

Chicago Valves & Controls

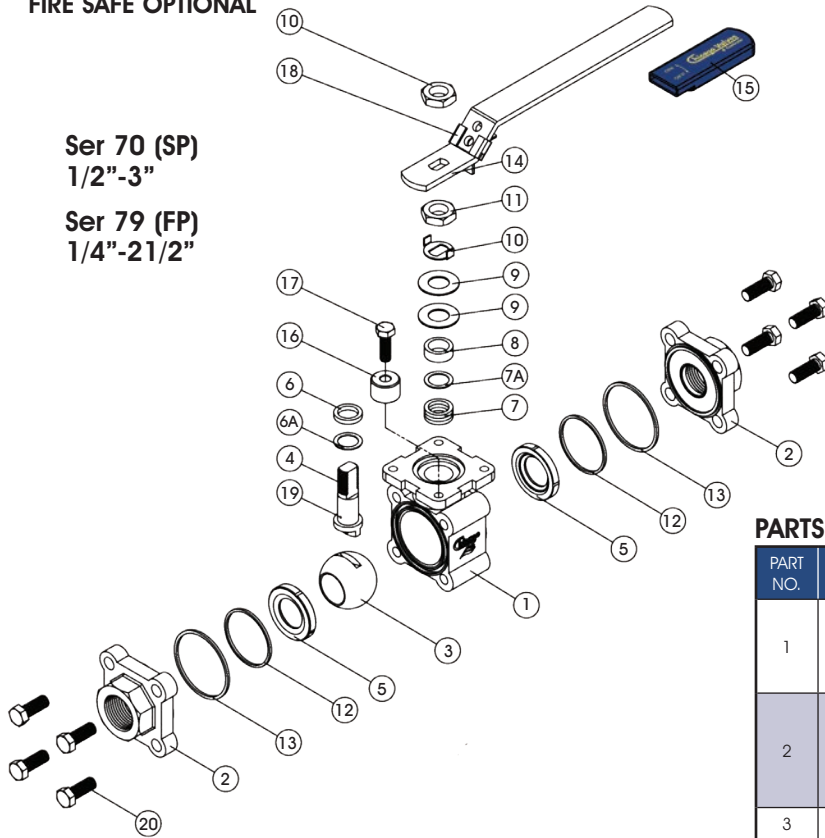


SERIES 70/79
FS 70/79

**HIGH PERFORMANCE STANDARD/FULL PORT
3 PIECE BALL VALVE**

Class 800 1/2"-2" SP
 Class 800 1/4"-2" FP
 Class 600 2 1/2"-4" SP
 Class 600 2 1/2"-4" FP
 HIGH CYCLE STEM PACKING
 HEAVY DUTY STEM DESIGN
 FULLY ENCAPSULATED DUEL BODY SEAL
 FACILITATE WELDING WITHOUT DISASSEMBLY
 INTEGRAL MOUNTING PAD
 LOCKABLE HANDLE
 CHOICE OF SEATS AND SEALS
 API 608
 FIRE SAFE OPTIONAL

Series 70/79



Ser 70 (SP)
 1/2"-3"

Ser 79 (FP)
 1/4"-2 1/2"

PARTS & MATERIAL

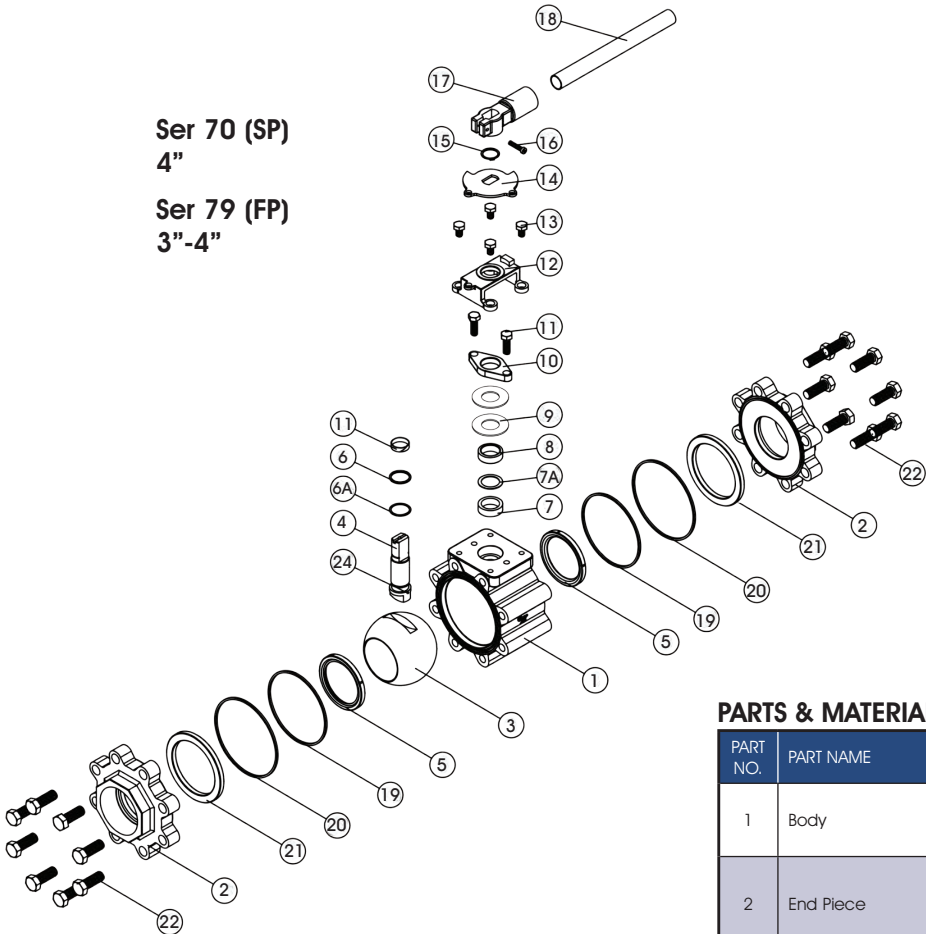
PART NO.	PART NAME	QTY.	MATERIAL
1	Body	1	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M Alloy 20 ASTM A351 CN7M SMO 254® ASTM A351 CK3MCuN
2	End Piece	2	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M 316L Stainless Steel ASTM A351 CF3M (SW,BW) Alloy 20 ASTM A351 CN7M SMO 254® ASTM A351 CK3MCuN
3	Ball	1	316 Stainless Steel Alloy 20 SMO 254®
4	Stem	1	316 Stainless Steel Alloy 20 SMO 254®
5	Seat	2	PTFE, RTFE, TFM, XN, PEEK, DELRIN
6	Thrust Bearing	1	XN
6A		1	PEEK
7	Stem Packing	**	TFM, XN, Graphite
7A	Seal Protector	1	PEEK
8	Gland	1	300 Series Stainless Steel
9	Belleville Washer	2	300 Series Stainless Steel
10	Lock Tab	1	300 Series Stainless Steel
11	Packing Nut	1	300 Series Stainless Steel
12	Body Seal	2	TFM
13	Outer Body Seal	2	TFM Graphite
14	Handle	1	300 Series Stainless Steel
15	Handle Sleeve	1	PVC
16	Stopper	1	300 Series Stainless Steel
17	Stopper Bolt	1	300 Series Stainless Steel
18	Locking Device	1	300 Series Stainless Steel
19	Anti-Static Device	2	300 Series Stainless Steel
20	Body Bolt	8/12	B8M

** TFM XN 1/4"-1/2" 2PC
 1/2"-2 1/2" 3PC
 2 1/2"-3" 4PC
 4" 3PC

Graphite 1PC (All Sizes)

Series 70/79

Ser 70 (SP)
4"
Ser 79 (FP)
3"-4"



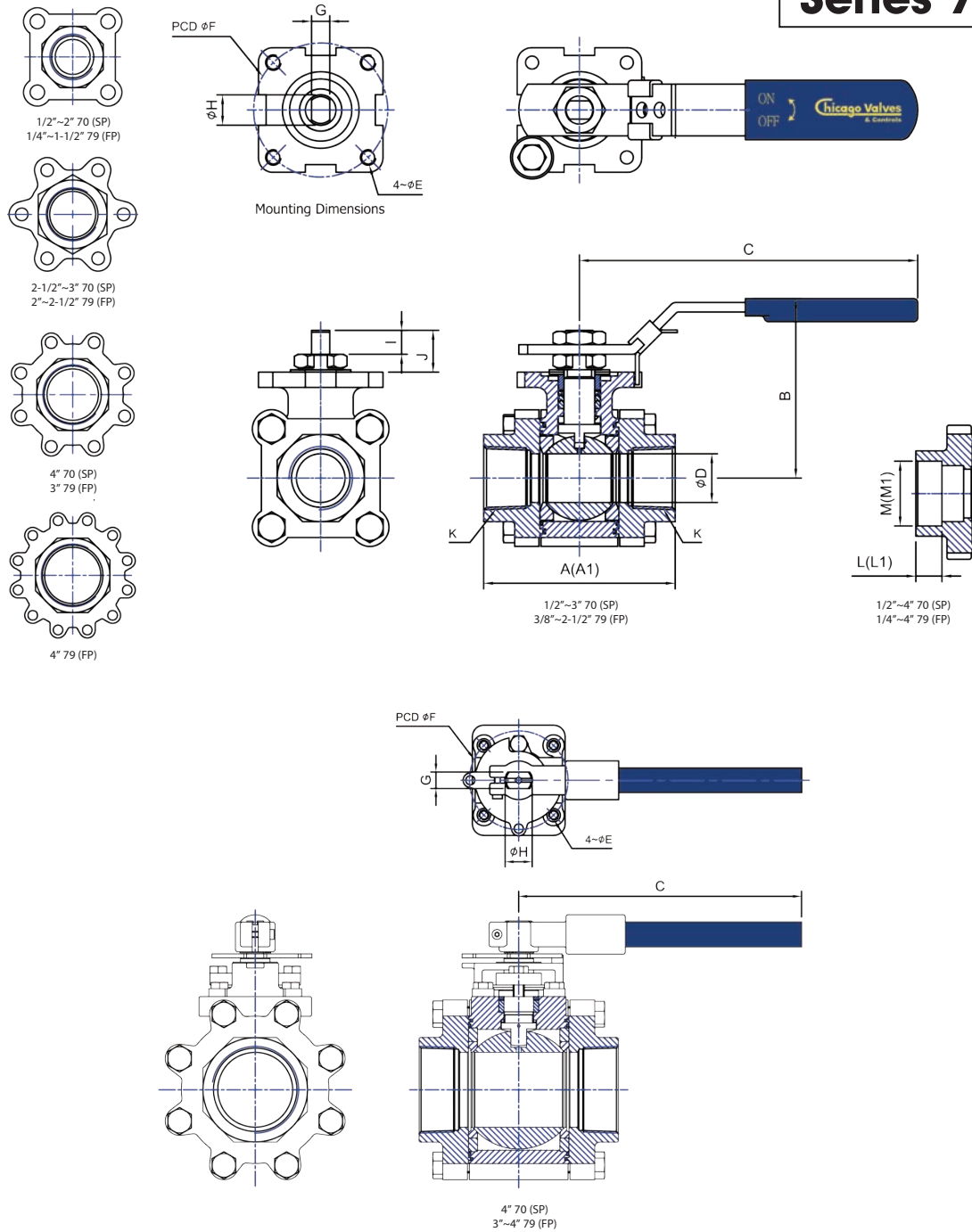
PARTS & MATERIAL

PART NO.	PART NAME	QTY.	MATERIAL
1	Body	1	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M Alloy 20 ASTM A351 CN7M
2	End Piece	2	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M 316L Stainless Steel ASTM A351 CF3M (SW,BW) Alloy 20 ASTM A351 CN7M
3	Ball	1	316 Stainless Steel Alloy 20
4	Stem	1	316 Stainless Steel Alloy 20
5	Seat	2	PTFE, RTFE, TFM, XN, PEEK, DELRIN
6	Thrust Bearing	1	XN
6A		1	PEEK
7	Stem Packing	**	TFM, XN, Graphite
7A	Seal Protector	1	PEEK
8	Gland	1	304 Stainless Steel
9	Belleville Washer	2	300 Series Stainless Steel
10	Gland Flange	1	300 Series Stainless Steel
11	Gland Flange Bolt	2	300 Series Stainless Steel
12	Stopper Bridge	1	304 Stainless Steel
13	Bridge Bolts	4	300 Series Stainless Steel
14	Stop Plate	1	300 Series Stainless Steel
15	C Snap Ring	1	Nickle Plated Carbon Steel
16	Handle Bolt	1	300 Series Stainless Steel
17	Handle Head	1	304 Stainless Steel
18	Handle Pipe	1	304 Stainless Steel
19	Body Seal	2	TFM
20	Outer Body Seal	2	Graphite
21	Seal Ring	2	Carbon Steel ASTM A216 WCB 316 Stainless Steel ASTM A351 CF8M Alloy 20 ASTM A351 CN7M
22	Bolt	16-24	B8M
24	Anti-Static Device	2	316 Stainless Steel ASTM A351 CF8M

** Ser 70
TFM, XN 1/2"-3" 3PC
4" 4PC
Graphite 1PC (All Sizes)

** Ser 79
TFM, XN 1/4"-3/8" 2PC
1/2"-21/2" 3PC
3" 4PC
4"-3PC
Graphite 1PC (All Sizes)

Series 70/79



DIMENSIONS (INCHES)

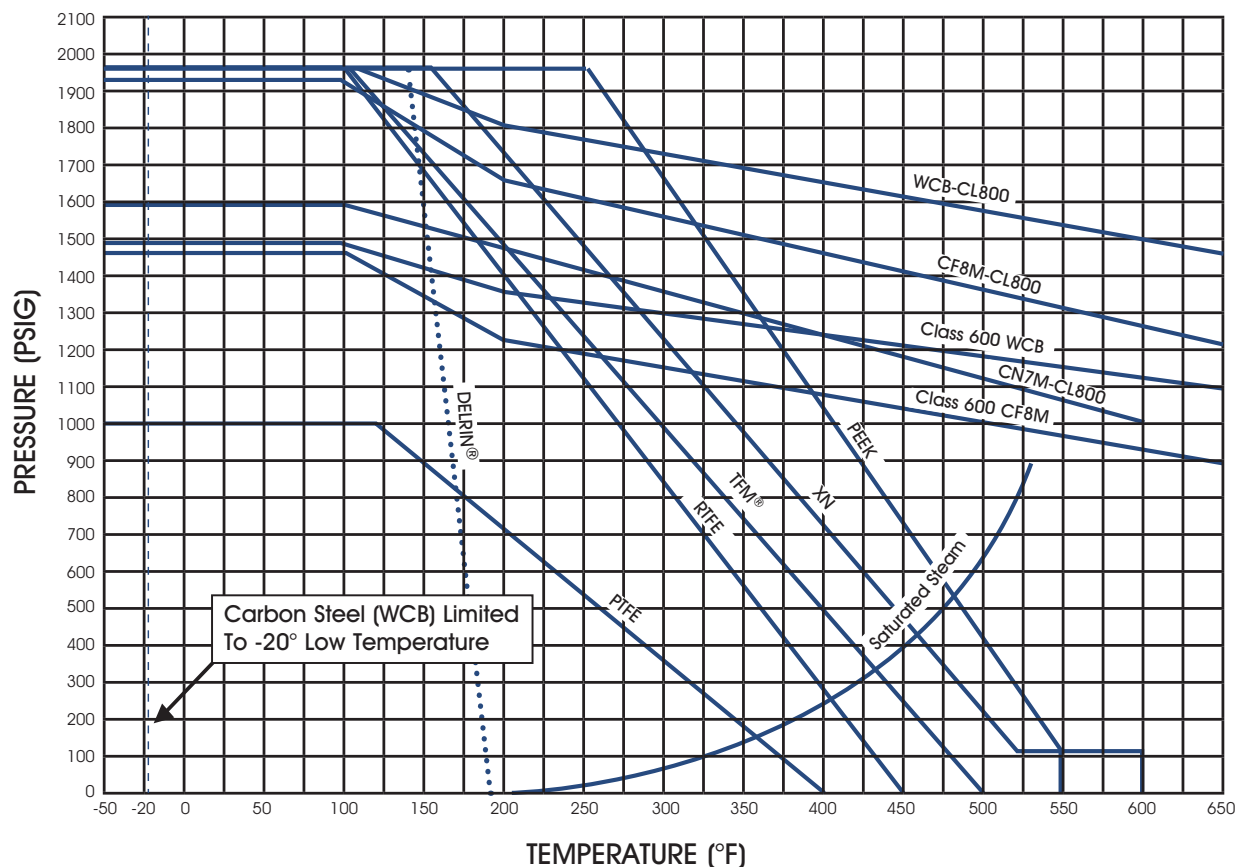
SIZE	SIZE	70	79											70	79	70	79	ISO5211
70	79	A1	A	B	C	D	E	F	G	H	I	J	K	L1	L	M1	M	
1/2"	1/4"-3/8"	2.54	2.54	2.58	5.25	0.39	M5X0.8	1.42	0.20	3/8-24UNF	0.24	0.31	NPT	0.50	0.50	0.85	0.69	F03
3/4"	1/2"	2.99	2.99	2.83	6.30	0.56	M5X0.8	1.65	0.25	3/8-24UNF	0.31	0.55	NPT	0.56	0.50	1.07	0.85	F04
1"	3/4"	3.31	3.31	3.03	6.30	0.81	M5X0.8	1.65	0.25	3/8-24UNF	0.31	0.55	NPT	0.63	0.56	1.33	1.07	F04
1 1/4"	1"	3.94	3.94	3.82	9.65	1.00	M8X1.25	2.76	0.37	5/8-18UNF	0.51	0.91	NPT	0.69	0.63	1.68	1.33	F07
1 1/2"	1 1/4"	4.33	4.33	4.02	9.65	1.26	M8X1.25	2.76	0.37	5/8-18UNF	0.55	0.93	NPT	0.75	0.69	1.91	1.68	F07
2"	1-1/2"	5.04	5.04	4.29	10.24	1.50	M8X1.25	2.76	0.47	3/4-16UNF	0.67	1.04	NPT	0.87	0.75	2.41	1.91	F07
2 1/2"	2"	6.06	5.71	4.65	10.24	2.00	M8X1.25	2.76	0.47	3/4-16UNF	0.73	1.10	NPT	0.98	0.87	2.91	2.41	F07
3"	2 1/2"	7.26	7.26	5.30	10.24	2.56	M8X1.25	2.76	0.47	3/4-16UNF	0.73	1.10	NPT	0.98	0.98	3.54	2.91	F07
4"	3"	8.27	7.95	6.78	23.23	2.99	M10x1.5	4.02	0.67	1.10	1.47	3.02	NPT	1.18	0.98	4.54	3.54	F10
-	4"	-	9.06	7.73	23.23	4.02	M10x1.5	4.02	0.67	1.10	1.47	3.02	NPT	-	1.18	-	4.54	F10

APPLICABLE STANDARDS

BASIC DESIGN	ASME B16.34
THREADED & SOCKET WELD	ASME B16.11
PRESSURE TEST	API 598
MOUNTING PADS	ISO 5211
NACE	MR 0175
FIRE SAFE	FS API 607 7TH EDITION

70	CV (GPM)	WEIGHT (LBS)	79	CV (GPM)	WEIGHT (LBS)
1/2"	18	1.90	1/4"-3/8"	18	1.90
3/4"	33	2.50	1/2"	38	2.40
1"	44	3.70	3/4"	70	3.50
1 1/4"	70	7.00	1"	110	6.40
1 1/2"	125	9.25	1 1/4"	125	8.90
2"	240	13.00	1 1/2"	250	12.80
2 1/2"	400	19.30	2"	430	18.75
3"	700	31.80	2 1/2"	700	31.40
4"	980	52.00	3"	1300	50.30
-	-	-	4"	2400	90.00

PRESSURE-TEMPERATURE RATINGS SERIES 70/79



Standard Port

Class 800 1/2"-2"
Class 600 2 1/2"-4"

Full Port

Class 800 1/4"-2"
Class 600 2 1/2"-4"

Chicago Valves & Controls® Seat Materials

T-Virgin PTFE

Polytetrafluoroethylene is a Fluorocarbon-based polymer. This seating material has excellent chemical resistance and low coefficient of friction. Its temperature range is -100°F to 400°F (-73°C to 204°C). Color - white.

M-TFM® PTFE

Dyneon TFM® PTFE is a second generation PTFE with improved chemical and heat resistant properties and stress recovery. Its temperature range is -100°F to 500°F (-73°C to 260°C) Color - white.

R-Reinforced Polytetrafluoroethylene (RTFE).

PTFE's mechanical properties are enhanced by adding 15% filler material to provide improved strength, stability and wear resistance. Its temperature range is from -320°F to 450°F (-196°C to 232°C). Color-off-white.

XN - is a free-flowing compound based on TFM® containing electro-graphitized carbon. It features: increased thermal dimensional stability and surface hardness, improved deformation under load, reduced friction and wear, and good chemical stability. It has a high limiting oxygen index (LOI), low coefficient of friction, very good mechanical properties and exceptional temperature resistance. It is used as a seat material in chemical processing and automotive industries. It is ideal to with steam and thermal fluid applications up to 550°F (228°C) and as low as -40°F (-40°C). Color - black.

D-DELRIN

Provide excellent high pressure resistance with low torque, it can withstand pressure up to 6000 PSI (depending on valves size and class rating) Temperature limit to -70f - 180f

P-PEEK (Unfilled) Polyetheretherketone

PEEK Polymer offers a unique combination of chemical, mechanical and thermal properties. Excellent for water and steam application at elevated temperatures up to 600°F (315°C). Color - beige.

Other seat materials

Other seat materials are available according to the application, such as very high temperature or cryogenic conditions.

HOW TO ORDER SERIES 70/79

1"		70	6	4	6	6	M	G	M	TE	X	A	
Size		Series	Body	Ends	Ball	Stem	Seat	Body Seal	Stem Packing	Ends	Service	Options	
SIZE		SERIES	BODY			SEAT		BODY SEAL		ENDS		OPTIONS	
70	79	70	Standard Port	4	Carbon Steel	T	PTFE	M	TFM®	TE	Threaded Ends		
-	1/4"	79	Full Port	6	316 Stainless Steel	R	RTFE 15% Glass Filled	G	Graphite	SW	Socket Weld		
1/2"	3/8"	FS70	Fire Safe SP	2	Alloy 20	M	TFM®	STEM PACKING		BW	Butt Weld (SCH 40)		
3/4"	1/2"	FS79	Fire Safe FP	ENDS			X	XN Carbon Filled TFM®	M	TFM®	BW1	Butt Weld (SCH 10)	
1"	3/4"			4	Carbon Steel	D	Delrin®	X	XN Carbon Filled TFM®	BW8	Butt Weld (SCH 80)	VB	Vented Ball
1 1/4"	1"			6	316 Stainless Steel	P	PEEK	G	Graphite	EBW	Extended Butt Weld	SJ	Steam Jacket (2 Inlets)
1 1/2"	1 1/4"			2	Alloy 20	BALL				ESW	Extended Socket Weld	JJ3	Steam Jacket (3 Inlets)
2"	1 1/2"			STEM								SRH	Spring Return Handle
2 1/2"	2"			6	316 Stainless Steel								
3"	2 1/2"			2	Alloy 20								
4"	3"												
												SERVICE	
												X	Oxygen Service*
												SF	Silicone FREE*

Chicago Valves
& Controls

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