

**Design EW Series Valve Body Assembly, NPS 10X6, NPS 8X6,
NPS 8X4 Class 150-600**

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EWX2 – A B C D E F G H J K 9B 9C 9D 9E**C-SEAL TRIM SELECTION STRING = EWX2 – A E G J K 9C & CSEALX1-A B C D E 9A 9B**

Item	Parts contained in Item	Find Number
A	Valve Body	1
	Plug, Pipe, Hex HD	17
B	Cage	3
C	Plug	2
	Pin, Groove	8
	Seat Ring	9
	Disc Retainer	21
	Disc Seat	22
	Ring, Retaining, EXT	27
	Ring, Back-up	29
D	Disc	23
E	Gasket	10
	Gasket, Spiral Wound	12
	Gasket	13
	Gasket Shim	53
F	Ring, Piston	6
	Seal Ring	28
	Ring, Back-up	29
	Rings, Anti-extrusion	63
G	Stud Bolt, CONT THD/S	15
	Nut, Hex, Heavy	16
H	Stem, Plug	7
J	Arrow, Flow Direction	18
	Screw, Drive	19
K	Screw, Drive	19
	Nameplate, SS Body	54
	Seal & Wire, Lead	55
9B	Type/Action/Flow Direction	
9C	Class/Hydro	
9D	Seat Leak Per FGS 4L5	
9E	Design	

Design EW Series Valve Body Assembly, NPS 10X6, NPS 8X6,
NPS 8X4 Class 150-600

ITEM A – VALVE BODY

BODY	TEMPERATURE °F	CLASS	CWP (PSI)	END CONNECTION		DRAIN TAPPING	SIZE	A
WCC	-20+800	150	290	RF		WITHOUT	8X4	415
							8X6	412
							10X6	467
		300	750	RF		WITHOUT	8X4	252
							8X6	17
							10X6	468
						WITH	8X4	276
							8X6	123
							10X6	469
		600	1500	RF		WITHOUT	8X4	256
							8X6	24
							10X6	470
				RTJ		WITHOUT	8X6	38
				BWE	SCHD 40	WITHOUT	8X4	244
							8X6	3
							10X6	471
					SCHD 60	WITH	8X4	268
							8X6	109
							10X6	472
					SCHD 80	WITHOUT	8X6	10
							10X6	473
WC6		600		BWE	SCHD 40	WITHOUT	8X6	7
WC9	-20+1050	600	1500	RF		WITHOUT	8X6	223
				BWE	SCHD 40	WITHOUT	10X6	474
					SCHD 60	WITHOUT	10X6	475
					SCHD 80	WITHOUT	10X6	476
C5	-20+1100	150		RF		WITHOUT	8X6	413
		300	750	RF		WITHOUT	8X4	253
		600	1500	RF		WITHOUT	8X6	20
				RF		WITHOUT	8X6	27
				BWE	SCHD 40	WITHOUT	8X6	6
CF8M	-325+1000	150	275	RF		WITHOUT	8X4	416
							8X6	414
							10X6	477
		300	720	RF		WITHOUT	8X4	254
							8X6	22
							10X6	478
						WITH	8X4	278
						WITH	8X6	128
		600	1440	RF		WITHOUT	8X4	258
							8X6	29
				RTJ		WITHOUT	8X6	43

**ITEM A – VALVE BODY (CONTINUED)**

FOREIGN MANUFACTURED EN1092-1 FLANGES, DRAIN NOT TAPPED

MATL	TEMP ° F	RATING	C.W.P. (PSI/100° F)
WCC	-20+800	PN10	145
		PN16	232
		PN25	363
		PN40	580
		PN63	914
		PN100	1450
LCC	-50+650	PN10	145
		PN16	232
		PN25	363
		PN40	580
		PN63	914
		PN100	1450
WC1	-20+850	PN25	363
		PN40	580
		PN63	914
		PN100	1450
C5	-20+1100	PN16	232
		PN25	363
		PN40	580
		PN63	914
		PN100	1450
WC6	-20+1100	PN25	363
		PN40	580
		PN63	914
		PN100	1450
CF8M	-325+1000	PN10	145
		PN16	232
		PN25	363
		PN40	580
		PN63	914
		PN100	1450
347	-325+1000	PN25	363
		PN40	580
		PN63	914
		PN100	1450
WC9	-20+1100	PN10	145
		PN16	232
		PN25	363
		PN40	580
		PN63	914
		PN100	1450

**ITEM A – VALVE BODY (CONTINUED)**

EN TYPE B (RF)

DN	BODY	PN 10	PN 16	PN 25	PN 40	PN 63	PN 100
		A	A	A	A	A	A
200 X 150 (8X6)	WCC	417	420	292	302	312	322
	LCC	418	421	293	303	313	323
	WC1	-	-	294	304	314	324
	C5	-	-	295	305	315	325
	WC6	-	-	296	306	316	326
	316	419	422	297	307	317	327
	347	-	-	298	308	318	328
	WC9	-	-	301	311	321	331
200 X 100 (8X4)	WCC	423	332	336	340	344	348
	C5	-	333	337	341	345	349
	316	424	334	338	342	346	350
	WC9	-	335	339	343	347	351
	LCC	425	426	427	428	429	430

EN TYPE F (RECESS)

DN	BODY	PN 10	PN 16	PN 25	PN 40	PN 63	PN 100
		A	A	A	A	A	A
200 X 150 (8X6)	WCC	431	434	437	440	443	446
	316	432	435	438	441	444	447
	LCC	433	436	439	442	445	448
200 X 100 (8X4)	WCC	449	452	455	458	461	464
	316	450	453	456	459	462	465
	LCC	451	454	457	460	463	466



Design EW Series Valve Body Assembly, NPS 10X6, NPS 8X6, NPS 8X4 Class 150-600

ITEM B – CAGE

CAGE	VALVE PLUG		RING	TEMP ° F	TRIM/BODY	TEMPERATURE °F	
					BODY	SIZE 8X4	SIZE 8X6 & 10X6
CI ENC	416 SST		416 SST	-20+500			
	316 SST		316 SST	-20+500			
17-4 PH	416 SST		416 SST	-20+800	CF8M/347 SST	-20+275	-20+250
					WCC/WC1	-20+625	-20+600
					WC6/WC9	-20+625	-20+600
					LCC	-20+625	-20+625
			316 SST	-20+800	CF8M/347 SST	-20+300	-20+325
	316 SST		316 SST	-150+410	CF8M/347 SST	-150+300	-150+325
					HAST C	-150+360	-150+350
	316 SST/HF SEAT		COCR-A	-150+300			
	316 SST/HF S/G	STD	COCR-A	-150+410	CF8M/347 SST	-150+300	-150+325
HI-TEMP		COCR-A	+410+800	CF8M/347 SST	(M)	(M)	
316L SST	316L SST		316L SST	-425+300			
316 SST ENC	416 SST		416 SST	-20+410			
	316 SST		316 SST	-425+600	HAST C	-325+360	-325+350
					WCC/WC1	-20+425	-20+400
					WC6/WC9	-20+425	-20+400
					C5	-20+360	-20+350
					LCC	-50+425	-50+400
	MONEL		MONEL	-400+500			
316 SST/HF SEAT		COCR-A	-425+300				
	316 SST/HF S/G		COCR-A	-425+650	HAST C	-325+360	-325+350
				WCC/WC1	-20+425	-20+400	
				WC6/WC9	-20+425	-20+400	
				C5	-20+360	-20+350	
				LCC	-50+425	-50+400	
COCR-A	316 SST/HF SEAT		COCR-A	-425+300			
	316 SST/HF S/G	STD	COCR-A	-425+800	HAST C	-325+500	-325+400
					CF8M/347 SST	-325+600	-325+600
				C5	-20+500	-20+400	
			HI-TEMP	COCR-A	+800+1100	HAST C	(M)
				CF8M/347 SST	(M)	(M)	
				C5	(M)	(M)	

MAX DELTA P (PSI), MUST =<CWP, NO SEAT LOAD CONSIDERED

FLOWING = 1500

SHUT OFF

SHUT OFF	DESIGN	EWS												EWD/EWT
	SEAT	METAL						COMP						ALL
	PORT	4 3/8			7			4 3/8			7			ALL
	STEM	1/2	3/4	1	1/2	3/4	1	1/2	3/4	1	1/2	3/4	1	ALL
PLUG	RING													
416 SST	416 SST	339	762	1500	298	427	546	339	762	1500	298	427	546	1500
	316 SST	300	300	300	298	300	300	339	762	1500	298	427	546	300
316 SST	316 SST	300	300	300	298	300	300	339	762	1500	298	427	546	300
316L SST	316L SST	125	281	300	110	195	300	125	281	499	110	195	305	300
MONEL	MONEL	125	281	300	110	195	300	125	281	499	110	195	305	300
316 SST/HF SEAT	COCR-A	339	762	1500	298	427	546	339	762	1500	298	427	546	1500
316 SST/HF SEAT/GUIDE	COCR-A	339	762	1500	298	427	546	339	762	1500	298	427	546	1500

**ITEM B – CAGE (CONTINUED)**

TRAVEL	CHARACTERISTIC	CAGE	PORT	B
2	EQ PERCENT	17-4 PH H900	4 3/8	66
			7	1
		316L SST	7	5
		316 SST ENC	4 3/8	73
			7	8
		CI ENC	7	131
	LINEAR	COCR-A	4 3/8	100
			7	35
		17-4PH H900	4 3/8	75
			7	10
		316SST ENC	4 3/8	82
			7	17
	Q-OPEN	COCR-A	4 3/8	107
			7	42
	WHISPER	17-4PH H900	4 3/8	84
			7	19
		17-4PH H900	4 3/8	93
			7	28
		316SST ENC	4 3/8	154
			7	153
		COCR-A	4 3/8	152
			7	151



ITEM C – VALVE PLUG/SEAT RING/GROOVE PIN

DESIGN	SEAT	TRAVEL	CHARACTERISTIC	PLUG	RING	PORT	VSC	C
EWD	METAL	2	CL IV SHUT OFF	416 SST	416 SST	4 3/8	1L7500	614
						7	1L7500	604
							1L1000	609
				316 SST	316 SST	4 3/8	1L7500	615
						7	1L7500	605
							1L1000	610
				316 SST/HF SEAT	316/HF	4 3/8	1L7500	616
						7	1L7500	606
							1L1000	611
				316 SST/HF S/G	316/HF	4 3/8	1L7500	617
						7	1L7500	607
							1L1000	612
					HI-TEMP	4 3/8	1L7500	618
						7	1L7500	608
							1L1000	613
			OTHER	416 SST	416 SST	4 3/8	1L5000	145
						7	1L7500	159
								103
				316 SST	316 SST	4 3/8	1L7500	160
						7	1L7500	104
				316L SST	316L SST	7	1L7500	105
						7	1L7500	557
				316 SST/HF SEAT	316/HF	4 3/8	1L5000	567
						7	1L7500	570
				316 SST/HF S/G	316/HF	4 3/8	1L5000	567
						7	1L7500	570
					HI-TEMP	4 3/8	1L5000	568
						7	1L7500	559
							1L1000	562
			CAVITROL	416 SST	416 SST	7	1L7500	529
							1L1000	531
EWS	METAL	2	ALL	416 SST	416 SST	7	1L7500	285
							1L1000	302
							1L1250	319
				316 SST	316 SST	7	1L7500	577
							1L1000	581
	COMP	2	ALL	416 SST	316 SST	7	1L7500	448
						4 3/8	1L7500	451

**ITEM C – VALVE PLUG/SEAT RING/GROOVE PIN (CONTINUED)**

DESIGN EWT

SEAT	TRAVEL	CHARACTERISTIC	PLUG	RING	PORT	VSC	C
METAL	2	ALL	416 SST	416 SST	4 3/8	1L5000	145
						1L7500	159
					7	1L7500	103
			316 SST	316 SST	4 3/8	1L7500	160
					7	1L7500	104
			316L SST	316L SST	7	1L7500	105
			316 SST/HF SEAT	316/HF	7	1L7500	557
			316 SST/HF S/G	316/HF	4 3/8	1L5000	567
						1L7500	570
					7	1L7500	558
COMP	3	CAVITROL	416 SST	416 SST	7	1L7500	529
						1L1000	531
			416 SST	316 SST	4 3/8	1L5000	445
						1L7500	446
					7	1L7500	442
						1L1000	443
COMP	2	ALL	416 SST	316 SST	4 3/8	1L5000	262
					7	1L7500	241

SPRING LOADED SEAL RING, WITHOUT ANTI-EXTRUSION RING

SEAT	TRAVEL	CHARACTERISTIC	PLUG	RING	PORT	VSC	C
METAL	2	ALL	416 SST	416 SST	4 3/8	1L5000	549
					7	1L7500	545
			316 SST/HF S/G	316/HF	7	1L7500	575
COMP	3	CAVITROL	416 SST	416 SST	7	1L7500	547
COMP	2	ALL	416 SST	316 SST	4 3/8	1L5000	554
					7	1L7500	552

**ITEM C – VALVE PLUG/SEAT RING/GROOVE PIN (CONTINUED)**

DESIGN EWT

SPRING LOADED SEAL RING, WITH ANTI-EXTRUSION RING

METAL SEAT, 2 TRAVEL

CAGE	PLUG		RING	PORT	VSC	C				
17-4 PH H900	416 SST		410 SST	4 3/8	1L5000 1L7500 1L1000	649 650 651				
				7	1L7500 1L1000	641 642				
				316 SST/HF S/G STD		4 3/8	1L5000 1L7500 1L1000	655 656 657		
						7	1L7500 1L1000	645 646		
						HI-TEMP		4 3/8	1L5000 1L7500 1L1000	652 653 654
								7	1L7500 1L1000	643 644
	316 SST/HF S&G		4 3/8					1L5000 1L7500 1L1000	658 659 660	
			7					1L7500 1L1000	647 648	

TIGHT SHUTOFF TRIM

CHARACTERISTIC	PLUG	RING	TRAVEL	VSC	PORT	C
ALL	S44004/ S17400 H1075	S44004	2	1L7500	4 3/16	639
					6 13/16	640

ITEM D – DISC

TEMPERATURE °F	SIZE	D
-100+400	8X4	3
	8X6 & 10X6	1

ITEM E – GASKET

FLAT SHEET	SPIRAL WOUND	TEMPERATURE °F	SIZE	E
GRAPHITE/SST	INCONEL & GRAPHITE	+450+1100	8X4	45
		-325+1100	8X6 & 10X6	26

**ITEM F – PISTON RING OR SEAL RING**

DESIGN EWD

PISTON RING	SERVICE	TEMP °F	SHUTOFF	PORT	F
CARBON FILLED PTFE	ALL	-100 +450	STANDARD	8X6 & 10X6 8X4	1 3
			CLASS IV PLUGS	ALL	M
GRAPHITE FMS 17F19	STEAM OR NON-OXIDIZING FLUIDS	-425+600	STANDARD	8X6 & 10X6 8X4	2 4
			CLASS IV PLUGS	ALL	M
GRAPHITE FMS 17F27	STEAM OR NON-OXIDIZING FLUIDS	-425+900	STANDARD	8X6 & 10X6 8X4	9 10
			CLASS IV PLUGS	8X6 & 10X6 8X4	21 23
	AIR OR OXIDIZING FLUIDS	-425+800	STANDARD	8X6 & 10X6 8X4	9 10
			CLASS IV PLUGS	8X6 & 10X6 8X4	21 23
GRAPHITE FMS 17F39	STEAM OR NON-OXIDIZING FLUIDS	-425+1100	STANDARD	8X6 & 10X6 8X4	19 20
			CLASS IV PLUGS	8X6 & 10X6 8X4	22 24

DESIGN EWT

SEAL RING	BACK UP RING	SERVICE	TEMP ° F	PORT	F
CARBON/PTFE FMS 17F18	VITON FMS 17G34	NACE, NOT WATER >180 °F, NOT STEAM	0+400	8X6 & 10X6 8X4	5 7
	NITRILE FMS 17G14	HYDROCARBONS AND AIR	-30+160	8X6 & 10X6 8X4	6 8
		FIRE-RESISTANT HYDRAULIC OILS	-30+180	8X6 & 10X6 8X4	M M
		OTHER COMPATIBLE FLUIDS	-30+160	8X6 & 10X6 8X4	6 8
	ETHYL PROP FMS 17G39	NOT HYDROCARBON (OIL)	-40+450	8X6 & 10X6 8X4	27 28

SPRING LOADED SEAL RING	ANTI-EXTRUSION RING	SERVICE	TEMP °F	PORT	F
N10276/PTFE GLASS/MOS2	WITHOUT	ALL	-100+450	8X6 & 10X6 8X4	16 18
R30003/PTFEPPVE	PEEK	OXIDIZING	-100+500	8X6 & 10X6 8X4	29 31
		NON-OXIDIZING	-100+600	8X6 & 10X6 8X4	29 31



Design EW Series Valve Body Assembly, NPS 10X6, NPS 8X6, NPS 8X4 Class 150-600

ITEM G – BOLTING

BOLTING	NUT	TEMP °F	BODY	TEMP ° F	SIZE	CWP (PSI)	HYDRO (PSI/MIN)
B7	2H	-50+800			ALL	SAME AS BODY	SAME AS BODY
	GRADE 7	-50+1000			ALL	SAME AS BODY	SAME AS BODY
B16	GRADE 7	-20+1100			ALL	SAME AS BODY	SAME AS BODY
B8M CLASS 2	8M LUB	-325+800	HAST C	-325+250	8X6 & 10X6 8X4	1085 1465	1650/3 2200/3
B8M CLASS 1	8M LUB	-325+1000			8X6 & 10X6 8X4	975 1125	1475/3 1700/3
B8	GRADE 8	-425+100			8X6 & 10X6 8X4	975 1125	1475/3 1700/3

BOLT	NUT	USE WITH BODY	BONNET	PORT	G
B7	2H	WCC, LCC, WC1, WC6, WC9, C5, HAST C, CF8M, 347 & ALLOY 20	PLAIN & EXTENSION	8X4	7
				8X6 & 10X6	1
		LC3	BELLOWS SEAL	8X4	30
				8X6 & 10X6	4
	GRADE 7 LUB	WC1, WC6, WC9 & C5	PLAIN & EXTENSION	8X4	7
			BELLOWS SEAL	8X4	30
			PLAIN & EXTENSION	8X4	26
			BELLOWS SEAL	8X4	31
B16	GRADE 7 LUB	WC9 & C5		8X6 & 10X6	41
			PLAIN & EXTENSION	8X4	27
				8X6 & 10X6	37
			BELLOWS SEAL	8X4	32
B8M CLASS 1	8M LUB	CF8M & 347		8X6 & 10X6	42
			PLAIN & EXTENSION	8X6 & 10X6	13
				8X4	29
			BELLOWS SEAL	8X4	39
B8M CLASS 2	8M	ALLOY 20, CF8M & 347		8X6 & 10X6	34
			PLAIN & EXTENSION	8X4	44
		LC3	BELLOWS SEAL	8X4	9
				8X6 & 10X6	3
	8M LUB	HAST C, CF8M & 347	BELLOWS SEAL	8X4	12
				8X6 & 10X6	9
			PLAIN & EXTENSION	8X4	12
			BELLOWS SEAL	8X4	28
B8	GRADE 8	CF8M & 347		8X6 & 10X6	38
			BELLOWS SEAL	8X4	33
				8X6 & 10X6	43
			BELLOWS SEAL	8X4	16

**ITEM H – VALVE STEM (OMIT W/TIGHT SHUTOFF TRIM)**

SIZE	TVL	STEM	ACTR GROUP	VSC	BONNET STYLE		H
8X6 & 10X6	3	316	1	1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	314
	2	316	101	1L1000	PLAIN	ALL EXCEPT EWD CLASS IV	225
					EWD CLASS IV		319
				1L1000	PLAIN	EWD CLASS IV	317
					ALL EXCEPT EWD CLASS IV		169
			100	EXT STYLE 1	EWD CLASS IV		318
					ALL EXCEPT EWD CLASS IV		176
				1L1250	PLAIN	ALL EXCEPT EWD CLASS IV	197
			1	EXT STYLE 1	ALL EXCEPT EWD CLASS IV		204
					ALL EXCEPT EWD CLASS IV		
			NIT 50	1L7500	PLAIN	ALL	1
					EXT STYLE 1	ALL	8
				1L1000	PLAIN	ALL EXCEPT EWD CLASS IV	326
					EXT STYLE 1	ALL EXCEPT EWD CLASS IV	323
			1	1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	324
					EXT STYLE 1	ALL EXCEPT EWD CLASS IV	320
		316L MONEL	1	1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	2
			1	1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	33
8X4	2	316	101	1L1000	PLAIN	ALL EXCEPT EWD CLASS IV	281
					EWD CLASS IV		319
			100	1L1000	PLAIN	EWD CLASS IV	317
					EXT STYLE 1	EWD CLASS IV	318
			1	1L5000	PLAIN	ALL EXCEPT EWD CLASS IV & 1/4 TRAVEL	57
					EXT STYLE 1	ALL EXCEPT EWD CLASS IV & 1/4 TRAVEL	64
					EXT STYLE 2	ALL EXCEPT EWD CLASS IV & 1/4 TRAVEL	71
				1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	113
					EWD CLASS IV		1
				EXT STYLE 2	ALL EXCEPT EWD CLASS IV		127
					EWD CLASS IV		8
		NIT 50	1	1L5000	PLAIN	ALL EXCEPT EWD CLASS IV & 1/4 TRAVEL	325
				1L7500	PLAIN	ALL EXCEPT EWD CLASS IV	321
					EXT STYLE 1	ALL EXCEPT EWD CLASS IV	322

ITEM J – FLOW ARROW & DRIVE SCREW

J
1

ITEM K – NAMEPLATE

K
1

**ITEM 9B – TYPE/ACTION/FLOW DIRECTION**

ACTION	DESIGN	FLOW	9B
PDTC	EWD	UP	1
		DOWN	4
	EWT	UP	2
		DOWN	5
	EWS	UP	3
		DOWN	6

ITEM 9C – CLASS/HYDRO

SIZE	BODY	RATING	HYDRO (PSI/MIN)	9C
NPS 8X6, NPS 8X4	WCC, WC6, C5, CF8M, 347 SST, HAST C, WC9 & LCC	CL 150	450/2	7
		CL 300	1125/3	1
		CL 600	2250/3	2
	WC1	CL 300	1050/3	5
		CL 600	2100/3	6
	ALLOY 20	CL 300	900/3	3
		CL 600	1800/3	4
	ALL	PN10	225 PSI (15 BAR)/ 2 MIN	8
		PN16	350 PSI (24 BAR)/ 2 MIN	9
		PN25	550 PSI (38 BAR)/ 2 MIN	10
		PN40	875 PSI (60 BAR)/ 2 MIN	11
		PN63	1375 PSI (95 BAR)/ 3 MIN	12
		PN100	2175 PSI (150 BAR)/ 3 MIN	13
NPS 10X6	WCC, WC9, CF8M	CL 150	450/3	14
		CL 300	1125/5	15
		CL 600	2250/5	16



ITEM 9D – SEAT LEAK PER FGS 4L5

DESIGN	PORT	SEAT	SEAL OR PISTON RING	FLOW	CHARACTER	LEAK CLASS	VALUE	9D
EWD	7	METAL	PISTON RING	DOWN	EQ PERCENT	II (SCFH)	5434	1
						IV (SCFH)	108.6	5
					LINEAR	II (SCFH)	6470	2
						IV (SCFH)	129.4	6
					QUICK OPEN	II (SCFH)	6922	3
						IV (SCFH)	138.4	7
				UP	WHISPER	II(SCFH)	4173	4
						IV(SCFH)	83.4	8
	4 3/8	METAL	PISTON RING	DOWN	EQ PERCENT	II (SCFH)	3040	17
						IV (SCFH)	60.8	21
					LINEAR	II (SCFH)	3817	18
						IV (SCFH)	76.3	22
					QUICK OPEN	II (SCFH)	4431	19
						IV (SCFH)	88.6	23
				UP	WHISPER	II (SCFH)	2633	20
						IV (SCFH)	52.6	24
EWT	7	METAL	STANDARD SEAL RING & SPRING LOADED W/O ANTI-EXTRUSION RING	DOWN	EQ PERCENT	IV (SCFH)	108	9
					LINEAR	IV (SCFH)	129	10
					QUICK OPEN	IV (SCFH)	138	11
				UP	WHISPER	IV (SCFH)	83.4	12
		METAL	SPRING LOADED WITH PEEK ANTI-EXTRUSION	DOWN	TIGHT SHUTOFF TRIM	TSO	0/30 SEC	39
				ALL	ALL	V WATER TEST (ML/MIN)	*	38
		COMP	STANDARD SEAL RING & SPRING LOADED W/O ANTI-EXTRUSION RING	ALL	ALL	V AIR TEST (ML/MIN))	32.90	37
	4 3/8	METAL	STANDARD SEAL RING & SPRING LOADED W/O ANTI-EXTRUSION RING	DOWN	EQ PERCENT	IV (SCFH)	60.8	21
					LINEAR	IV (SCFH)	76.3	22
					QUICK OPEN	IV (SCFH)	88.6	23
				UP	WHISPER	IV (SCFH)	52.6	24
		METAL	SPRING LOADED WITH PEEK ANTI-EXTRUSION	DOWN	TIGHT SHUTOFF TRIM	TSO	0/30 SEC	39
				ALL	ALL	V WATER TEST (ML/MIN)	*	38
		COMP	STANDARD SEAL RING & SPRING LOADED W/O ANTI-EXTRUSION RING	ALL	ALL	V AIR TEST (ML/MIN)	20.59	40
EWS	7	METAL	N/A	UP	EQ PERCENT	IV (SCFH)	105	13
					LINEAR	IV (SCFH)	129	10
					QUICK OPEN	IV (SCFH)	151	14
					WHISPER	IV (SCFH)	84	15
	4 3/8	METAL	N/A	UP	ALL	VI(BUBBLE/MIN)	36	16
					EQ PERCENT	IV (SCFH)	58.4	25
					LINEAR	IV (SCFH)	72.4	26
					QUICK OPEN	IV (SCFH)	97.6	27
		COMP	N/A	UP	WHISPER	IV (SCFH)	52.2	28
					ALL	VI(BUBBLE/MIN)	14	29

* CLASS V SEAT LEAK MUST BE CALCULATED

**ITEM 9E – DESIGN**

Design	9E
NPS 10X6	1
NPS 8X6	NA
NPS 8X4	NA

EWT	SPRING LOADED SEAL RING W/ANTI-EXTRUSION RING ASSY DWG	21B2120
	GASKET ASSEMBLY DWG	16A1943 (8X4)
EWT	8 X 4, ASSEMBLY DWG	43A8592
EWT	8 X 6, ASSEMBLY DWG	43A8590
EWD	ASSEMBLY DWG	41A9275
EWD	CLASS IV 10 X 6, ASSEMBLY DWG	47A7189
EWD	CLASS IV 8 X 6, ASSEMBLY DWG	47A7189
EWD	CLASS IV 8 X 4, ASSEMBLY DWG	47A7189
EWS	ASSEMBLY DWG	31A9274

Revision Change Record

The date recorded on this document reflects the effective date of this revision.

ECRN: 20181203

Matrix Section:

Item	Module	Changes
9C	14	New – Create the Class “CL150, Hydro 450/3” for NPS 10X6.
9C	15	New – Create the Class “CL300, Hydro 1125/5” for NPS 10X6.
9C	16	New – Create the Class “CL600, Hydro 2250/5” for NPS 10X6.