

COPES-VULCAN, SPX Process Equipment Road Two, Industrial Estate, Winsford, Cheshire. United Kingdom Phone: +44 (0)1606 552041 Fax: +44 (0)1606 558275					CONTROL VALVE SPECIFICATION SHEET					
Customer Name: ALSTOM POWER CENTRALES - BELFORT Customer Inquiry: EMAIL Customer PO: 745117-P12-73077 Ultimate User: MARITZA EAST 1 BULGARIA Tag: 01/02 LCP30 AA001 Application: FWT LEVEL CONTROL VALVE					CV Inquiry: DMS/060909/PM1 CV Job: WH/00071 CV Job Ref: CW32721 CV Serial#: 07CW32721/01-02 Item: 22 Quantity: 2					
Description : 4 Inch, Class 150 STD, FLG, A216 WCB, GS, 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	80	1.3	0.3	70	143.7	88%	82%	9.2	<75	4.51
COND 2	70	4.6	0.3	70	44.9	28%	28%	8.0	<75	12.63
COND 3										
COND 4										
COND 5										
SHUTOFF		7	1.01		Allowable Leakage:			Predicted noise level with		Insulation 0.0 Inch
DESIGN		7		80	ANSI FCI 70-2 Class IV			Insulation (IEC 60534-8-3)		
BODY AND BONNET										
Style: GS - General Service, Globe Size: 4 Inch ASME Class: 150 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: 4" Sch 40 Outlet Pipe: 4" Sch 40					Bonnet Type: Bolted with Bonnet Spacer Packing Material: Grafoil Packing Hardware: Stainless Steel Options: Double Packed (w/leakoff Tapped & Plugged) Service: Continuous Modulation					
TRIM										
Size: 4 Inch with 2 Turns Style: RAVEN (Balanced with Ucup seal) Flow Direction: UNDER THE WEB Stem Diameter: 0.75 Inch Characteristic: RAVEN					Seat Type: Metal Trim Material: 410/420 & 300SST Disc Stack Max. Cv Available: 163.1 @Max Travel of 3.5" (+/-1/8) Min. Controllable Cv of Trim: 3.61					
ACTUATOR										
Actuator Model: CV700 160-5R Action: Reverse (Air Fail Closed) Handwheel: None Frame Material: Ductile Iron Air Pressure Available: 5.0 bar.g Air Pressure Required: 1.4 bar.g					Actuator Mounting Style: 4 x Studded Actuator Spring: 357579 Spring Rate: 384 lbf/in Max Stem Thrust Required to Close: 422 lbf Max Stem Thrust Required to Open: 134 lbf Bench Set: 7 - 15 psi.g					
ACCESSORIES										
Positioner: Siemens SIPART PS2, Single Acting Positioner Input Range: 4-20 mA Position FeedBack Module (4-20mA): YES Alarm Module: NO HART Module: NO Piping: 3/8" Stainless Steel Tubing (Hoke) Limit Switches: None					Airlock: None Filter/Regulator: Bellofram 51FR c/w gauge Qty: 1 Solenoid Valve: None Booster Relay: RK1000 Qty: 1 Additional Acc'y: Pneumatic Isolation Valve Qty: 1					
COMMENTS										
Downstream Orifice Plate Sized at 145CV (approx 63.5mm Bore) to provide a small back pressure onto the Valve The Orifice Plate will impart the following pressure drops: COND 1: 0.5 bar, COND 2: 0.38 Bar. If the Pressure Drops are Increased above these values then cavitation will occur at the orifice plate. THE PRESSURES SHOWN ON THE DATA SHEET ARE THOSE BEFORE THE ORIFICE PLATE. Orifice Plate Tag Number: 01/02 LCP30 BP001 shall be stamped on the outside edge Orifice Plate manufactured from 420SST Nitrided and designed to Fit between 4" ANSI 150 RF Flanges Gland is Double Packed for Vacuum Service Stroking Time Opening or Closing shall be Less than 20 Seconds										
				04	IJW	Pressure Conditions Modified			Oct-30-2007	
				03	IJW	Revised For Contract Use			Jan-26-2007	
				02	MWV	Revised Per L2 Meeting			Nov-20-2006	
				01	MWV	Stroking Speed & Trim Exit Velocity Added			Oct-25-2006	
				00	MWV	Original Data Sheet			Sep-15-2006	
				Rev	Initials	Description			Date	
Program Rev Level: UK-1-2 (WS Version)										

SPX Process Equipment

LISTEN...INNOVATE...DELIVER

COPE-S-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/CW32721/01 & 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 150
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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
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	3, 4, 5, 18, 20, 21, 22, 25, 33, 39	Assy Trim, Raven 4" 2T 38P Consisting Of #	C89105LAQA		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	3+	Plug #	C33812-XMC		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	4+	Trim Slack #	C33810-AQA		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	5+	Seat#	SRG30410403		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	18+	Spirol Pin #	U20-119		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	20++	Trim Gasket #	S325432	1	4
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	21	Trim Spacer #	C33811-XMC		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	22++	Trim Gasket #	S196093-BPP	1	4
01/02LCP30AA001	CW32721/01 & 02	1	GD32721	25++	U Cup Seal #	VAS040101		4
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	33+	Seal Retainer #	RET3040104		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	39++	Retaining Ring #	S342267	1	4
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	6+	Stem	STM310219002		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	9++	Bonnet Gasket	S342796	1	4
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	10+	Gland Washer	S373407		1
01/02LCP30AA001	CW32721/01 & 02	1	CD32721	16++	Gland Packing	S368491	1	4
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	14, 32, 33, 35, 36	Actuator Spares Kit 160R 3/4" Consisting of ##	C80141-AQA		1
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	14+	Diaphragm #	S196964BPP		1
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	32++	Gasket #	S356999		1
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	33+	U Cup Seal #	S357800		1
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	35+	O Ring (Inner) #	S357801		1
01/02LCP30AA001	CW32721/01 & 02	1	See Manual	36+	O Ring (Outer) #	S357802		1
01/02LCP30AA001	CW32721/01 & 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