

<b>COPES-VULCAN, SPX Valves &amp; Controls</b> Road Two, Industrial Estate, Winsford, Cheshire. UK Phone: +44 (0)1606 552041 Fax: +44 (0)1606 558275					<b>CONTROL VALVE SPECIFICATION SHEET</b>					
Customer Name: <b>ALSTOM POWER CENTRALES - BELFORT</b> Customer Inquiry: <b>EMAIL</b> Customer PO: <b>745117 P12 73077</b> Ultimate User: <b>MARITZA EAST 1 BULGARIA</b> Tag: <b>01/02 LCH70 AA001</b> Application: <b>HP7 NORMAL DRAIN</b>					CV Inquiry: <b>DMS/060909/PM1</b> CV Job: <b>WH/00071</b> CV Job Ref: <b>CW32706</b> CV Serial #: <b>07CW32706/01-02</b> Item: <b>07</b> Quantity: <b>2</b>					
Description: <b>4" (100 mm), CL600, WC9 , BW, GS-700 DIAPHRAGM</b>										
FLUID: <b>Water</b>		<b>SERVICE CONDITIONS</b>								
	FLOW (Mton/hr)	P1 (bar a)	P2 (bar a)	Temp. (deg C)	Cv	CV (%)	Travel (%)	Valve Outlet Vel. (ft/sec)	Noise * (dBA)	Remarks
COND 1	65	40.7	20.7	224.9	21.2	52%	71%	1574 (ft/min)	---	FLASHING
COND 2	58.4	38.5	19.7	222.5	19.7	49%	68%	1465 (ft/min)	---	FLASHING
COND 3	14	12.4	6.64	169.7	8.28	20%	41%	516 (ft/min)	---	FLASHING
COND 4										
COND 5										
SHUTOFF		54	1	270	Allowable Leakage:			* Estimated Noise Level with 0" of Insulation		
DESIGN		54		270	Class IV					
<b>BODY AND BONNET</b>										
Style: <b>GS - General Service, Globe</b> Size: <b>4 inch</b> ASME Class: <b>600 Standard</b> Body Inlet: <b>Butt Weld, Sch 40 per ANSI B16.25, Fig. 2b</b> Body Outlet: <b>Butt Weld, Sch 40 per ANSI B16.25, Fig. 2b</b> Material: <b>A-217 WC9</b> Inlet Pipe: <b>6 In. (150 mm), Sch 40</b> Outlet Pipe: <b>6 In. (150 mm), Sch 40</b>					Bonnet Type: <b>Bolted</b> Packing Material: <b>Grafoil</b> Packing Hardware: <b>Stainless Steel</b> Packing Nut Torque: <b>4 ft-lbs.</b> Options: <b>Double Packed(w/Leakoff Tapped &amp; Plugged)</b> Service: <b>Intermittent Modulation</b>					
<b>TRIM</b>										
Size: <b>3 inch with 4 Starts</b> Style: <b>CAV-B9 (Balanced w/Carbon Piston Rings)</b> Flow Direction: <b>OVER THE WEB</b> Stem Diameter: <b>.75 in.</b> Characteristic: <b>CAV-B9</b>					Seat Type: <b>METAL</b> Trim Material: <b>400/70 SST</b> Max. Cv Available: <b>40.39 @Max. Act. Travel of 1" (±1/8)</b> Min. Controllable Cv of Trim: <b>1.5</b>					
<b>ACTUATOR</b>										
Style: <b>700 DIAPHRAGM</b> Size: <b>100 (Square Inch)</b> Action: <b>Spring Closing (Reverse)</b> Handwheel: <b>None</b> Frame Material: <b>Ductile Iron</b> Air Pressure Available: <b>4.0 bar g (58 psig)</b> Air Pressure Required: <b>2.5 bar g (36 psig)</b>					Actuator Mounting Style: <b>Screwed Ring</b> Actuator Spring: <b>357569</b> Spring Rate: <b>600 (lbs/inch)</b> Max. Stem Thrust Required to Close: <b>1304 (lbs)</b> Max. Stem Thrust Required to Open: <b>572 (lbs)</b> Spring Precompression (Diaphragm Air Pressure): <b>19 (psig)</b> Pressure @ Full Valve Travel (With No Internal Valve Pres.): <b>25 (psig)</b>					
<b>ACCESSORIES</b>										
Positioner: <b>Siemens SIPART PS2, Single Acting</b> Positioner Input Range: <b>4-20 mA</b> Position FeedBack Module (4-20ma): <b>NO</b> Alarm Module: <b>NO</b> HART Module: <b>NO</b>					Airlock: <b>None</b> Filter/Regulator: <b>Norgren B64G-4GK-AD3-RMN</b> Qty: 1 Solenoid Valve: <b>ASCO (110 VDC)</b> Qty: 1 De-energize to vent actuator Booster Relay: <b>RK 1000</b> Qty: 1 Additional Acc'y: <b>Pneumatic Isolation Valve</b> Qty: 1					
Piping: <b>1/2" Stainless Steel Tubing (Hoke)</b> Limit Switches: <b>None</b>										
<b>COMMENTS</b>										
Gland is double packed for vacuum service Solenoid valve tag number 01/02 LCH70 AA001 A Alstom to confirm pipe sizes as they appear large for the stated duties Stroking speed <4 seconds										
Model = <b>GS4</b> Body Option: <b>BDY504080603</b> Bonnet Option: <b>BNT504270603</b> Trim Option: <b>TRM504330710403</b> Hardware Pack Option: <b>HDP5124112</b> Actuator Option: <b>ACT5*****</b> Stem Option: <b>STM5**04021012</b> Gasket Option: <b>GSK5040301061</b> Accessory Kit Option: I.D. Plate: <b>OPT187019</b> Limit Switch Option: <b>None</b>										
					3	IJW	Revised For Contract Use		Jan-24-2007	
					2	MW	Revised per Clarification		Nov-20-2006	
					1	MW	Stroking speed added		Oct-26-2006	
					0	MW	Original Sizing		Sep-15-2006	
					Rev	Initials	Description		Date	
Program Rev Level: <b>9.2.11 S</b>					File Name: <b>K:\...Technical\Contract Docs\Datasheets\DS-CW32706.VS3 (9.2.11)</b>					



## 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/CW32706/01 & 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 8" 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
0102LCH70AA001	CW32706/01 & 02	1	CD32706	3,4,5,40,71,73	Assy, Trim 4" BH CAV 4S NIT Consisting of #	M504330410303		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	3+	Plug #	PLG303020203		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	4+	Cage #	CAG30301050403		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	5+	Seat#	SRG30310303		1
0102LCH70AA001	CW32706/01 & 02	2	CD32706	40++	Piston Ring #	S347748	1	8
0102LCH70AA001	CW32706/01 & 02	1	CD32706	71	Seat Adaptor Ring #	UAR3040302		
0102LCH70AA001	CW32706/01 & 02	1	CD32706	73	Cage Adaptor Ring #	ADR3040302		
0102LCH70AA001	CW32706/01 & 02	1	CD32706	6+	Stem	STM310214502		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	9++	Bonnet Gasket	S342796	1	4
0102LCH70AA001	CW32706/01 & 02	1	CD32706	10+	Gland Washer	S373407		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	16++	Gland Packing	S388491	1	4
0102LCH70AA001	CW32706/01 & 02	1	CD32706	18+	Spirol Pin #	U20-119		1
0102LCH70AA001	CW32706/01 & 02	1	CD32706	20,22	Trim Gasket Consisting Of ##	GSK6040301061	1	4
0102LCH70AA001	CW32706/01 & 02	2	CD32706	20++	Trim Gasket #	S268903	1	8
0102LCH70AA001	CW32706/01 & 02	2	CD32706	22++	Trim Gasket #	S325432	1	8
0102LCH70AA001	CW32706/01 & 02	1	See Manual	14,30,32,33,35,36	Actuator Spares Kit 100R Consisting of ## #	C80135-AQA		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	14+	Diaphragm # ##	S186989BPP		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	32++	Gasket # #	S356959		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	33+	U Cup Seal # #	S357800		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	35+	O Ring (Inner) # #	S357801		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	36+	O Ring (Outer) # #	S357802		1
0102LCH70AA001	CW32706/01 & 02	1	See Manual	30+	Bushing	S356093		1

### NOTES

### 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