

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 LCA35 AA001**  
Application: **CONDENSER SURPLUS CONTROL VALVE**

CV Inquiry: **DMS/060909/PM1**  
CV Job: **WH/00071**  
CV Job Ref: **CW32720**  
CV Serial#: **07CW32720/01-02**  
Item: **21**  
Quantity: **2**

FLUID: **Water**

## SERVICE CONDITIONS

	FLOW t/hr	P1 bar.a	P2 bar.a	Temp deg C	Cv	Cv (%)	Travel (%)	Valve Outlet Vel. ft/sec	Noise (dBA)	Trim Exit Vel. m/sec
COND 1	140	18.2	1.5	37.4	40.3	76%	75%	15.8	<75	14.74
COND 2	140	29.2	1.5	24.7	31.2	59%	62%	15.8	<75	18.99
COND 3										
COND 4										
COND 5										
SHUTOFF		36	1.01		Allowable Leakage:  <b>ANSI FCI 70-2                      Class IV</b>			Predicted noise level with Insulation (IEC 60534-8-3)		<b>Insulation 0.0 Inch</b>
DESIGN		36		80						

Style: **GS - General Service, Globe**  
 Size: **4 Inch**  
 ASME Class: **300 Standard**  
 Body Inlet: **Flanged, Raised Face Per ANSI B16.25**  
 Body Outlet: **Flanged, Raised Face Per ANSI B16.25**  
 Material: **ASTM A216 WCB**  
 Inlet Pipe: **6" Sch 40**  
 Outlet Pipe: **6" Sch 40**

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

Size: **4 Inch with 6 Turns**  
 Style: **RAVEN (Balanced with Ucup seal)**  
 Flow Direction: **OVER THE WEB**  
 Stem Diameter: **0.75 Inch**  
 Characteristic: **RAVEN**

Seat Type: **Metal**  
Trim Material: **400/70 SST & 300SST Disc Stack**  
Max. Cv Available: **52.8 @Max Travel of 2" (+/-1/8)**  
Min. Controllable Cv of Trim: **0.51**

## Actuator Model: CV700 160R

Actuator Mounting Style: **Screw**

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

Actuator Spring: **357575**

Handwheel: **None**

Spring Rate: **640** lbf/in

Frame Material: **Ductile Iron**

Max Stem Thrust Required to Close: **549** lbf

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

Max Stem Thrust Required to Open: **266** **lbf**

Air Pressure Required: **1.5 bar.g**

Bench Set: 7 - 15      psi.g

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

Airlock: None

Positioner Input Range: 4-20 mA

Filter/Regulator: **Bellofram 51FR c/w gauge**

Qty: 1

Position FeedBack Module (4-20mA): **YES**

Solenoid Valve: **None**

Alarm Module: **NO**

Booster Relay: **RK1000**

Qty: 1

HART Module: **NO**

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

Qty: 1

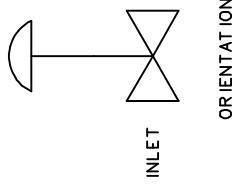
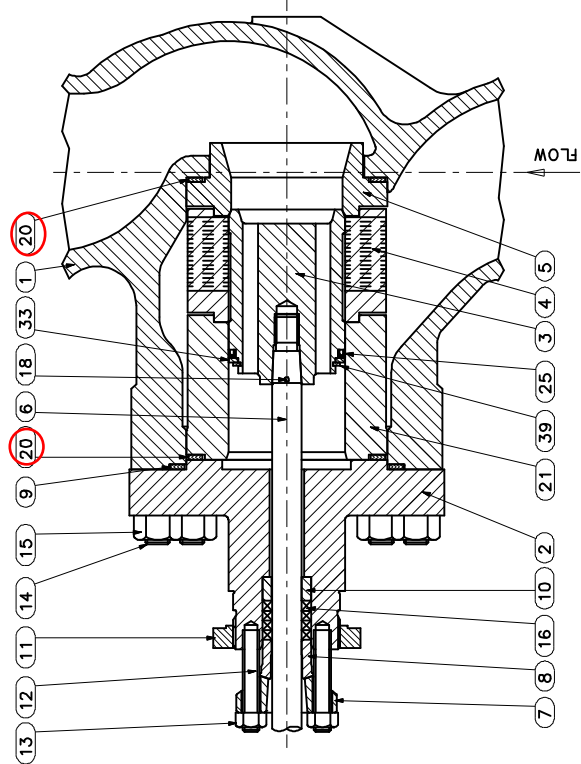
Piping: 3/8" Stainless Steel Tubing (Hoke)

Limit Switches: **None**

Stroking Speed Opening or Closing Shall be Less than 15 seconds

04	CMN	Request by customer to reduce stroking speed from 20 seconds. Advised additional accessories may be required	Aug-31-2007
03	IJW	Revised For Contract Use	Jan-26-2007
02	MW	Revised For L2 Meeting	Nov-20-2006
01	MW	Stroking Speed & Trim Exit Velocity Added	Oct-25-2006
00	MW	Original Data Sheet	Aug-31-2006
<b>Rev</b>	<b>Initials</b>	<b>Description</b>	<b>Date</b>

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

DO NOT SCALE  
IF IN DOUBT - ASK!

[illegible]

BY		SCALE	_____	DRAWN	JRL	<b>COPEX-VULCAN</b> <b>SPX Process Equipment</b>
JRL		MATL	_____	CHECKED	CMN	
DU		USED ON	CHE2720	APPROVED		
		DATE	31-04-07	TRACED		
<b>DRAWING NO</b> CD32720						<b>ISSUE</b> 02

## SPX Process Equipment

DRAWING NO	CD32720	ISSUE	02
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**Marlitz East | Power Station**

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**Marlitz East**

[illegible]

<p><b>COPEX-VULCAN</b></p> <p><b>SPX Process Equipment</b></p>									
<p><b>JRL</b></p>									
<p><b>BY</b> <b>SCALE</b> <b>DRAWN</b> <b>CHECKED</b> <b>CWN</b></p>									
<p><b>W/URL</b> <b>MATL</b> <b>USED ON</b> <b>CN23720</b> <b>APPROVED</b></p>									
<p><b>DATE</b> <b>21-04-07</b> <b>TRACED</b></p>									
<p><b>DRAWING NO</b> <b>CD32720</b></p>									
<p><b>ISSUE</b> <b>02</b></p>									

SPX Process Equipment

LISTEN...INNOVATE...DELIVER

COPES-VULCAN®

RECOMMENDED SPARES LIST

CUSTOMER NAME	ALSTOM POWER CENTRALES - BELFORT	VENDOR CONTRACT N°	WH/00071	DATE	21-May-07
PROJECT NAME	MARITZA EAST 1 BULGARIA	DOCUMENT N°	RSL/CW3272001 & 02	AFTERMARKET REF	DGE/070206/IRSL8
CUSTOMER PO N°	745117 P12 73077	REV STATUS	0	CONTACT	D.G. EDWARDS

Qty Of Valves	2 OFF	Description	GS Globe 4" ANSI 300
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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
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01/02/LCA35AA001	CW3272001 & 02	1	CD32720	3,4,5,18,20,21,25,33,39	Assy Trim, Raven 4" 6T 20P Consisting Of #	C89105KAQA		1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	3+	Plug #	C33830-XMC		1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	4+	Trim Slack #	C33833-AQA		1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	5+	Seat#	C33831-XMC		1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	18+	Spiral Pin #	U20-120		1
01/02/LCA35AA001	CW3272001 & 02	2	CD32720	20++	Trim Gasket #	S325432	1	8
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	21+	Trim Spacer #	C33834-XMC		1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	25++	U Cup Seal #	VAS030101	1	4
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	33+	Seal Retainer #	RET3030101	1	1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	39++	Retaining Ring #	S342268	1	4
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	6+	Stern	STM310216002	1	1
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	9++	Bonnet Gasket	S342796	1	4
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	10++	Gland Washer	S373407	1	4
01/02/LCA35AA001	CW3272001 & 02	1	CD32720	16++	Gland Packing	S368489	1	4
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	14,32,33,35,36	Actuator Spares Kit 160R 3/4" Consisting of ##	C80138-AQA		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	14+	Diaphragm # ##	S185950BPP		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	32++	Gasket # ##	S356999		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	33+	U Cup Seal # ##	S357800		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	35+	O Ring (Inner) # ##	S357801		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	36+	O Ring (Outer) # ##	S357802		1
01/02/LCA35AA001	CW3272001 & 02	1	See Manual	30+	Bushing	S356093		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