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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

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EZX4 - A B C D E F G H J K 9B 9C 9D 9Z

Item	Parts contained in Item	Find Number
A	Valve Body	1
	Pipe Plug	17
В	Seat Ring Retainer	3
$\frac{B}{C}$	Seat Ring	9
D	Valve Plug	2
	Groove Pin	8
	Plug Guide	27
	Disc or Disc Seat	29
	Plug Tip	30
	Cap Screw	32
E	Bonnet Gasket	10
	Spiral Gasket	12
	Seat Ring Gasket or Seal Ring	13
	Shim	25
F	Cap Screw or Stud Bolt	15
	Hex Nut	16
$\frac{G}{J}$	Stem	7
J	Drive Screw	19
	Nameplate	33
	Wire	34
K	Flow Arrow	18
	Drive Screw	19
9B	Class/Hydro	_
9C	Seat Leak per FGS 4L5	
9D	Nameplate Data	
~~	In	

9Z Partial Assembly

Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM A - VALVE BODY (WITHOUT DRAIN TAPPING=N/TAP) (WITH DRAIN TAPPING=TAP)

ASME

MATL	TEMP ° F	CLASS	CWP (PSI)
CI	-100+406	250	400
CI CL B	-100+450	125	200
		250	500
WCC	-20+800	150	290
		300	750
		600	1500
LCC	-50+650	150	290
		300	750
		600	1500
C5	-20+1100	150	290
		300	750
		600	1500
CF8M	-325+1000	150	275
		300	720
		600	1440
ALY 20, MONEL	-325+800	150	230
		300	600
		600	1200
HAST C	-325+1000	150	290
		300	750
		600	1500

EN 2092-1

MATL	TEMP ° F	TEMP°C	PN EN	CWP(BAR)
CI CL B	-100+406	-73 +208	PN10	16
WCC	-20+800	-29 +	PN10/16	16
		425	PN25/40	40
			PN63	63
			PN100	100
LCC	-50+650	-46 +343	PN10/16	16
			PN25/40	40
			PN63	63
			PN100	100
CF8M	-325+1000	-198	PN10/16	16
		+538	PN25/40	40
			PN63	63
			PN100	100

Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM A - VALVE BODY (WITHOUT DRAIN TAPPING=N/TAP, WITH DRAIN TAPPING=TAP)

	125B FF		250B RF	7	SCH 40	BWE	SCH 80	BWE	CL150 F	RF	CL300 R	rF
	N/TAP	TAP	N/TAP	TAP	N/TAP	TAP	N/TAP	TAP	N/TAP	TAP	N/TAP	TAP
BODIES	A	A	A	A	A	A	A	A	A	A	A	A
CAST IRON	1	37	2	38	M	M	M	M	M	M	M	M
WCC	M	M	M	M	3	39	5	41	7	43	12	48
LCC		-	-	-	-	-	-	-	106	-	107	-
CF8M	M	M	M	M	4	40	6	42	8	44	13	49
ALLOY 20	M	M	M	M	M	M	M	M	9	45	14	50
HAST C	M	M	M	M	M	M	M	M	10	46	15	51
MONEL	M	M	M	M	M	M	M	M	11	47	16	52
C5	M	M	M	M	78	86	79	87	80	88	81	89

	CL600 RF		CL150 RTJ		CL300 R'	ГJ	CL600 RTJ		
	N/TAP TAP		N/TAP TAP		N/TAP	TAP	N/TAP	TAP	
	A	A	A	A	A	A	A	A	
WCC	17	53	22	58	27	63	32	68	
LCC	108	-	-		-	-	111	-	
CF8M	18	54	23	59	28	64	33	69	
ALLOY 20	19	55	24	60	29	65	34	70	
HAST C	20	56	25	61	30	66	35	71	
MONEL	21	57	26	62	31	67	36	72	
C5	82	90	83	91	84	92	85	93	

DN80, EN1092-1 W/O DRAIN TAPPING

	RF (Type B)				Spigot (Ty	pe E)	Recess(Type F)				
	PN10/16	PN25/40	PN63	PN100	PN10/16	PN25/40	PN10/16	PN25/40	PN63	PN100	
BODY	A	A	A	A	A	A	A	A	A	A	
CI	100	-	-	-	-	-	-	-	-	-	
WCC	113	101	117	120	-	-	123	126	129	132	
CF8M	114	102	118	121	-	112	124	127	130	133	
LCC	115	116	119	122	_	109	125	128	131	134	

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING

ITEM C - SEAT RING

ITEM D - VALVE PLUG

ITEM G - STEM

METAL SEA	AT						THERM	
SEAT		LCEAT	37A 37E	ı	NON LUBR	LUBR	TRIM/B	SION LIMIT ODY COMB
RING		SEAT	VALVE		FLUID	FLUID		APPLICABLE
RETAINER	BUSHING	RING	PLUG	STEM	TEMP°F	TEMP° F	BODY	TEMP ° F
CB7CU-1	17-4PH	316	316	316	-150+300	-150+800	CF8M	-150+440 (LUBR)
							WCC	-20+700 (LUBR)
316	COCR-A	316	316	316	-325+300	-325+700	C5	-20+650 (LUBR)
ALY 20	ALY 20	ALY 20	ALY 20	ALY 20	-325+300	-325+300		
HAST C	HAST C	HAST C	HAST C	HAST C	-325+400	-325+400		
MONEL	K-MONEL	K-MONEL	K-MONEL	K-MONEL	-325+600	-325+600		
CB7CU-1	17-4PH	416	416	316	-20+800	-20+800	CF8M	-20+420
HARD FA	CED SEAT RI	NG						
HARD FA	CED SEAT PI	LUG						
CB7CU-1	17-4PH	316	316	316	-150+300	-150+700	CF8M	-150+440 (LUBR)
316	COCR-A	316	316	316	-325+300	-325+700	C5	-20+650 (LUBR)
HARD FA	CED SEAT RI	NG						
HARD FA	CED SEAT &	GUIDE PLUG	ŕ					
CB7CU-1	17-4PH	316	316	316	-150+450	-150+700	CF8M	-150+440
316	COCR-A	316	316	316	-325+700	-325+700	C5	-20+650
HARD FAC	ED SEAT RIN	lG			*	•	•	
HARD FAC	ED SEAT & C	GUIDE PLUG						
SPECIAL T	ACK WELDE	D SEAT RING	RETAINER/	BUSHING AS	SEMBLY			
316	COCR-A	316	316	316	-325+800	-325+1100	WCC	-20+800
HARD FA	CED SEAT &	BORE RING	-	-	•	•	•	
HARD FA	CED SEAT, G	UIDE & CON	TOUR PLUG					
316	COCR-A	316	316	316	-325+700	-325+700	C5	-20+650

COMPOSITION SEAT - TFE DISC

SEAT					NON LUBR	LUBR
RING		SEAT	VALVE		FLUID	FLUID
RETAINER	BUSHING	RING	PLUG	STEM	TEMP ° F	TEMP ° F
CB7CU-1	17-4PH	316	316	316	-100+300	-100+400
316	COCR-A	316	316	316	-100+300	-100+400
ALY 20	ALy 20	ALY 20	ALY 20	ALY 20	-100+300	-100+300
HAST C	HAST C	HAST C	HAST C	HAST C	-100+440	-100+400
MONEL	K-MONEL	K-MONEL	K-MONEL	K-MONEL	-100+400	-100+400
CB7CU-1	17-4PH	416	416	316	-20+400	-20+400

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING

ITEM C - SEAT RING

ITEM D - VALVE PLUG

COMPOSITION SEAT - TFE DISC

ITEM G - STEM

METAL SEA	(SEAT LOAD NOT CONSIDERED) MAX PRESS DROP PSI (CANNOT EXCEED C.W.P.)								
an	İ				SHUT-O	FF			FLOWING
SEAT		1	1	ı	2 PORT	1	3 PORT	ı	ALL PORTS
RING		SEAT	VALVE		1/2	3/4	1/2	3/4	ALL
RETAINER	BUSHING	RING	PLUG	STEM	STEM	STEM	STEM	STEM	STEMS
CB7CU-1	17-4PH	316	316	316	300	300	300	300	1500
316	COCR-A	316	316	316	300	300	300	300	1500
ALY 20	ALY 20	ALY 20	ALY 20	ALY 20	300	300	300	300	1500
HAST C	HAST C	HAST C	HAST C	HAST C	300	300	300	300	1500
MONEL	K-MONEL	K-MONEL	K-MONEL	K-MONEL	800	800	800	800	1500
CB7CU-1	17-4PH	416	416	316	1500	1500	721	1500	1500
HARD FAC	CED SEAT RIN	IG							
HARD FAC	CED SEAT PLU	JG							
CB7CU-1	17-4PH	316	316	316	1500	1500	721	1500	1500
316	COCR-A	316	316	316	1500	1500	721	1500	1500
HARD FAC	CED SEAT RIN	IG							
HARD FAC	CED SEAT & C	GUIDE PLUG							
CB7CU-1	17-4PH	316	316	316	1500	1500	721	1500	1500
316	COCR-A	316	316	316	1500	1500	721	1500	1500
HARD FAC	CED SEAT & E	ORE							
HARD FAC	CED SEAT, GU	IDE & CONTO	OUR PLUG						
316	COCR-A	316	316	316	1500	1500	721	1500	1500

					MAX PRES	SS DROP PSI	/100° F		
					(CANNOT EXCEED C.W.P)				
SEAT					SHUT OFF		FLOWING		
RING		SEAT	VALVE		3 PORT		3 PORT		
RETAINER	BUSHING	RING	PLUG	STEM	1/2 STEM	3/4 STEM	ALL STEMS		
CB7CU-1	17-4PH	316	316	316	721	1500	1500		
316	COCR-A	316	316	316	721	1500	1500		
ALY 20	ALY 20	ALY 20	ALY 20	ALY 20	474	1066	1500		
HAST C	HAST C	HAST C	HAST C	HAST C	485	1092	1500		
MONEL	K-MONEL	K-MONEL	K-MONEL	K-MONEL	752	1500	1500		
CB7CU-1	17-4PH	416	416	316	721	1500	1500		

(SEAT LOAD NOT CONSIDERED)

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING

ITEM C - SEAT RING ITEM D - VALVE PLUG

METAL SEAT - RESTRICTED VALVE PLUG 2" PORT - 1 1/8" TRAVEL

WETAL SEAT - KI	ESTRICTED VA	ALVE FLUG 2	FUK1 - 1 1/6	IKAVEL			LINEAR	
SEAT RING	1	SEAT	VALVE				1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM	I		VSC	VSC
	MATERIAL BESINITE KITCH TECC STEAT							
	17 4 11000	216 007	216 000	216 007	+ = -	C	D	D 12
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	1	1	13
316 SST	COCR-A	316 SST	316 SST	316 SST	3	1	1	13
ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	4	2	4	16
HAST C	HAST C	HAST C	HAST C	HAST C	5	3	5	17
MONEL M-35W	K-MONEL	K-MONEL	K-MONEL	K-MONEL	6	4	6	18
CB7CU-1 H1150	17-4 H900	416 SST	416 SST	316 SST	1	12	73	78
HARD FACED	SEAT RING	1	1	1			•	
HARD FACED	SEAT PLUG							
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	5	2	14
316 SST	COCR-A	316 SST	316 SST	316 SST	3	5	2	14
HARD FACED	SEAT RING							
HARD FACED	SEAT & GUIDI	E PLUG						
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	5	3	15
316 SST	COCR-A	316 SST	316 SST	316 SST	3	5	3	15
HARD FACED S	SEAT RING, HA	ARD FACED SI	EAT & GUIDE	PLUG				
SPECIAL TACK	WELDED SEA	AT RING RETA	INER/BUSHIN	IG ASSEMBLY	7			
316 SST	COCR-A	316 SST	316 SST	316 SST	7	5	3	15
HARD FACED	SEAT & BORE	RING						
HARD FACED	SEAT,GUIDE &	& CONTOUR P	LUG					
316 SST	COCR-A	316 SST	316 SST	316 SST	3	11	76	81
	•	•	•	•		•	•	•

							EQUAL 9	%	QUICK (OPEN
SEAT RING		SEAT	VALVE				1L5000	1L7500	1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC	VSC	VSC
MATERIAL					В	С	D	D	D	D
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	1	7	19	61	67
316 SST	COCR-A	316SST	316SST	316SST	3	1	7	19	61	67
ALY 20	ALY 20	ALY 20	ALY 20	ALY 20	4	2	10	22	64	70
HAST C	HAST C	HAST C	HAST C	HAST C	5	3	11	23	65	71
MONEL M-35W	K-MONEL	KMONEL	KMONEL	KMONEL	6	4	12	24	66	72
CB7CU-1 H1150	17-4 H900	416SST	416SST	316SST	1	12	74	79	75	80
HARD FACED	SEAT RING									
HARD FACED	SEAT PLUG									
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	5	8	20	62	68
316 SST	COCR-A	316SST	316SST	316SST	3	5	8	20	62	68
HARD FACED	SEAT RING									
HARD FACED	SEAT & GUI	DE PLUG								
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	5	9	21	63	69
316 SST	COCR-A	316SST	316SST	316SST	3	5	9	21	63	69
HARD FACED	SEAT RING, I	HARD FACE	D SEAT & C	GUIDE PLUG						
SPECIAL TACK	K WELDED SI	EAT RING R	ETAINER/B	USHING ASS	SEMI	BLY				
316 SST	COCR-A	316 SST	316 SST	316 SST	7	5	9	21	63	69
HARD FACED S	EAT & BORE	RING								
HARD FACED	SEAT, GUIDE	& CONTOU	JR PLUG							
316 SST	COCR-A	316SST	316SST	316SST	3	11	77	82		

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING (CONT)

ITEM C - SEAT RING (CONT)

ITEM D - VALVE PLUG (CONT)

METAL SEAT - FULL CAPACITY VALVE PLUG - 1 1/2" TVL

METAL SEAT - FU.	LL CAFACIT I	VALVETLOG	- 1 1/2 1 VL				QUICKOF	PEN
SEAT RING		SEAT	VALVE				1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC
MATERIAL					В	C	D	D
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	6	25	43
316 SST	COCR-A	316 SST	316 SST	316 SST	3	6	25	43
ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	4	7	28	46
HAST C	HAST C	HAST C	HAST C	HAST C	5	8	29	47
MONEL M-35W	K-MONEL	K-MONEL	K-MONEL	K-MONEL	6	9	30	48
CB7CU-1 H1150	17-4 H900	416 SST	416 SST	316 SST	1	14	83	88
HARD FACED S	EAT RING							
HARD FACED S	EAT PLUG							
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	10	26	44
316 SST	COCR-A	316 SST	316 SST	316 SST	3	10	26	44
HARD FACED S	EAT RING							
HARD FACED S	EAT & GUIDE	PLUG						
CB7CU-1 H1150	17-4 H900	316 SST	316 SST	316 SST	1	10	27	45
316 SST	COCR-A	316 SST	316 SST	316 SST	3	10	27	45
HARD FACED SI	EAT RING, HAI	RD FACED SEA	AT & GUIDE P	LUG				
SPECIAL TACK	WELDED SEAT	Γ RING RETAII	NER/BUSHING	ASSEMBLY				
316 SST	COCR-A	316 SST	316 SST	316 SST	7	10	27	45
HARD FACED SEA	T & BORE RIN	G						
HARD FACED S	EAT,GUIDE &	CONTOUR PL	UG					
316 SST	COCR-A	316 SST	316 SST	316 SST	3	13		

METAL SEAT - FULL CAPACITY VALVE PLUG - 1 1/2" TVL

							LINEAR		EQUAL 9	%
SEAT RING		SEAT	VALVE				1L5000	1L7500	1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC	VSC	VSC
MATERIAL					В	C	D	D	D	D
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	6	31	49	37	55
316 SST	COCR-A	316SST	316SST	316SST	3	6	31	49	37	55
ALY 20	ALY 20	ALY 20	ALY 20	ALY 20	4	7	34	52	40	58
HAST C	HAST C	HAST C	HAST C	HAST C	5	8	35	53	41	59
MONEL M-35W	K-MONEL	KMONEL	KMONEL	KMONEL	6	9	36	54	42	60
CB7CU-1 H1150	17-4 H900	416SST	416SST	316SST	1	14	84	89	85	90
HARD FACED S	EAT RING									
HARD FACED S	EAT PLUG									
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	10	32	50	38	56
316 SST	COCR-A	316SST	316SST	316SST	3	10	32	50	38	56
HARD FACED S	EAT RING									
HARD FACED S	EAT & GUIDE F	PLUG								
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	10	33	51	39	57
316 SST	COCR-A	316SST	316SST	316SST	3	10	33	51	39	57
HARD FACED S	EAT RING, HAP	RD FACED SE	AT & GUIDE	PLUG						
SPECIAL TACK	WELDED SEAT	RING RETAIN	NER/BUSHING	G ASSEMBLY						
316 SST	COCR-A	316 SST	316 SST	316 SST	7	10	33	51	39	57
HARD FACED SEA	T & BORE RING	J								
HARD FACED S	EAT,GUIDE & C	CONTOUR PL	UG							
316 SST	COCR-A	316SST	316SST	316SST	3	13	86	91	87	92

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING (CONT)

ITEM C - SEAT RING (CONT)

ITEM D - VALVE PLUG (CONT)

COMPOSITION SEAT - FULL CAPACITY VALVE PLUG - 1 1/2" TRAVEL EQUAL PERCENT

SEAT RING		SEAT	VALVE				1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC
MATERIAL					В	C	D	D
CB7CU-1 H1150	17-4PH H900	316 SST	316 SST	316 SST	1	6	93	98
316 SST	COCR-A	316 SST	316 SST	316 SST	3	6	93	98
ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	ALLOY 20	4	7	94	99
HAST C	HAST C	HAST C	HAST C	HAST C	5	8	95	100
MONEL M-35W	K-MONEL	K-MONEL	K-MONEL	K-MONEL	6	9	96	101
CB7CU-1 H1150	17-4PH H900	416 SST	416 SST	316 SST	1	14	97	102
HARD FACED I	PLUG GUIDE	·	·					·
316 SST	COCR-A	316 SST	316/COCR-A	316 SST	3	6	103	104

LINEAR

SEAT RING		SEAT	VALVE				1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC
MATERIAL					В	C	D	D
CB7CU-1 H1150	17-4PH H900	316 SST	316 SST	316 SST	1	6	105	106

QUICK OPENING

SEAT RING		SEAT	VALVE				1L5000	1L7500	
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC	
MATERIAL					В	C	D	D	
CB7CU-1 H1150	17-4PH H900	316 SST	316 SST	316 SST	1	6	107	108	

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING

ITEM C - SEAT RING, VANED

ITEM D - VALVE PLUG

METAL SEAT - RESTRICTED VALVE PLUG 2" PORT - VANED SEAT RING - 1 1/8" TVL

											LINEAR		
SEAT RING		SEA	Γ	VAL	VE						1L5000	1L7500	
RETAINER	BUSHING	RING	j	PLU	G	STI	EM				VSC	VSC	
MATERIAL	•	•							В	C	D	D	
CB7CU-1 H1150	17-4 H900	316 \$	SST	316.5	SST	316	SST	,	1	15	1	13	
316 SST	COCR-A	316 \$	SST	316 \$	SST	316	SST	,	3	15	1	13	
CB7CU-1 H1150	17-4 H900	416 \$	SST	416 \$	SST	316	SST	٠	1	16	73	78	
HARD FACED	SEAT RING	•										•	
HARD FACED	SEAT PLUG												
CB7CU-1 H1150	17-4 H900	316 \$	SST	316 \$	SST		SST		1	17	2	14	
316 SST	COCR-A	316 \$	SST	316 \$	SST	316	SST	•	3	17	2	14	
HARD FACED SE	,												<u>.</u>
SPECIAL TACK V										1	ı		
316 SST	COCR-A	316 S	ST	316 \$	SST	316	5 SST		7	17	2	14	
HARD FACED			~										
HARD FACED										1			
CB7CU-1 H1150	17-4 H900			316.5			SST		1	17	3	15	
316 SST	COCR-A	316 \$	SST	316 \$	SST	316	SST	Ì	3	17	3	15	
									D/	TIAI (0/-	OHICK	DEN
SEAT RING	į	SEAT	VΔ	LVE	I					QUAL 9		QUICK (
SEAT RING RETAINER	BUSHING	SEAT RING		LVE JG	STEM	ır İ			1I	5000	1L7500	1L5000	1L7500
RETAINER	BUSHING	SEAT RING	VA PLU		STEM	1	В	С	1I	.5000 SC	1L7500 VSC	1L5000 VSC	1L7500 VSC
	BUSHING 17-4 H900		PLU		STEM		B	C 15	1I	5000	1L7500	1L5000	1L7500
RETAINER MATERIAL		RING	316	IJG		ST			1I	.5000 SC D	1L7500 VSC D	1L5000 VSC D	1L7500 VSC D
RETAINER MATERIAL CB7CU-1 H1150	17-4 H900	RING 316SST	316 316	JG SST	316SS	ST ST	1	15	1I	25000 SC D	1L7500 VSC D	1L5000 VSC D 61	1L7500 VSC D 67
RETAINER MATERIAL CB7CU-1 H1150 316 SST	17-4 H900 COCR-A 17-4 H900	RING 316SST 316SST	316 316	JG SSST SSST	316SS 316SS	ST ST	1 3	15 15	1I	25000 SC D 7	1L7500 VSC D 19	1L5000 VSC D 61 61	1L7500 VSC D 67 67
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG	316SST 316SST 416SST	316 316 416	SST SST SST	316SS 316SS 316SS	ST ST ST	1 3	15 15 16	1I	25000 SC D 7 7 74	1L7500 VSC D 19 19 79	IL5000 VSC D 61 61 75	1L7500 VSC D 67 67 80
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900	316SST 316SST 416SST 316SST	316 316 416	SST SST SST	316SS 316SS 316SS	ST ST ST	1 3 1	15 15 16	1I	25000 SC D 7 7 74	1L7500 VSC D 19 19 79	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A	316SST 316SST 416SST 316SST 316SST	316 316 416 316 316 316	SST SST SST SST	316SS 316SS 316SS 316SS	ST ST ST ST	1 3 1	15 15 16	1I	25000 SC D 7 7 74	1L7500 VSC D 19 19 79	IL5000 VSC D 61 61 75	1L7500 VSC D 67 67 80
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA	RING 316SST 316SST 416SST 316SST 316SST RD FACE	316 316 416 316 316 316 D SEA	SST SST SST SST T & GU	316SS 316SS 316SS 316SS JIDE P.	ST ST ST ST LUG	1 3 1	15 15 16 17 17	1I	25000 SC D 7 7 74	1L7500 VSC D 19 19 79	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE SPECIAL TACK V	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA	316SST 316SST 416SST 316SST 316SST RD FACE F RING RI	316 316 416 316 316 316 D SEA	SST SST SST SST SST T & GUER/BU	316SS 316SS 316SS 316SS 316SS 316SS	ST ST ST ST ST LUG	1 3 1 1 3 EMB	15 15 16 17 17 17	1I	55000 SC D 7 7 74	1L7500 VSC D 19 19 79 20 20	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80 68
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE SPECIAL TACK V 316 SST	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA WELDED SEA'	RING 316SST 316SST 416SST 316SST 316SST RD FACE	316 316 416 316 316 316 D SEA	SST SST SST SST T & GU	316SS 316SS 316SS 316SS JIDE P.	ST ST ST ST ST LUG	1 3 1	15 15 16 17 17	1I	25000 SC D 7 7 74	1L7500 VSC D 19 19 79	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE SPECIAL TACK V 316 SST HARD FACED SI	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA WELDED SEA' COCR-A EAT RING	316SST 316SST 416SST 316SST 316SST RD FACE F RING RI 316 SST	316 316 416 316 316 316 D SEA	SST SST SST SST SST T & GUER/BU	316SS 316SS 316SS 316SS 316SS 316SS	ST ST ST ST ST LUG	1 3 1 1 3 EMB	15 15 16 17 17 17	1I	55000 SC D 7 7 74	1L7500 VSC D 19 19 79 20 20	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80 68
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE SPECIAL TACK V 316 SST HARD FACED SI 17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA WELDED SEA' COCR-A EAT RING EAT & GUIDE	316SST 316SST 416SST 316SST 316SST RD FACE F RING RI 316 SST PLUG	316 316 416 316 316 316 316 310	SST SST SST SST T & GU ER/BU	316SS 316SS 316SS 316SS 316SS JIDE P SHINO 316 S	ST ST ST ST LUG S ASS	1 3 1 1 3 EMB	15 15 16 17 17 17 LY	1I	.5000 SC D 7 7 74 8 8 8	1L7500 VSC D 19 19 79 20 20	1L5000 VSC D 61 61 75 62 62	1L7500 VSC D 67 67 80 68 68	
RETAINER MATERIAL CB7CU-1 H1150 316 SST CB7CU-1 H1150 HARD FACED SI HARD FACED SI CB7CU-1 H1150 316 SST HARD FACED SE SPECIAL TACK V 316 SST HARD FACED SI	17-4 H900 COCR-A 17-4 H900 EAT RING EAT PLUG 17-4 H900 COCR-A EAT RING, HA WELDED SEA' COCR-A EAT RING	316SST 316SST 416SST 316SST 316SST RD FACE F RING RI 316 SST	316 316 416 316 316 316 316 316 316 316	SST SST SST SST SST T & GUER/BU	316SS 316SS 316SS 316SS 316SS 316SS	ST ST ST ST LUG S ASS	1 3 1 1 3 EMB	15 15 16 17 17 17	1I	55000 SC D 7 7 74	1L7500 VSC D 19 19 79 20 20	1L5000 VSC D 61 61 75	1L7500 VSC D 67 67 80 68

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM B - SEAT RING RETAINER, BUSHING (CONT)

ITEM C - SEAT RING, VANED (CONT)

ITEM D - VALVE PLUG (CONT)

METAL SEAT - FULL CAPACITY VALVE PLUG - VANED SEAT RING - 1 1/2" TVL

										QUIC	KOP	EN
SEAT RING		SE	AT	VALVE						1L500	00	1L7500
RETAINER	BUSHING	G RII	NG	PLUG		STEN	Л			VSC		VSC
MATERIAL								В	C	D		D
CB7CU-1 H1150	17-4 H90	0 310	5 SST	316 SST		316 S	ST	1	18	25		43
316 SST	COCR-A	310	5 SST	316 SST		316 S	ST	3	18	25		43
CB7CU-1 H1150	17-4 H90	0 410	5 SST	416 SST		316 S	ST	1	19	83		88
HARD FACED	SEAT RING											
HARD FACED	SEAT PLUC	j										
CB7CU-1 H1150	17-4 H90	0 310	5 SST	316 SST		316 S	ST	1	20	26		44
316 SST	COCR-A	310	5 SST	316 SST		316 S	ST	3	20	26		44
HARD FACED	SEAT RING	, HARD I	FACED SEA	AT & GUID	E PI	LUG						
SPECIAL TAC	K WELDED			NER/BUSH	ING	ASSE	MBLY					
316 SST	COCR-A	31	6 SST	316 SST		316 S	ST	7	20	26	·)	44
HARD FACED SE	AT RING											
HARD FACED	SEAT & GU											
CB7CU-1 H1150	17-4 H90		5 SST	316 SST		316 S		1	20	27		45
316 SST	COCR-A	310	5 SST	316 SST		316 S	ST	3	20	27		45
	Ī	1	1	ī			LINEAR			EQ %		
SEAT RING RETAINER	BUSHING	SEAT RING	VALVE PLUG	STEM	ı		1L5000 VSC	1L7: VSC		1L5000 VSC	VS(500
MATERIAL	BUSHING	KING	PLUG	SIEM	В	С	D	VSC		D		<u> </u>
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	18	31	49		37		5
316 SST	COCR-A	316SST	316SST	316SST	3	18	31	49		37		5
CB7CU-1 H1150	17-4 H900	416SST	416SST	316SST	1	19	84	89		85		0
HARD FACED SI	EAT RING	1				1						
HARD FACED SI	EAT PLUG											
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	20	32	50	-	38		6
316 SST	COCR-A	316SST	316SST	316SST	3	20	32	50)	38	5	6
HARD FACED SH						DT 17						
SPECIAL TACK V				_	5EM1		22		· I	20	-	
316 SST HARD FACED SI	COCR-A	316 SST	316 SST	316 SST	/	20	32	50)	38)	6
HARD FACED SI		PLUG										
CB7CU-1 H1150	17-4 H900	316SST	316SST	316SST	1	20	33	5	1	39	5	7
316 SST	COCR-A	316SST	316SST	316SST	3	20	33	5		39		7
	•	•	•	•	•	•	•	•			•	

COMPOSITION SEAT - FULL CAPACITY VALVE PLUG - VANED SEAT RING - 1 $1/2^{\prime\prime}$ TVL EQUAL PERCENT

SEAT RING		SEAT	VALVE				1L5000	1L7500
RETAINER	BUSHING	RING	PLUG	STEM			VSC	VSC
MATERIAL					В	C	D	D
CB7CU-1 H1150	17-4PH H900	316 SST	316 SST	316 SST	1	18	93	98
316 SST	COCR-A	316 SST	316 SST	316 SST	3	18	93	98
CB7CU-1 H1150	17-4PH H900	416 SST	416 SST	316 SST	1	19	97	102
HARD FACED	PLUG GUIDE							
316 SST	COCR-A	316 SST	316/COCR-A	316 SST	3	18	103	104

Design EZ Valve Body Assemblies, NPS 3

ITEM E - GASKET

Fisher Controls Int. Inc.

MAXIMUM ΔP (PSI) SHUT-OFF (SEAT LOAD NOT CONSIDERED) (CANNOT EXCEED CWP

SPIRAL WOUND	FLAT SHEET	TEMP ° F	2 PORT	3 PORT	E
MONEL & PTFE	MONEL/PTFE	-100+300	1010	1410	6
HAST C & GRAPHITE	GRAPH/SST	-100+1100	800	1020	9
MONEL & GRAPHITE	GRAPH/SST	-100+900	800	1020	10
INCONEL & GRAPHITE	GRAPH/SST	-325+1100	1010	1410	8

ITEM F - BOLTING (UNDERLINED BOLT GRADE SYMBOL INDICATES STRAIN HARDENED BOLTING)

BOLTING	NUT	TEMP ° F	BODY	TEMP ° F	CWP (PSI)	HYDRO (PSI/MIN)
SAE GRADE 5		-20+650			BODY	BODY
B7	SA-194-2H	-50+800			BODY	BODY
B8	SA-194-8	-425+100			1055	1600/2
B7M	SA-194-2HM	-50+800			1175	1775/2
B8M CLASS 2	SA-194-8M	-325+800	HAST C	-325+225	1370	2075/2
			MONEL	-325+450	1370	2075/2

						ENVIRO-SEAL
				PLAIN &	BELLOWS SEAL	BELLOWS SEAL
BODY	TEMP ° F	BOLT	NUT	F	F	F
CAST IRON	-20+450	SAE GR 5		1	M	M
WCC	-20+450	B7	2H	2	9	14
		B7M	2HM	5		
	450+800	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		
LCC	-20+450	B7	2H	2	9	14
		B7M	2HM	5		
	450+700	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		
CF8M	-325+100	B8	GR 8	4	11	16
	-325+450	B8M CL2	8M	3	10	15
	-50+450	B7	2H	2	9	14
		B7M	2HM	5		
	450+800	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		
		B8M CL2	8M LUB	7	13	18
ALLOY 20	-20+450	B7	2H	2	9	14
		B7M	2HM	5		
	450+800	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		
	-325+400	B8M CL2	8M	3	10	15
HAST C	-50+450	B7	2H	2	9	14
	-325+225	B8M CL2	8M LUB	7	13	18
	450+800	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		
MONEL	-325+450	B8M CL2	8M	3	10	15
	-50+450	B7	2H	2	9	14
	450+800	B7	2H LUB	6	12	17
		B7M	2HM LUB	8		

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

ITEM G - STEM ITEM 9D - NAMEPLATE DATA FOR ENVIRO-SEAL BELLOWS SEAL

GROUP 1 ACTR PER AU2259

BONNET STYLE	CAPACITY	STEM VSC	STEM	G	9D
PLAIN	ALL	1L5000	316SST	1	N
			ALY 20	2	N
			HAST C	3	N
			K-MONEL	4	N
			NIT 50	18	N
	ALL	1L7500	316SST	5	N
			ALY 20	6	N
			HAST C	7	N
			K-MONEL	8	N
			NIT 50	17	N
EXT STYLE 1	ALL	1L5000	316SST	9	N
		1L7500	316SST	11	N
EXT STYLE 2	ALL	1L5000	316SST	10	N
		1L7500	316SST	12	N
BELLOWS SEAL	FULL	1L5000	316SST	13	N
	RESTRICT	1L5000	316SST	14	N
ENVIRO-SEAL BELLOWS- SEAL	ALL	ALL	316LSST	N	1
			HAST C	N	2

ITEM J - NAMEPLATE

<u>J</u>

ITEM K - FLOW ARROW

K

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Design EZ Valve Body Assemblies, NPS 3

ITEM 9B - CLASS/HYDRO

Fisher Controls Int. Inc.

STYLE	BODY	CLASS	HYDRO	9B
ASME	CAST IRON	125B	300 PSI/2 MIN	1
		250B	750 PSI/2 MIN	2
	WCC, C5, LCC, CF8M	150	450 PSI/2 MIN	3
		300	1125 PSI/2 MIN	4
		600	2250 PSI/2 MIN	5
	ALLOY 20	150	350 PSI/2 MIN	6
		300	900 PSI/2 MIN	7
		600	1800 PSI/2 MIN	8
	MONEL	150	350 PSI/2 MIN	9
		300	900 PSI/2 MIN	10
		600	1800 PSI/2 MIN	11
	HAST C	150	450 PSI/2 MIN	12
		300	1125 PSI/2 MIN	13
		600	2250 PSI/2 MIN	14
EN	CAST IRON	PN 10/16	350 PSI (24 BAR)/2 MIN	15
	WCC, C5, LCC, CF8M	PN 10/16	350 PSI (24 BAR)/2 MIN	17
		PN 25/40	875 PSI (60 BAR)/2 MIN	16
		PN 63	1375 PSI (95 BAR)/2 MIN	18
		PN 100	2175 PSI (150 BAR)/2 MIN	19

ITEM 9C - SEAT LEAK TEST FGS 4L5

FLOW UP

SEAT	CLASS	CHARACTERISTIC	PORT SIZE	TRAVEL	LEAK VALUE	9C
METAL	IV(SCFH)	QUICK OPENING	2	1 1/8	20.2	1
			3	1 1/2	29.4	2
		LINEAR	2	1 1/8	18.0	3
			3	1 1/2	26.9	4
		EQUAL PERCENT	2	1 1/8	15.8	5
			3	1 1/2	26.1	6
	V AIR TEST (ML/MIN)	ALL	2	1 1/8	9.40	8
			3	1 1/2	14.10	9
COMP	VI (BUBBLES/MIN)		3	1 1/2	6	7

ITEM 9Z - PARTIAL ASSEMBLY (USE FOR NAMEPLATE PAD VALUES)

ASSY INCLUDED ITEMS	INDEX CODES	9Z
A, F, J, 9B	10004,10005,10006,10008	1

COMPOSITION SEAT ASSEMBLY DRAWING 46A1842 ASSEMBLY DRAWING 35A5717 GASKET ASSEMBLY DRAWING 16A1943

EZX4

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Design EZ Valve Body Assemblies, NPS 3

Fisher Controls Int. Inc.

Revision Change Record Section for the present Revision

ECRN: 20180325

Matrix Section:

Item Module Changes

9D 1 Change the stem material description from "316SST" to "316LSST" for the "GROUP 1"

actuator, "ENVIRO-SEAL BELLOWS SEAL" bonnet.