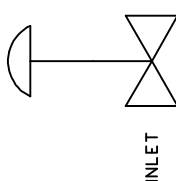
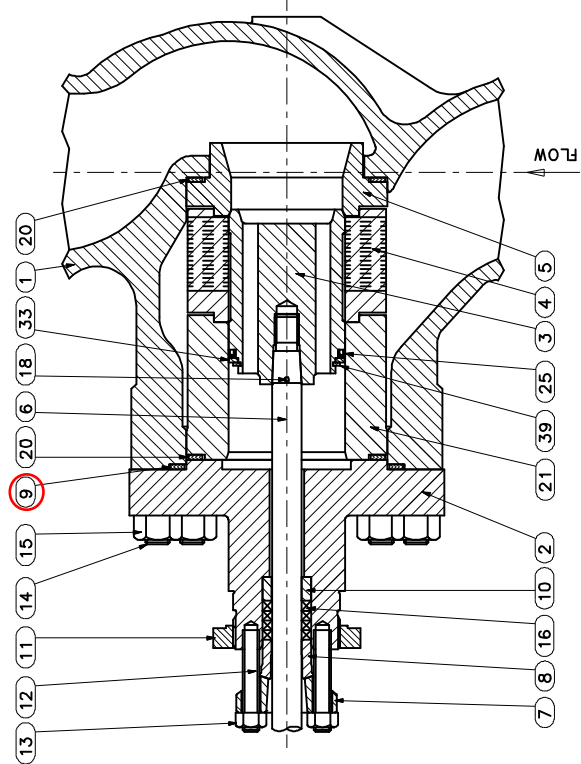


<div>COPES-VULCAN, SPX Process Equipment</div> <div>Road Two, Industrial Estate, Winsford, Cheshire. United Kingdom</div> <div>Phone: +44 (0)1606 552041 Fax: +44 (0)1606 558275</div>					<div>CONTROL VALVE</div> <div>SPECIFICATION SHEET</div>					
Customer Name: ALSTOM POWER CENTRALES - BELFORT					CV Inquiry: DMS/060909/PM1					
Customer Inquiry: EMAIL					CV Job: WH/00071					
Customer PO: 745117-P12-73077					CV Job Ref: CW32720					
Ultimate User: MARITZA EAST 1 BULGARIA					CV Serial#: 07CW32720/01-02					
Tag: 01/02 LCA35 AA001					Item: 21					
Application: CONDENSER SURPLUS CONTROL VALVE					Quantity: 2					
Description : 4 Inch, Class 300 STD, FLG, A216 WCB, GS, CV700 160R										
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:			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: GS - General Service, Globe					Bonnet Type: Bolted					
Size: 4 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: 6" Sch 40										
Outlet Pipe: 6" Sch 40										
TRIM										
Size: 4 Inch with 6 Turns					Seat Type: Metal					
Style: RAVEN (Balanced with Ucup seal)					Trim Material: 400/70 SST & 300SST Disc Stack					
Flow Direction: OVER THE WEB					Max. Cv Available: 52.8 @Max Travel of 2" (+/-1/8)					
Stem Diameter: 0.75 Inch					Min. Controllable Cv of Trim: 0.51					
Characteristic: RAVEN										
ACTUATOR										
Actuator Model: CV700 160R					Actuator Mounting Style: Screwed ring					
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					
ACCESSORIES										
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										
COMMENTS										
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		
	Rev	Initials	Description					Date		
Program Rev Level: UK-1-2 (WS Version)										



CONNECTIONS

DO NOT SCALE
IF IN DOUBT - ASK!

GENERAL ARRANGEMENT DRAWING OF 4" ANSI 300 GLOBE VALVE
WITH RAVEN TRIM & CV700-160R REVERSE ACTING PNEUMATIC
DIAPHRAGM ACTUATOR WITHOUT HANDWHEEL

THIS DRAWING IS THE PROPERTY OF CORES-VULCAN AND MAY NOT BE USED WITHOUT THE EXPRESS PERMISSION AND LICENCE OF CORES-VULCAN.	DO NOT SCALE IF IN DOUBT - ASK !	GENERAL ARRANGEMENT DRAWING OF 4" ANSI 300 GLOBE VALVE WITH RAVEN TRIM & CV700-180R REVERSE ACTING PNEUMATIC DIAPHRAGM ACTUATOR WITHOUT HANDWHEEL	CUSTOMER NAME ALSTOM POWER CENTRALES - BELFORT 1 EAST 1 BULGARIE PROJECT NAME 745117-P2-73077 CUSTOMER PO No 01/02 LC435 AA001 CUSTOMER TAG No COPES-VULCAN, WINSFORD VENDOR NAME WH/00071 VENDOR CONTRACT No VENDOR JOB No ITEM DESCRIPTION CONDENSER SURPLUS CONTROL VALVE	ISS 01 02 PER CUSTOMER COMMENTS PER CUSTOMER COMMENTS	MODIFICATION DATE 10-06-07 31-10-07	BY JRL DJJ	SCALE 1:1 USED ON	DRAWING NO CD32720	JRL CHAN APPROVED TRACED	DATE 21-04-07	DRAWING NO CD32720	CORES-VULCAN SPX Process Equipment	ISSUE 02

RECOMMENDED SPARES LIST

CUSTOMER NAME	ALSTOM POWER CENTRALES - BELFORT	VENDOR CONTRACT N°	WH00071	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+	Spirol 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+	Stem	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		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	COMMENTS
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