

<div>COPES-VULCAN, SPX Process Equipment</div> <div>Road Two, Industrial Estate, Winsford, Cheshire. United Kingdom</div> <div>Phone: +44 (0)1606 552041 Fax: +44 (0)1606 558275</div>					<div>CONTROL VALVE</div> <div>SPECIFICATION SHEET</div>					
Customer Name: ALSTOM POWER CENTRALES - BELFORT					CV Inquiry: DMS/060909/PM1					
Customer Inquiry: EMAIL					CV Job: WH/00071					
Customer PO: 745117 P12 73077					CV Job Ref: CW32717					
Ultimate User: MARITZA EAST 1 BULGARIA					CV Serial#: 07CW32717/01-02					
Tag: 01/02 LCA30AA001					Item: 18					
Application: CONDENSER LEVEL CONTROL VALVE					Quantity: 2					
Description : 10 Inch, Class 300 STD, FLG, A216 WCB, SD, CV700 160-5R										
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	920	21.3	19.8	52.3	977.3	85%	86%	17	<75	14.15
COND 2	694	25.6	16.1	37.4	292.0	26%	47%	13	<75	14.20
COND 3	245	29.7	5.6	24.6	64.58	6%	13%	4	<75	22.62
COND 4										
COND 5										
SHUTOFF		36	1.01		Allowable Leakage:			Predicted noise level with		Insulation 0.0 Inch
DESIGN		36		80	ANSI FCI 70-2 Class IV			Insulation (IEC 60534-8-3)		
BODY AND BONNET										
Style: SD-Severe Duty, Globe					Bonnet Type: Bolted					
Size: 10 Inch					Packing Material: Grafoil					
ASME Class: 300 Standard					Packing Hardware: Stainless Steel					
Body Inlet: Flanged, Raised Face Per ANSI B16.25					Options: Single Packed					
Body Outlet: Flanged, Raised Face Per ANSI B16.25					Service: Continuous Modulation					
Material: ASTM A216 WCB										
Inlet Pipe: 12" Sch 40										
Outlet Pipe: 12" Sch 40										
TRIM										
Size: 10 Inch with 4 Turns and 8 Ports					Seat Type: Metal					
Style: RAVEN (Balanced with Ucup seal)					Trim Material: 400/70SST & 300SST Disc Stack					
Flow Direction: OVER the web					Max. Cv Available: 1144.3 @Max Travel of 5" (+/-1/8)					
Stem Diameter: 1.00 Inch					Min. Controllable Cv of Trim: 3.49					
Characteristic: RAVEN										
ACTUATOR										
Actuator Model: CV700 160-5R					Actuator Mounting Style: 4 x Studded					
Action: Reverse (Air Fail Closed)					Actuator Spring: 364494					
Handwheel: None					Spring Rate: 987 lbf/in					
Frame Material: Ductile Iron					Max Stem Thrust Required to Close: 1529 lbf					
Air Pressure Available: 4.0 bar.g					Max Stem Thrust Required to Open: 634 lbf					
Air Pressure Required: 3.4 bar.g					Bench Set: 9 - 40 psi.g					
ACCESSORIES										
Positioner: Siemens SIPART PS2, Single Acting					Airlock: None					
Positioner Input Range: 4-20 mA					Filter/Regulator: Norgren B64G-4GK-AD3-RMN Qty: 1					
Position FeedBack Module (4-20mA): YES					Solenoid Valve: ASCO (110V DC) Qty: 1					
Alarm Module: NO					De-energise to Vent Actuator					
HART Module: NO					Booster Relay: RK3000 Qty: 1					
Piping: 1/2" Stainless Steel Tubing (Hoke)					Additional Acc'y: Pneumatic Isolation Valve Qty: 1					
Limit Switches: None										
COMMENTS										
Solenoid Tag No - 01/02LCA30AA001 A										
Stroke Time Opening or Closing Shall be Less Than 20 Seconds										
Minimum of 4 Stages of Pressure Reduction Required for Cavitation Elimination at Condition 2 & 3										
				03	IJW	Revised For Contract Use			Jan-25-2007	
				02	MW	Revised Per L2 Meeting			Nov-20-2006	
				01	MW	Stroking Speed & Trim Exit Velocity Added			Oct-26-2006	
				00	MW	Original Data Sheet			Aug-31-2006	
				Rev	Initials	Description			Date	
Program Rev Level: UK-1-2 (WS Version)										

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°	RSUCW3271701 & 02	AFTERMARKET REF	DGE070206/RSLS
CUSTOMER PO N°	745117 P12 73077	REV STATUS	0	CONTACT	D.G.EDWARDS

Qty Of Valves	2 OFF	Description	SD Globe 10" 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
0102LCA30AA001	CW3271701 & 02	1	CD32717	3,4,5,18,20,21,25,51,	Assy Trim, Raven 10" 4T 60P Consisting Of #	C99108JQAQ		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	3, 25, 51	Plug Assembly # - Consisting Of ###	C33817-AQA		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	3+	Plug ###	C33816-XMC		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	25+	U Cup Seal ###	C31570-BPP	1	4
0102LCA30AA001	CW3271701 & 02	1	CD32717	51+	Retaining Ring ###	C31568-XMC		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	4+	Trim Stack #	C33814-AQA		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	5+	Seat #	C33060-XMC		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	18+	Spirol Pin #	U20-124		1
0102LCA30AA001	CW3271701 & 02	2	CD32717	20++	Trim Gasket #	S267466Q	1	8
0102LCA30AA001	CW3271701 & 02	1	CD32717	21+	Trim Spacer #	C33815-XMA		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	6+	Stem	STM32020502		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	9++	Bonnet Gasket	S286657	1	4
0102LCA30AA001	CW3271701 & 02	1	CD32717	10+	Gland Washer	S373408		1
0102LCA30AA001	CW3271701 & 02	1	CD32717	16++	Gland Packing	S368493	1	4
0102LCA30AA001	CW3271701 & 02	1	See Manual	14,30,32,33,35,36	Actuator Spares Kit 160R-L 1" Consisting of ###	C80141-AQA		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	14+	Diaphragm # #	S195964BPP		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	32++	Gasket # #	S356999		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	33+	U Cup Seal # #	S357800		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	35+	O Ring (Inner) # #	S357801		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	36+	O Ring (Outer) # #	S357802		1
0102LCA30AA001	CW3271701 & 02	1	See Manual	30+	Bushing	S356093		1

NOTES

1

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