance against severe chemicals and corrosive services.

- Bi-directional, bubble tight shut-off
- Rated to 150 psi
- Live Loaded packing
- Blow out proof stem
- 2-piece wafer or lug bodies are epoxy coated
- Resilient back up liner
- Multiple safety seals
- Operating Temp: -20°F to 355°F
- Sizes 2" - 24"

STANDARDS

Design	API 609
Pressure Testing	API 598
End Connections	ANSI/ASME B16.5
Face to Face Dimensions	ANSI/ASME B16.10
Mounting Dimensions	ISO 5211
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

AS Series Bill of Materials



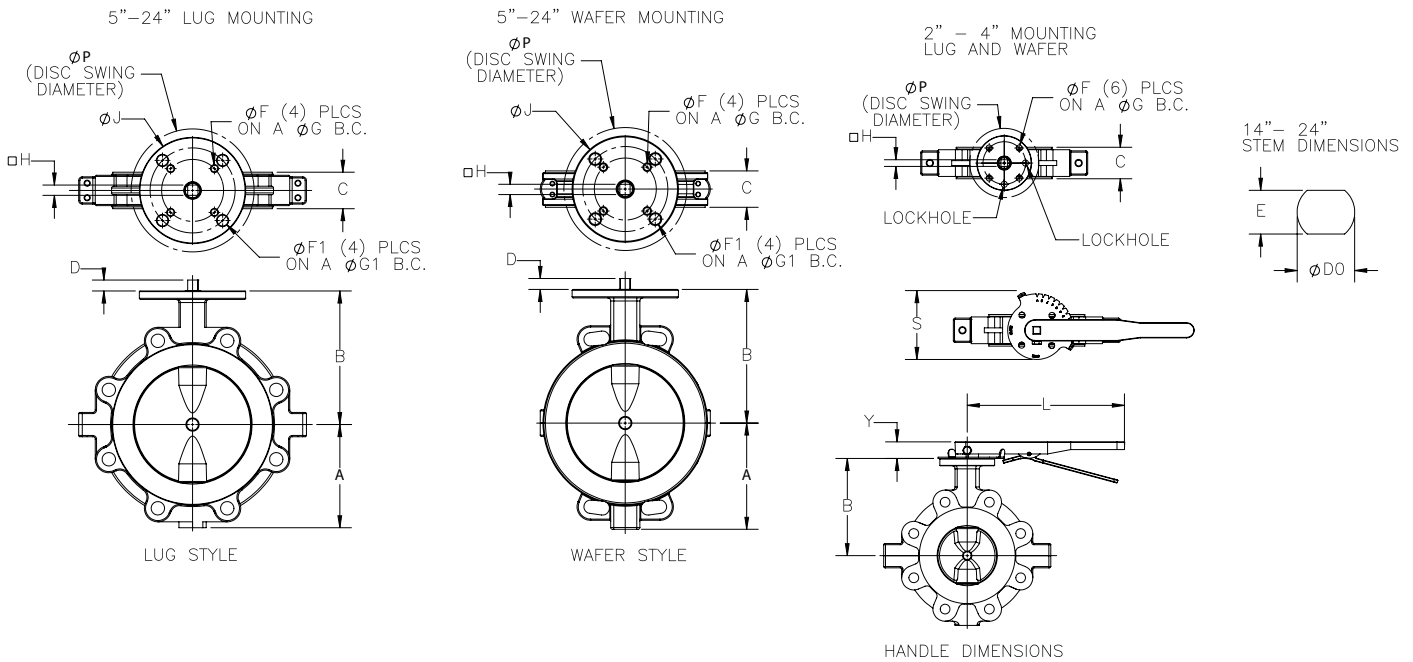
ITEM NO.	PART NUMBER	QTY.	MATERIAL
1	BODY	1	ASTM A216 GRADE WCB ASTM A351 GRADE CF8M
2	BUSHING	4	PTFE/CS BUSHING
3	BELLEVILLE WASHER	4	AISI 304
4	V-SEAL GLAND	2	AISI 304
5	V-SEAL RING	2	PTFE
6	STEM	1	17-4® PH
7	DISC	1	PFA/ASTM A351 GRADE CF8
8	LOWER O-RING	2	VITON® (non-wetted part)
9	SEAT	1	PTFE
10	UPPER O-RING	1	VITON® (non-wetted part)
11	PAD ENERGIZER	4	COMPOSITE
12	RESILIENT PAD	4	SILICONE RUBBER
13	BODY BOLT	*	ISO 3506-1 A2-70
14	COVER**	1	ASTM A1020 CARBON STEEL
15	COVER BOLT**	2	ISO 3506-1 A2-70
16	PIN***	2	CARBON STEEL

*QTY 2 FOR 2" - 5" VALVES; QTY 4 FOR 6" - 12" VALVES
 **ONLY PRESENT ON 10" AND 12" VALVES, AND 8" LUG VALVE
 ***ONLY PRESENT ON 12" WAFER VALVE



SIZE	OPERATING TORQUE In-lbs (150 PSIG Air)	C _v (Fully Open)
2"	166	210
2½"	228	210
3"	332	410
4"	531	710
5"	597	1,150
6"	863	1,750
8"	1,195	3,550
10"	2,655	5,100
12"	4,049	8,870
14"	7,523	9,200
16"	10,356	14,500
18"	13,808	20,100
20"	16,109	22,000
24"	26,465	31,000

Torques include 15% safety.



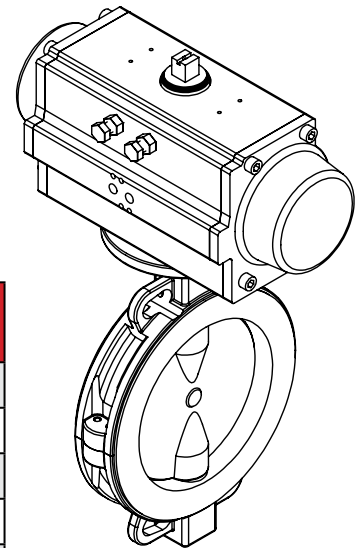
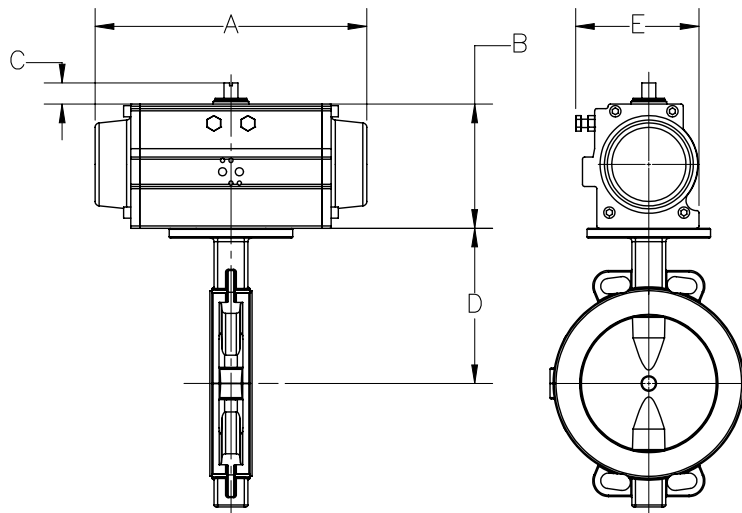
SIZE	A	B	C	D	ØD0	E	ØF	ØF1	ØG	ØG1	□H	ØJ	L	ØP	S	Y	END CONNECTIONS	ISO 5211	Lug (lbs)	Wafer (lbs)
2"	2.76*	4.53	1.75	0.67	N/A	N/A	0.38	N/A	2.756	N/A	0.433	3.54	10.51	2.45	4.45	1.18	ANSI B16.5 CLASS 150	F07	13.89	4.85
2½"	2.95*	4.53	1.75	0.67	N/A	N/A	0.38	N/A	2.756	N/A	0.433	3.54	10.51	2.45	4.45	1.18	ANSI B16.5 CLASS 150	F07	15.43	4.85
3"	3.15**	5.22**	1.81	0.67	N/A	N/A	0.38	N/A	2.756	N/A	0.433	3.54	10.51	3.23	4.45	1.18	ANSI B16.5 CLASS 150	F07	18.74	9.26
4"	4.53	6.30	2.10	0.67	N/A	N/A	0.38	N/A	2.756	N/A	0.433	3.54	10.51	4.06	4.45	1.18	ANSI B16.5 CLASS 150	F07	28.66	14.10
5"	5.12	6.89	2.23	0.71	N/A	N/A	0.38	N/A	2.756	N/A	0.551	3.54	CF	5.01	CF	CF	ANSI B16.5 CLASS 150	F07	37.48	17.42
6"	5.71	7.56	2.25	0.71	N/A	N/A	0.38	0.44	2.756	4.016	0.551	4.92	CF	6.03	CF	CF	ANSI B16.5 CLASS 150	F07/F10	50.04	22.93
8"	6.89	8.66	2.50	0.71	N/A	N/A	0.44	0.71	4.016	5.512	0.669	6.88	CF	7.94	CF	CF	ANSI B16.5 CLASS 150	F10/F14	67.24	37.48
10"	8.46	10.83	2.75	1.02	N/A	N/A	0.44	0.71	4.016	5.512	0.748	6.88	CF	9.83	CF	CF	ANSI B16.5 CLASS 150	F10/F14	113.54	55.12
12"	9.84	12.20	3.13	1.18	N/A	N/A	0.44	0.71	4.016	5.512	0.866	6.88	CF	11.95	CF	CF	ANSI B16.5 CLASS 150	F10/F14	140.21	76.06
14"	11.22	14.17	3.07	1.77	1.244	0.945	0.71	N/A	5.512	N/A	N/A	6.88	N/A	13.78	N/A	N/A	ANSI B16.5 CLASS 150	F14	CF	CF
16"	12.60	15.55	4.02	2.02	1.305	1.063	0.71	N/A	5.512	N/A	N/A	6.88	N/A	15.59	N/A	N/A	ANSI B16.5 CLASS 150	F14	CF	CF
18"	14.17	17.13	4.49	2.02	1.494	1.063	0.71	N/A	5.512	N/A	N/A	6.88	N/A	17.64	N/A	N/A	ANSI B16.5 CLASS 150	F14	CF	CF
20"	15.16	17.91	5.00	2.53	1.619	1.260	0.71	N/A	5.512	N/A	N/A	6.88	N/A	19.25	N/A	N/A	ANSI B16.5 CLASS 150	F14	CF	CF
24"	17.52	20.67	6.06	2.76	1.993	1.417	0.87	N/A	6.496	N/A	N/A	8.27	N/A	23.23	N/A	N/A	ANSI B16.5 CLASS 150	F16	CF	CF

* Dimension A is 2.36 for Wafer Valves, size 2" and 2½"

** For 3" Wafer valves, dimension A is 3.39 and dimension B is 5.91

A-T Controls reserves the right to change product designs and technical/dimensional specifications without notice. See website for updates.

AS Series Dimensions / Torques



DIMENSIONS - AS Series Double Acting Package

SIZE	A	B	C	D	E	Actuator Size
2"	7.95	3.43	0.79	4.53	3.21	2R40
2½"	7.95	3.43	0.79	4.53	3.21	2R40
3"	9.29	4.49	0.79	5.22*	4.17	2R80
4"	9.29	4.49	0.79	6.30	4.17	2R80
5"	9.29	4.49	0.79	6.89	4.17	2R80
6"	10.87	4.88	0.79	7.56	4.83	2R130
8"	11.46	5.28	0.79	8.66	5.19	2R200
10"	15.16	6.93	1.18	10.83	6.69	2R500
12"	20.95	8.31	1.18	12.20	7.64	2R850

ACTUATOR SIZED FOR 80 PSI

* Dimension *D* is 5.91 for Wafer Valves, size 3"

DIMENSIONS - AS Series Spring Return Package

SIZE	A	B	C	D	E	Actuator Size
2"	9.29	4.49	0.79	4.53	4.17	2R80
2½"	10.87	4.88	0.79	4.53	4.83	2R130
3"	11.46	5.28	0.79	5.22*	5.19	2R200
4"	13.90	6.18	0.79	6.30	6.05	2R300
5"	13.90	6.18	0.79	6.89	6.05	2R300
6"	15.16	6.93	1.18	7.56	6.69	2R500
8"	15.16	6.93	1.18	8.66	6.69	2R500
10"	24.37	10.12	1.18	10.83	9.29	2R1750
12"	27.38	10.12	1.18	12.20	9.38	2R2500

ACTUATOR SIZED FOR 80 PSI. STANDARD 5 SPRINGS PER SIDE, FAIL CLOSE.

* Dimension *D* is 5.91 for Wafer Valves, size 3"

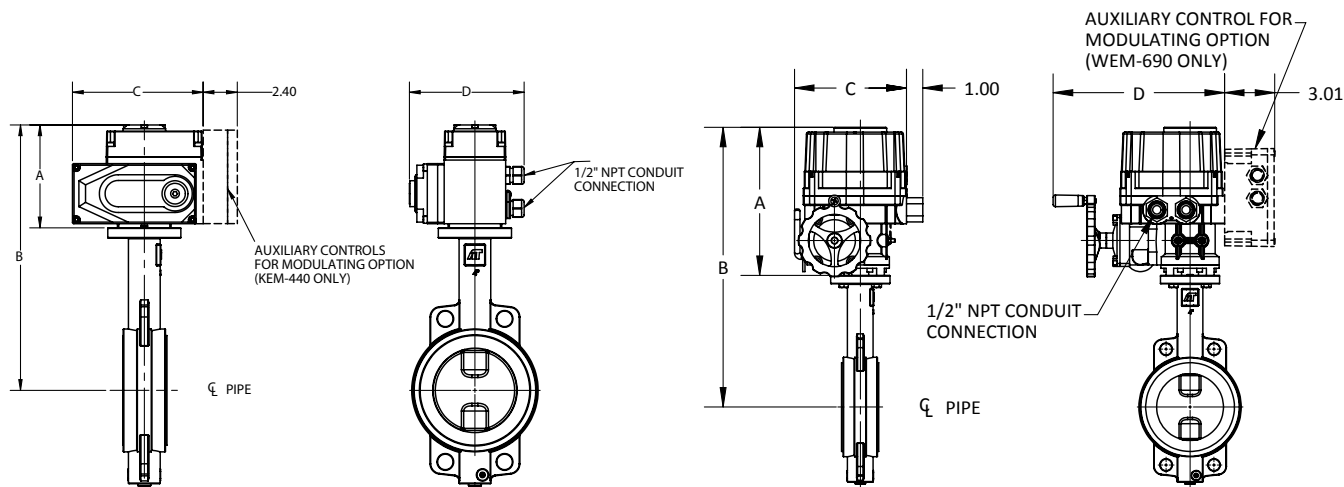
Consult factory for sizing automated packages with valves 14" and larger.

DIMENSIONS - AS Series Electric Automated Package

SIZE	A	B	C	D	On-Off Actuator	Modulating Actuator
2"	5.14	9.67	6.46	5.47	KE-440*	KEM-440*
2½"	5.14	9.67	6.46	5.47	KE-440*	KEM-440*
3"	5.14	10.36**	6.46	5.47	KE-440*	KEM-440*
4"	8.66	14.96	6.69	10.16	WE-690	WEM-690
5"	8.66	15.55	6.69	10.16	WE-690	WEM-690
6"	10.24	17.80	9.02	13.31	WE-1350	WEM-1350
8"	10.24	18.90	9.02	13.31	WE-1350	WEM-1700
10"	11.42	21.85	10.20	14.49	WE-4400	WEM-4400
12"	11.42	23.62	10.20	14.49	WE-4400	WEM-5200

** Dimension B is 11.05 for Wafer Valves, size 3"

* MAY BE SUBSTITUTED WITH WE-500
DIMENSIONS BASED UPON ON/OFF APPLICATIONS



AS Series Electric Assembly Dimensions

Triac KE Series Actuators

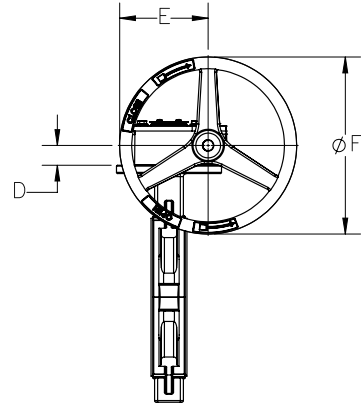
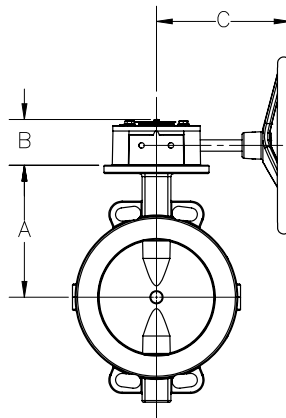
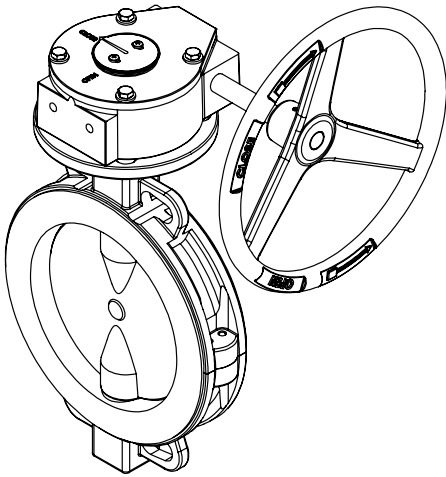
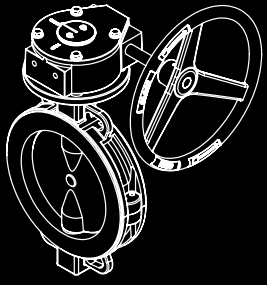
The Triac KE Series electric actuators are the perfect match for resilient or high-performance butterfly valves and dampers because of the self-locking worm drive. The KE Series actuators are used to control rotary valves, such as butterfly valves, ball valves, plug valves, etc. Widely used in applications such as petroleum, chemical, water treatment, ship, paper, power stations, heating supply, building automation, light industry etc.

Standard Features

- Convex lens visual position indicator makes it easier to observe without water collecting on the surface of the indicator
- Anti-condensation heater and thermostat
- Two auxiliary limit switches
- Self-locking gear train
- Manual override with wrench
- Available motor voltages: 12VDC, 24VDC, 120VAC & 220VAC
- Optional 4-20mA & 0-10 VDC proportional control



*Unique low profile actuator,
ideal for tight spaces*



DIMENSIONS - Gear Operator with AS Series valve

SIZE	A	B	C	D	E	F
2"	4.53	2.79	6.00	1.48	1.77	5.87
2½"	4.53	2.79	6.00	1.48	1.77	5.87
3"	5.22*	2.79	6.00	1.48	1.77	5.87
4"	6.30	2.79	6.00	1.48	1.77	5.87
5"	6.89	2.79	6.00	1.48	1.77	5.87
6"	7.56	2.79	6.00	1.48	1.77	5.87
8"	8.66	3.30	8.75	1.57	2.60	11.62
10"	10.83	3.30	8.75	1.57	2.60	11.62
12"	12.20	3.30	8.75	1.57	3.01	11.62

* Dimension A is 5.91 for Wafer Valves, size 3"

CONSULT FACTORY FOR GEAR ACTUATOR SIZING ON VALVES LARGER THAN 12"

Part Number Matrix for **A-T Controls Resilient Seated** Butterfly Valves

1 Valve Series	
OC	A-T BFV with DD Stem (14" and larger)
OS	A-T BFV with Square Stem (2-12") (Standard)

2 Body Material	
blank	(No Designation)= Stainless Steel (SST) Body
B	Ductile Iron (Standard)

3 End Connection	
L1	125/150# Lug
W1	125/150# Wafer with Guide Holes
W2	125/150# Wafer (no Guide Holes)

4 Valve Size			
0150	1-1/2"	1400	14"
0200	2"	1600	16"
0250	2-1/2"	1800	18"
0300	3"	2000	20"
0400	4"	2400	24"
0500	5"	3000	30"
0600	6"	3600	36"
0800	8"		
1000	10"		
1200	12"		

5 Seat Material/Style			
B	Buna	P	PTFE
E	EPDM	V	Viton®
H	High Temp EPDM		
F	Food Grade (FDA compliant) EPDM		(up to 12" only)

6 Disc Material/Style	
B	Aluminum Bronze
D	Ductile Iron (Nickel Plated)
N	Nylon Coated Ductile Iron
S	316 SST
U	Undercut Aluminum Bronze (6" and larger only)
W	Polished 316 SST
Y	Undercut Polished 316 SST (6" and larger only)
Z	Undercut 316 SST (6" and larger only)

7 Stem Bushing	
R	PTFE (Standard)
B	Lubricated Bronze

8 Operator Designation	
X	Bare Stem
H	Standard 10 point Handle
S	Stainless Steel 10 point Handle
I	Infinite Adjustment Handle
G	Gear Operator

9 Stem	
E	420 SST Upper and Lower Stem (Standard)
F	431 SST Upper Stem, 316 SST Lower Stem (Standard with PTFE seat)
A	17-4 PH® Upper stem, 316 SST Lower Stem

PTFE seat: F or A stem options only

HOW TO ORDER MANUAL RESILIENT SEATED BUTTERFLY VALVES								
1	2	-	3	-	4	-	5	6 7 - 8 9
↓	↓		↓		↓		↓	↓
OSB	-	W1	-	0200	-	EDR	-	X E

HOW TO ORDER AUTOMATED RESILIENT SEATED BUTTERFLY VALVES										
1	2	-	3	-	4	-	5	6 7 - 8 9 / actuator size - options		
↓	↓		↓		↓		↓	↓	↓	↓
OSB	-	W1	-	0200	-	EDR	-	X E /	2R3S	- XX
(see Actuator Size Legend)										

AS Series Lined Resilient Seated Butterfly Valves

1 Valve Series	
AS	A-T Split Body Lined Butterfly Valve
2 Body Material	
blank	(No Designation) Stainless Steel (SST) Body
C	Carbon Steel (ASTM A216 Grade WCB)
3 End Connection	
L1	125/150# Lug
W1	125/150# Wafer
4 Valve Size	
0150	1-1/2" 1400 14"
0200	2" 1600 16"
0250	2-1/2" 1800 18"
0300	3" 2000 20"
0400	4" 2400 24"
0500	5"
0600	6"
0800	8"
1000	10"
1200	12"
5 Seat Material/Style	
P	PTFE
6 Disc Material/Style	
F	PFA Encapsulated over 304 SST (standard with WCB body)
M	PFA Encapsulated over 316 SST (standard with SST body)
7 Stem Bushing	
R	PTFE
8 Operator Designation	
X	Bare Stem
H	Standard 10 point Handle
S	Stainless Steel 10 point Handle
G	Gear Operator
9 Stem	
A	17-4 PH® Stem

EXAMPLE:
ASC-L1-0600-PFR-XA
(6" A-T Controls Split Body Lined Butterfly Valve, ASTM A216 Grade WCB Body, 150# Lug Style, PTFE Seat, PFA Encapsulated over 304 SST Disc, PTFE Stem Bushing, 17-4 PH Stem.)