EX4

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Fisher Controls Int. Inc.

Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

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EX4-A B C D E F J K 9A 9B 9C 9D

ITEM A - PACKING FLANGE SET (FLANGE, STUDS, NUTS & CAP SCREW)

TRIM						NACE STEE	L	
CLASS					_	II	III	
STUDS	STEEL	316 SST	N10276	ALLOY 20	MONEL	B7M/NCF2	B7	B8M
BONNET STYLE/DESIGN	A	A	A	A	A	A	A	A
DESIGN EH & EW 12X8 CL900	13	14	-	-	-	15	42	43
ALL OTHER	1	2	4	_	7	12	40	41

LIVE LOAD PACKING

STYLE	PACKING	TRIM	BONNET STYLE/DESIGN	SPRING	A
HIGH SEAL	GRAPHITE ULF	316 SST	DESIGN EH	17-7PH	18
				N07718	19
			ALL OTHER	17-7PH	16
				N07718	17
TA-LUFT		316 SST	ALL	N07718	20

ENVIRO-SEAL PACKING

				NACE B7M/NCF2 BOLTS			
		TRIM	316 SST		N10276	MONEL	ALY 20
STYLE/DESIGN	PACKING		A	A	A	A	A
EH &	SINGLE GRAPHITE	ULF	30	31	32	33	34
EW 12X8 CL900		NUCLEAR	45	-	-	-	-
	DOUBLE PTFE	STANDARD	35	36	37	38	39
		CARBON BUSHINGS	35	36	37	38	39
	DUPLEX		35	36	37	38	39
	KALREZ, SINGLE		30	31	32	33	34
	H2 DUPLEX		30	31	32	33	34
ALL OTHER	SINGLE GRAPHITE	ULF	20	21	22	23	24
		NUCLEAR	44	-	-	-	-
	DOUBLE PTFE	STANDARD	25	26	27	28	29
		CARBON BUSHINGS	25	26	27	28	29
	DUPLEX		25	26	27	28	29
	KALREZ, SINGLE		20	21	22	23	24
	H2 DUPLEX		20	21	22	23	24

ISO-SEAL PACKING

	TRIM	316 SST
	SPRING	N07718
RATING		A
CLASS 1	46	
CLASS 9	00-1500	47
CLASS 2	500	48

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM B – PACKING

 $\begin{tabular}{ll} \textbf{ITEM C-PACKING PARTS-SPRING \& WASHER OR SPACER, PACKING RING, FOLLOWER ITEM 9A-PACKING ARRANGEMENT \end{tabular}$

SEE BULLETIN 59.1:062

TRIM	TEMP ° F	TEMP ° C
STD SST	-150+800	-101+427
316	-425+1100	-254+593
321	-325+1500	-198+816
N10276	-425+1000	-254+538
ALY 20	-425+1100	-254+593
MONEL	-400+900	-240+482
S31803	-60+600	-51+316
S32760	-60+600	-51+316

PACKING BOX SIZE 23A1000

STD PACKING

SINGLE PACKING ARRANGEMENT

	PTFE		LOW	CHLORIDE GRAPH					
PACKING	FMS	17D7	RIB &	RIB & FIL		GRAPHITE COMPOSITE		GRAPHITE ULF	
ARRANGEMENT	12A7	837	14A2340		12B5795		19B4123		
TRIM	В	C	В	C	В	C	В	С	
316 SST	1	2	14	34	18	82	31	81	
MONEL	1	12	-	-	-	-	-	-	
S31803	1	87	14	86	-	-	-	-	
S32760	1	92	14	91	-	-	-	-	

DOUBLE PACKING ARRANGEMENT

						PTF CON	_	GRAPH COMP		LOW CHLORIDE GRAPH	
PACKING	PTFE	E FMS	17D7				S 17D26	FMS 17D28		RIB & FIL	
ARRANGEMENT	12A7	'839	NO 1	NO 2	NO 3	12A	8150	13A0111		14A3413	
TRIM	В	C	9A	9A	9A	В	C	В	C	В	C
STD SST	3	17	1	2	3	6	17	5	17	15	17
316 SST	3	18	1	2	3	6	18	5	18	15	18
321 SST	3	21	1	2	3	6	21	5	21	15	21
MONEL	3	28	1	2	3	6	-	5	-	15	-
S31803	3	85	1	2	3	6	85	5	85	15	85
S32760	3	90	1	2	3	6	90	5	90	15	90

LEAKOFF PACKING ARRANGEMENT, PACKING BOX SIZE 23A1001

PACKING	ARRANGEMENT	TRIM	В	C
LOW CHLORIDE GRAPH RIB & FIL	15A5378	STD SST	17	49
		316 SST	17	50

LIVE LOAD PACKING, PBS 23A1000

PACKING		ARRANGEMENT	TRIM	В	C
TA-LUFT	CNN073 TEFLON	1Q57043	316 SST	29	74
	SET-85 GRAPHITE	1Q57048	316 SST	30	75

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Fisher Controls Int. Inc.

Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM B – PACKING (CONT)

ITEM C - PACKING PARTS - SPRING & WASHER OR SPACER, PACKING RING, FOLLOWER (CONT) ITEM 9A – PACKING ARRANGEMENT (CONT)

PACKING BOX SIZE 23A1000, LIVE LOAD PACKING PLAIN, EXT & EH BONNETS **ENVIRO-SEAL PACKING**

PACKING	GRAPHITE ULF		GRAPHITE NUCLEAR		PTFE/CARBON PTFE		PTFE/GLASS PTFE	
ARRANGEMENT	19B4123		12B5795		12B6929		12B6929	
TRIM	В	C	В	C	В	C	В	C
316 SST	31	77	18	61	20	57	21	57
N10276	31	78	-	-	20	58	21	58
MONEL	31	79	-	-	20	59	21	59
ALLOY 20	31	80	-	-	20	60	21	60
S31803	31	84	-	-	20	83	21	83
S32760	31	89	-	-	20	88	21	88

PTFE WITH CARBON BUSHINGS, DOUBLE PACKING

PACKING	PTF	E/CARBON PTFE	PTF	E/GLASS/PTFE
ARRANGEMENT	14B	7548	14B	7548
TRIM	В	С	В	C
316 SST	22	62	23	62
N10276	22	63	23	63
MONEL	22	64	23	64
ALLOY 20	22	65	23	65

PACKING					
TYPE	SET	ARRANGEMENT	TRIM	В	C
HIGH SEAL	GRAPHITE ULF	19B4123	316 SST	31	76
	GRAPHITE	12B5795	316 SST	18	51
DUPLEX	PTFE/CARBON PTFE	14B7470	316 SST	24	62
			N10276	24	63
			MONEL	24	64
			ALLOY 20	24	65
	PTFE/GLASS PTFE	14B7470	316 SST	25	62
			N10276	25	63
			MONEL	25	64
			ALLOY 20	25	65
KALREZ	KALREZ/VESPEL	14B7036	316 SST	27	66
			N10276	27	67
			MONEL	27	68
			ALLOY 20	27	69
	KALREZ/VESPEL/GRAPH	14B7037	316 SST	28	70
			N10276	28	71
			MONEL	28	72
			ALLOY 20	28	73
H2 DUPLEX	N/A	29B2877	316 SST	36	62
			N10276	36	63
			MONEL	36	64
			ALLOY 20	36	65

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM B – PACKING (CONT)

ITEM C – PACKING PARTS - SPRING & WASHER OR SPACER, PACKING RING, FOLLOWER (CONT) ITEM 9A – PACKING ARRANGEMENT (CONT)

ISO-SEAL PACKING

RATING	CLASS 125-600				CLAS	CLASS 900-1500				CLASS 2500			
PACKING	GRAF	PHITE	PTF	PTFE		PHITE	ITE PTFE		GRAPHITE		PTFE		
ARRANGEMENT	GF079	999	GF0	7999	GF08	GF08002		8002	GF09'	719	GF09719		
TRIM	В	C	В	C	В	C	В	C	В	C	В	C	
316 SST	32	93	33	94	34	93	35	94	37	93	38	94	

ITEM D – BONNET ITEM 9D – DIM A

						EXT STYLE 3 WITH				
	PLAIN & CA	AV III	EXT STYLE	1 & 2		LIQUID STEM SEAL BUSHING				
BONNET	TEMP ° F	TEMP ° C	BUSHING	TEMP ° F	TEMP ° C	BUSHING	TEMP ° F	TEMP ° C		
ALY 20	-325+300	-198+149	ALY 20	-325+300	-198+149					
CF8M	-325+1000	-198+538	316SST	-325+1000	-198+538	316SST/PTFE	-325+450	-198+232		
CI	-100+450	-73+232								
CW2M	-325+1000	-198+538	N10276	-325+1000	-198+538					
C5	-20+1100	-29+593	STL 4340	-20+1000	-29+593					
LCC	-50+650	-46+343	STL 1018	-20+650	-29+343					
MONEL	-325+900	-198+482								
WCC	-20+800	-29+427	STL 1018	-20+800	-29+427					
WC1	-20+850	-29+454	STL 4340	-20+850	-29+454					
WC6	-20+1000	-29+538	STL 4340	-20+1000	-29+538					
WC9	-20+1050	-29+566	STL 4340	-20+1050	-29+566					
347SST	-325+1100	-198+593	347SST	-325+1100	-198+593					
CD3MN	-60+600	-51+316	S31803	-60+600	-51+316					
CD3MWCUN	-60+600	-51+316	S32760	-60+600	-51+316					

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM D – BONNET (CONT) ITEM 9D – DIM A (CONT)

CLASS 125-600, PBS 23A1000 DESIGN E STANDARD SERVICE

			CI	WCC	C5	CF8M	LCC	WC6	ALY 20	CD3MN
BONNET	SIZE	LUBR	D	D	D	D	D	D	D	D
STD	2	TAP	-	1	-	-	-	-	-	-
		N/TAP	-	888	-	-	-	-	-	941
	3	TAP	-	26	-	35	27	-	-	-
		N/TAP	-	889	-	891	890	-	-	942
	4	TAP	-	51	55	60	-	-	-	-
		N/TAP	-	892	893	894	-	-	-	943
	6	TAP	107	76	80	85	-	-	-	-
		N/TAP	895	896	897	898	-	-	-	944
EXT STYLE 1	2 1/2	TAP	M	211	-	-	-	-	-	-
		N/TAP	M	899	-	-	-	-	-	962
	3	TAP	M	236	-	-	-	-	-	-
		N/TAP	M	900	-	-	-	-	-	963
	4	TAP	M	261	265	270	-	-	-	-
		N/TAP	M	901	902	903	-	-	911	964
	6	TAP	M	286	290	-	-	-	-	-
		N/TAP	M	904	905	-	-	-	-	965
	8	TAP	367	368	371	373	-	372	-	-
		N/TAP	912	906	908	910	907	909	_	966
EXT STYLE 2	3	N/TAP	M	913	-	-	-	-	-	-

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM D – BONNET (CONT) ITEM 9D – DIM A (CONT)

CLASS 125-600, PBS 23A1000

DESIGN E

NACE SERVICE (MEET THE REQUIREMENTS OF NACE MR0175/ISO15156)

			CD3MN	CD3MWCUN	CD3MN W/NORSOK	CD3MWCUN W/NORSOK
BONNET	LUBR	SIZE	D	D	D	D
STD	N/TAP	2	938	950	954	958
		3	939	951	955	959
		4	940	952	956	960
		6	945	953	957	961
EXT	N/TAP	2 1/2	967	977	982	987
STYLE 1		3	968	978	983	988
		4	969	979	984	989
		6	970	980	985	990
		8	971	981	986	991

BONNET	LUBR	BONNET	SIZE	DIM A	D	9D
EXT STYLE 3 W/LIQUID STEM SEAL BUSHING	TAP	CF8M	4	21	992	5
			6	30	914	1
			8	30	915	1
			8X6	31.38	914	2
			10X8	30	915	1
			12X6	34.06	914	3
			12X8	31.47	915	4
	N/TAP	CF8M	4	21	993	5
			6	30	994	1
			8	30	995	1
			8X6	31.38	996	2
			10X8	30	997	1
			12X6	34.06	998	3
			12X8	31.47	999	4

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

ITEM D – BONNET (CONT) ITEM 9D – DIM A (CONT)

CLASS 125-600, PBS 23A1000 DESIGN EP

				WCC	C5	WC9
DESIGN	BONNET	SIZE	LUBR	D	D	D
LOWER BOSS TAPPED	PLAIN	6	TAP	430	-	-
	EXT STYLE 1	6	TAP	-	-	469
LOWER BOSS NOT TAPPED	EXT STYLE 1	8	TAP	468	371	-

PBS 23A1000, WITH LUBRICATOR TAPPING CLASS 900 DESIGN EWP

BONNET	SIZE	LEAKOFF CONN	MATERIAL		D
PLAIN	6	1/2 NPT	WCC		472
		STANDARD 1/4 NPT	CAST	WCC	426
				WC9	470
			FORGED/SEISMIC	STEEL	471

						WCC	C5	316 SST	LCC	WC6	WC9	316H
CLASS	BONNET	DESIGN		SIZE	TRAVEL	D	D	D	D	D	D	D
900	PLAIN	EW		6	ALL	425	804	806	-	805	807	808
					ALL	809	-	811	-	810	812	813
1500	PLAIN	Е		3	ALL	396	397	-	-	399	401	-
				4	ALL	402	403	-	-	405	407	-
				6	ALL	408	409	-	-	411	413	-
		CAV III	2 STAGE	3	ALL	480	481	482	484	473	483	-
				4	ALL	-	-	-	476	477	-	-
				6	ALL	-	-	-	478	479	-	
			3 STAGE	3	2	396	397	-	-	-	401	-
				4	ALL	-	-	-	476	477	-	-
				6	ALL	-	-	-	478	479	-	-
		EH		2	ALL	870	815	817	871	-	819	818
				3	ALL	872	827	829	873	-	831	830
				4	ALL	874	833	835	875	-	837	836
				6	ALL	876	839	841	877	-	843	842
·	EXT STYLE 1	EH		2	ALL	878	863	864	-	-	865	
2500	PLAIN	E		3	ALL	378	379	-	-	-	-	-
				4	ALL	384	385	-	-	-	-	-
				6	ALL	390	391	-	-	-	-	-
		CAV III	2 STAGE	4	ALL	794	795	798	796	797	799	-
				6	ALL	448	449	-	802	803	451	-
			3 STAGE	4	ALL	444	445	-	800	801	-	-
				6	ALL	448	449	-	802	803	451	
		EH		2	ALL	879	821	823	880	-	825	824
				3	ALL	881	845	847	882	-	849	848
				4	ALL	883	851	853	884	-	855	854
				6	ALL	885	857	859	886	-	861	860
	EXT STYLE 1	EH		2	ALL	887	867	868	-	-	869	-

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

$\boldsymbol{ITEM~D-BONNET~(CONT)}$

DESIGN NOTCHFLO, PBS 23A1000, STD SERVICE

				WCC	LCC	WC9	CF8M	CF8C	CD3MN
CLASS	BONNET	SIZE	LUBR	D	D	D	D	D	D
300-600	PLAIN	4	N/TAP	892	917	919	894	920	921
		6	N/TAP	922	924	926	927	928	929
		8	N/TAP	930	932	934	935	936	937

NACE SERVICE

		_		WCC	LCC	WC9	CF8M	CF8C	CD3MN
CLASS	BONNET	SIZE	LUBR	D	D	D	D	D	D
300-600	PLAIN	4	N/TAP	916	918	-	894	920	921
		6	N/TAP	923	925	-	927	928	929
		8	N/TAP	931	933	-	935	936	937

ITEM E – PIPE PLUG/LUBRICATOR/ISOLATING VALVE

BONNET	PLUG /LUBRICATOR/ISOLATING VALVE	CLASS	BONNET	E
NON-TAPPED	NONE	ALL	ALL	N
TAPPED	PIPE PLUG	ALL	CI, WCC, LCC & WC1	1
			C5, WC6, WC9, CF8M & 347 SST	2
	LUBRICATOR	125-600	ALL	9
	LUBRICATOR/ISOLATING VALVE	125-600	CF8M, 347 SST, ALLOY 20 & CW2M	11
			OTHER	10
		1500-2500	WCC, LCC, C5, WC6 & WC9	12
			CF8M	13

ITEM F – BAFFLE/BUSHING

CLASS 125-600

	LIQUID STEM		WCC	C5	CF8M	LCC	WC1	WC6	WC9	CD3MN	CD3MWCUN
BONNET	SEAL BUSHING	SIZE	F	F	F	F	F	F	F	F	F
EXT STYLE 1	N/A	2 1/2	50	-	52	50	-	-	-	74	75
		3-6	56	57	58	56	57	57	57	76	77
EXT STYLE 2	N/A	3	78	-	-	78	-	-	-	-	-
EXT STYLE 3	316 SST/PTFE	ALL	-	-	72	-	-	-	-	-	-
	316 SST/PTFE	ALL	-	-	73	-	-	-	-	-	-
	/N07750 (NACE)										
OTHER	N/A	ALL	N	N	N	N	N	N	N	N	N

CLASS 1500-2500

			WCC	C5	CF8M	WC9
BONNET	LIQUID STEM SEAL BUSHING	SIZE	F	F	F	F
EXT STYLE 1	N/A	2	68	69	70	69
EXT STYLE 3	316 SST/PTFE	ALL	-	-	72	-
	316 SST/PTFE /N07750 (NACE)	ALL	-	-	73	-
OTHER	N/A	ALL	N	N	N	N

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ITEM J – LUBRICATOR FLUID

BONNET	PLUG/LUBRICATOR/ISOLATING VALVE	LUBRICATOR FLUID	J
NON-TAPPED	NONE	NONE	N
TAPPED	PIPE PLUG	NONE	N
	LUBRICATOR OR LUBRICATOR/ISOLATING VALVE	SILICONE	1
		FLUROLUBE	2

ITEM K – ENVIRO-SEAL PACKING TAG

PACKING STYLE	K
ENVIRO-SEAL	1
OTHER	N

ITEM 9B - PACKING ADJUSTMENT WARNING LABEL

ITEM 9C – PACKING ASSEMBLY AND TEST

PACKING ARRANGEMENTS		9C
SINGLE PTFE WITH STANDARD SST OR 316 SST PACKING PARTS	N	N
HIGH-SEAL	N	N
LIVE LOADED (EXCEPT ISO-SEAL)	N	1
ISO-SEAL	N	2
ALL OTHER	1	N

ASSEMBLY DRAWINGS	
STANDARD BONNET	CU4317
EXTENSION BONNET	30A9425
EXTENSION BONNET STYLE 3	44B8565
LUBRICATOR	10A9421
LUBRICATOR ISOLATING VALVE	AJ5428
DESIGN EH EXTENSION BONNET BAFFLE	18A8557
ENVIRO-SEAL PTFE PACKING FOR PLAIN & EXTENSION BONNET	32B6700
ENVIRO-SEAL GRAPHITE ULF PACKING FOR PLAIN & EXTENSION BONNET	39B4612
ENVIRO-SEAL GRAPHITE PACKING FOR NUCLEAR FOR PLAIN & EXTENSION BONNET	39B6697
HIGH SEAL GRAPHITE ULF PACKING	39B4153
GRAPHITE ULF PACKING	39B6701
SINGLE GRAPHITE COMPOSITE PACKING	39B6699
HIGH SEAL PACKING	32B5856
ISO-SEAL PACKING (CL125-600)	GF07999
ISO-SEAL PACKING (CL900-1500)	GF08002
ISO-SEAL PACKING (CL2500)	GF09719
ENVIRO-SEAL H2 DUPLEX	29B2877

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Design E Series Bonnet Size NPS 2-8 Class 125-2500, 5 Inch Yoke Boss, 1 Inch Stem

Revision Change Record

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

ECRN: 20160986

Matrix Section:

Item Module Changes

F 78 New - CLASS 125-600, EXT STYLE 2 BONNET, SIZE 3, WCC & LCC BAFFLE.

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