

Road Two, Industrial Estate, Winsford, Cheshire. United Kingdom
Phone: +44 (0)1606 552041 Fax: +44 (0)1606 558275

Customer Name: **ALSTOM POWER CENTRALES - BELFORT**
Customer Inquiry: **EMAIL**
Customer PO: **745117 P12 73077**
Ultimate User: **MARITZA EAST 1 BULGARIA**
Tag: **01/02 LBC20 AA021**
Application: **NORMAL CONTROL VALVE**

CV Inquiry: **DMS/060909/PM1**
CV Job: **WH/00071**
CV Job Ref: **CW32708**
CV Serial#: **07CW32708/01-02**
Item: **09**
Quantity: **2**

Description : 6 Inch, Class 600 STD, BW, A217 WC9, GS, CV700 160R

FLUID: **Steam**

SERVICE CONDITIONS

	FLOW t/hr	P1 bar.a	P2 bar.a	Temp deg C	Cv	Cv (%)	Travel (%)	Valve Outlet Vel. ft/min	Noise (dBA)	Velocity Head bar.a
COND 1	39.8	38.9	15.000	334.0	99.9	81%	83%	20726	87	3.87
COND 2	1.1	39.3	15.000	334.0	2.73	2%	8%	572	<70	3.96
COND 3										
COND 4										
COND 5										
SHUTOFF		54	1.01		Allowable Leakage:			Predicted noise level with Insulation (IEC 60534-8-3)		Insulation
DESIGN		54		500	ANSI FCI 70-2	Class IV				3.0 Inch

BODY AND BONNET

Style: **GS - General Service, Globe**
 Size: **6 Inch**
 ASME Class: **600 Standard**
 Body Inlet: **Butt Weld, Sch 80 Per ANSI B16.25, Fig. 2b**
 Body Outlet: **Butt Weld, Sch 80 Per ANSI B16.25, Fig. 2b**
 Material: **ASTM A217 WC9**
 Inlet Pipe: **6" x 8mm WT**
 Outlet Pipe: **6" x 8mm WT**

Bonnet Type: **Bolted w/Extension**
Packing Material: **Grafoil**
Packing Hardware: **Stainless Steel**
Options: **Single Packed**
Service: **Continuous Modulation**

TRIM

Size: **4 Inch with 4 Turns**
 Style: **RAVEN (Balanced with Piston rings)**
 Flow Direction: **UNDER THE WEB**
 Stem Diameter: **0.75 Inch**
 Characteristic: **RAVEN**

Seat Type: **Metal**
Trim Material: **400/70 SST & 300SST Disc Stack**
Max. Cv Available: **122.7 @Max Travel of 2.75" (+/-1/8)**
Controllable Cv of Trim: **3.00**

ACTUATOR

Actuator Model: **CV700 160R**

Actuator Mounting Style: 4 x Studded

Action: **Reverse** (Air Fail Closed)

Actuator Spring: 357575

Handwheel: **None**

Spring Rate: 640

Frame Material: **Ductile Iron**

Max Stem Thrust Required to Close: **883**

Air Pressure Available: **4.0** bar.g

Max Stem Thrust Required to Open: **470**

Air Pressure Required: **1.8 bar.g**

Bench Set: 6 - 17

lbf/in**lbf****lbf**

psi.g

ACCESSORIES

Positioner: **Siemens SIPART PS2, Single Acting**

Airlock: None

Positioner Input Range: 4-20 mA

Filter/Regulator: **Norgren B64G-4GK-AD3-RMN**Position FeedBack Module (4-20mA): **YES**

Solenoid Valve: **ASCO (110V DC)**

Alarm Module: **NO**

De-Energise to Vent Actuator

HART Module: NO

Booster Relay: **RK 3000**

Piping: 1/2" Stainless Steel Tubing (Hoke)

Additional Acc'y: **Pneumatic Isolation Valve**

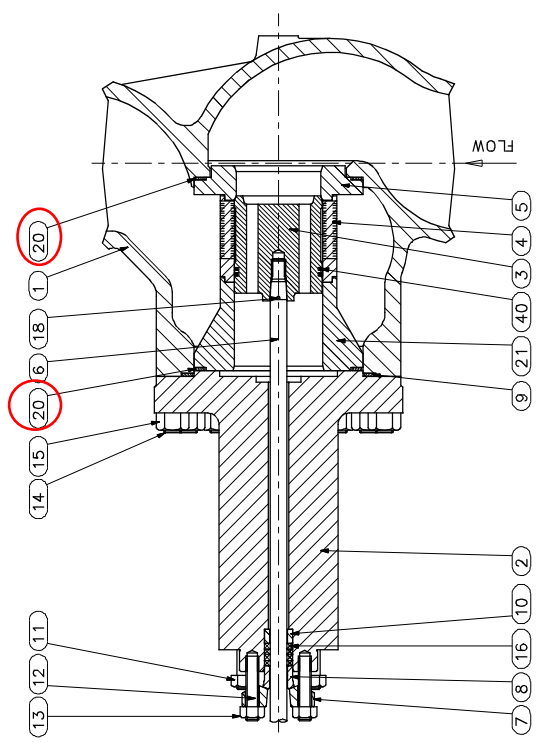
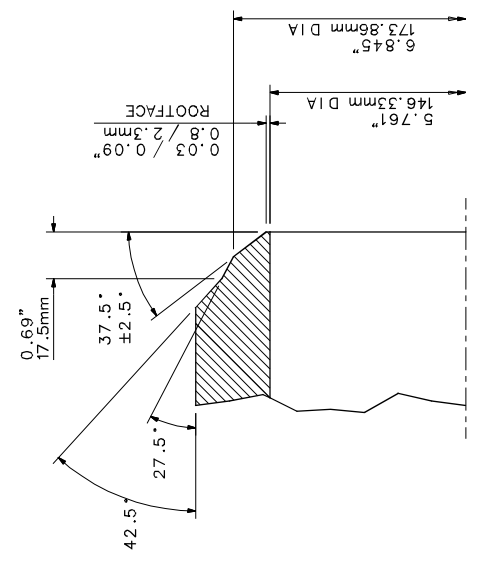
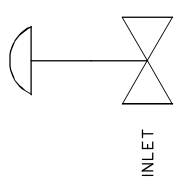
Limit Switches: **None**

COMMENTS

Solenoid Tag Number 01/02 LBC20AA021 A
 Stroking Speed Opening or Closing shall be less than 10 Seconds

06	CMN	Tag Number Change	Oct-31-2007
05	JRL	Per customer comments	Aug-30-2007
04	JRL	Tag Number Change	Aug-23-2007
03	IJW	Released For Contract Use	Jan-24-2007
02	MW	Revised For L2 Meeting	Nov-20-2006
01	MW	Revised For RAVEN Trim	Oct-25-2006
00	MW	Original Data Sheet	Aug-31-2006
Rev	Initials	Description	Date

Program Rev Level: UK-1-2 (WS Version)



ITEM	DESCRIPTION	MATERIAL
1	BOOY	ASTM A317 WC9
2	BONNET	ASTM A317 WC9
3+	PLUG	BS 970 420 537
4+	TRIM STACK ASSY	ASTM A240 GR 316L
5+	SEAT	BS 970 420 537
6+	STEM	ASTM A276 316 COND
7	GLAND BRIDGE	ASTM A351 CF8M
8	GLAND FOLLOWER	BS 970 420 537
9++	BONNET GASKET	FLEX ICARB
10	GLAND WASHER	CARBON JP900
11	ACTUATOR BOLTING	ASTM A193 B8M
12	GLAND STUD	ASTM A193 B8M
13	GLAND NUT	ASTM A194 8M
14	BONNET STUD	ASTM A193 B16
15	BONNET NUT	ASTM A194 4
16++	GLAND PACKING	GRAFO IL
18++	SP1ROL PIN	420 STAINLESS STEEL
20++	TRIM SPACER	FLEX ICARB
21+	TRIM SPACER	BS 970 420 537
40+	PISTON RING	CARBON JP900

RECOMMENDED SPARES

5	21-12-07	S.J.H	CWN	CWN	
4	20-12-07	CWN	CWN	CWN	
3	19-12-07	D.J	CWN	CWN	
2	18-10-07	CWN	CWN	CWN	
1	15-08-07	J.R.L	CWN	CWN	
0	15-04-07	J.R.L	CWN	CWN	
FCN			Completed	Crackdown Approved	
FCN			Penalty Claim	Crackdown	
			FOR REVIEW		FR
			Description		SBAR

Maritza East | Power Station



Space for stamp of Municipality of Galatičovo Место на поштенски марка	Space for further stamps Место на поштенски марка
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Area for stamp of EQE Control OOD (ICS)
 Show on every HA EQE Control OOD (Hess, Haysop)

Main Contractor / Построитель	Partner of Main Contractor / Партнер по основным материалам
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THIS DRAWING IS THE PROPERTY OF COPES-VULCAN AND MAY NOT BE USED WITHOUT THE EXPRESS PERMISSION AND LICENCE OF COPES-VULCAN.	GENERAL ARRANGEMENT DRAWING OF 6" ANSI 600 GLOBE VALVE WITH RAVEN TRIM & CV700-160R REVERSE ACTING PNEUMATIC DIAPHRAGM ACTUATOR WITHOUT HANDWHEEL	CUSTOMER NAME ALSTOM POWER CENTRALES - BELFORT A EAST 1 BULLCAP/A PROJECT NAME 745117 P12 73077 CUSTOMER PO No 01/02 LB20 AAO21 CUSTOMER TAG No COPES-VULCAN, WINSFORD VENDOR NAME COPES-VULCAN, WINSFORD VENDOR CONTRACT WH/00071 VENDOR JOB No CW32708 ITEM DESCRIPTION NORMAL CONTROL VALVE	COPES-VULCAN									
			ISS	MODIFICATION	DATE	BY	SCALE	DRAWN	JRL			
DO NOT SCALE IF IN DOUBT - ASK!			01	PER CUSTOMER COMMENTS	31-08-07	JRL	—	—	—	—	—	
			02	HOOK-UP MODIFIED	18-10-07	DJ	—	—	—	—	—	—
			03	PER CUSTOMER COMMENTS	31-10-07	DJ	—	—	—	—	—	
			04	21-12-07 WAS 12.28"	20-12-07	CJH	—	—	—	—	—	
			05	TAG NUMBER CORRECTED	31-09-07	CJH	—	—	—	—	—	
			DRAWING NO CD32708									
			ISSUE 05									

SPX Process Equipment

LISTEN₀₀₀₀₀INNOVATE₀₀₀₀₀DELIVER

COPES-VULCAN®

RECOMMENDED SPARES LIST

CUSTOMER NAME	ALSTOM POWER CENTRALES - BELFORT	VENDOR CONTRACT N°	WH100071	DATE	21-May-07
PROJECT NAME	MARITZA EAST 1 BULGARIA	DOCUMENT N°	RSL/CW32708/01 & 02	AFTERMARKET REF	DGE/070206/RSL8
CUSTOMER PO N°	745117 P12 73077	REV STATUS	0	CONTACT	D.G.EDWARDS

Qty Of Valves	2 OFF	Description	GS Globe 6" ANSI 600
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Tag N°	Serial N°	Qty Installed Per Valve	CD Drawing N°	Drawing Item	Description	Part N°	Notes	Recommended 2 Yrs Operation
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	3,4,5,18,20,21,40	Assy Trim, Raven 6" 4T 40P Consisting Of #	C99106TAQA		1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	3+	Plug #	PLG04020203		1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	4+	Trim Stack #	C33846-AQA		1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	5+	Seat #	C33844-XMC		1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	18+	Spitol Pin #	U20-120		1
01/02LBC20AA021	CW32708/01 & 02	2	CD32708	20++	Trim Gasket #	S269031		8
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	21+	Trim Spacer #	G33847-XMC		8
01/02LBC20AA021	CW32708/01 & 02	2	CD32708	40++	Piston Ring #	S347749	1	8
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	6+	Stem	STM310225001	1	1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	9++	Bonnet Gasket	S282694	1	4
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	10++	Gland Washer	S373407	1	1
01/02LBC20AA021	CW32708/01 & 02	1	CD32708	16++	Gland Packing	S368489	1	4
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	14,32,33,35,36	Actuator Spares Kit 160R 3/4" Consisting of ###	C80138-AQA	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	14+	Diaphragm # # #	S185990BPP	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	32++	Gasket # # #	S356999	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	33+	U Cup Seal # # #	S357800	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	35+	O Ring (Inner) # # #	S357801	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	36+	O Ring (Outer) # # #	S357802	1	1
01/02LBC20AA021	CW32708/01 & 02	1	See Manual	30+	Bushing	S356093	1	1

NOTES

1

COMMENTS

Please note that items marked with a [1], must be changed during an inspection or maintenance overhaul it should be ensured that these items are available before commencing the inspection.

Do Not Re-Use