

RECOMMENDED SPARES LIST

CUSTOMER NAME	ALSTOM POWER GENERATION AG	VENDOR CONTRACT N°	WG00799	DATE	04-Jun-07
PROJECT NAME	MARTIZA EAST 1, BULGARIA	DOCUMENT N°	RSI CWG2608/01	AFTERMARKET REF	WB/07011/RSI.8
CUSTOMER PO N°	D61-4500057376	REV STATUS	0	CONTACT	W. BAKER

Qty Of Valves	1	Description	GLOBE 10" 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	Delivery	Unit Price	Total Ex-Works
01MAW15AA012	CW32608/01	1	CD32608	3,4,5,25,33,39	Asy Trim, 10" B SSH 3S 420 Consisting of #	TRM510012412502		1	8 weeks	€ 21,450.00	€ 21,450.00
01MAW15AA012	CW32608/01	1	CD32608	3+	Plug #	PLG310030102	⑥	1	8 weeks	€ 4,312.50	
01MAW15AA012	CW32608/01	1	CD32608	4+	Cage #	CAG31001022502		1	8 weeks	€ 11,737.50	
01MAW15AA012	CW32608/01	1	CD32608	5+	Seat #	SRG31011002	⑥	1	8 weeks	€ 3,187.50	
01MAW15AA012	CW32608/01	1	CD32608	25++	U Cup Seal #	VAS100101	①	1	8 weeks	€ 1,125.00	€ 1,125.00
01MAW15AA012	CW32608/01	1	CD32608	33+	Seal Retainer #	RET3100101		1	8 weeks	€ 675.00	
01MAW15AA012	CW32608/01	1	CD32608	39++	Retaining Ring #	352553	①	1	8 weeks	€ 412.50	€ 412.50
01MAW15AA012	CW32608/01	1	CD32608	6+	Stem	STM320320502		1	8 weeks	€ 225.00	€ 225.00
01MAW15AA012	CW32608/01	1	CD32608	9++	Bonnet Gasket	286657	①	2	8 weeks	€ 135.00	€ 270.00
01MAW15AA012	CW32608/01	1	CD32608	10+	Gland Washer	373408		1	8 weeks	€ 82.50	€ 82.50
01MAW15AA012	CW32608/01	1	CD32608	16++	Gland Packing	368493	①	2	8 weeks	€ 82.50	€ 165.00
01MAW15AA012	CW32608/01	1	CD32608	18+	Spiral Pin #	U20-163		1	8 weeks	€ 3.00	€ 3.00
01MAW15AA012	CW32608/01	1	CD32608	20	Trim Gasket Consisting #	GSK5101001061	①	2	8 weeks	€ 210.00	€ 420.00
01MAW15AA012	CW32608/01	2	CD32608	20++	Trim Gasket #	267469Q		4	8 weeks	€ 105.00	€ 420.00
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	14,30,32,33,35,36	Actuator Spares Kit 160R-L 1" Consisting of #	C80141-AQA		1	8 weeks	€ 589.50	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	14+	Diaphragm #	195964BPP		1	8 weeks	€ 525.00	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	32++	Gasket #	356909		1	8 weeks	€ 37.50	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	33+	U Cup Seal #	357800		1	8 weeks	€ 15.00	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	35+	O Ring (Inner) #	357801		1	8 weeks	€ 6.00	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	36+	O Ring (Outer) #	357802		1	8 weeks	€ 6.00	
01MAW15AA012	CW32608/01	1	REFER TO MANUAL	30+	Bushing	356093		1	8 weeks	€ 502.50	€ 502.50
Total Ex-Works Value Sheet										€	25,075.50
Packing										€	25,075.50
Carriage CPT Job Site Galabovo Romania										€	25,075.50
Total Price Packed and Delivered CPT Job Site Galabovo Romania										€	25,075.50

For And On Behalf Of SPX Flow Control

Compiled By Mr D.G. Edwards
Title/Position Aftermarket Manager
Date

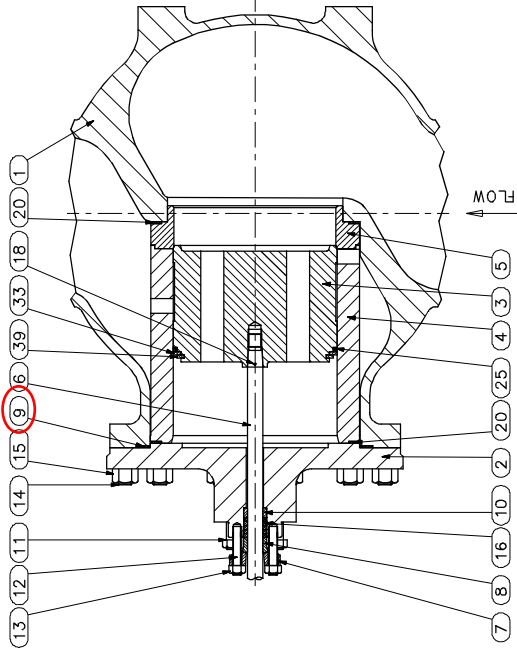
① Please note that items marked ① must be changed during an inspection or maintenance overhaul it should be ensured that these items are available before commencing the inspection.
Do Not Re-Use

⑥ Please note that items marked ⑥ are operational spares
Please note that these items require factory mating prior to shipment and form a unique matched set that must not be separated in storage or during valve rebuild
We will lap the plug with the seat prior to shipment
Plug and seat cannot be purchased as individual components

COPES-VULCAN, SPX Valves & Controls Road Two, Winsford Industrial Estate, Cheshire. CW7 3QL Phone: 0044 1606 552041 Fax: 0044 1606 558275					CONTROL VALVE SPECIFICATION SHEET					
Customer Name: ALSTOM POWER GENERATION AG Customer Inquiry: EMAIL Customer PO: D61-4500057376 Ultimate User: MARITZA EAST 1, BULGARIA Tag: 01MAW15AA012 Application: GLAND STEAM EXHAUST VALVE					CV Inquiry: DMS/060112/RK1 CV Job: WG/00799 CV Job Ref: CW32608 CV Serial #: 07CW32608/01 Item: 2 Quantity: 1					
Description: 10" (250 mm), CL150, WCB , BW, SD-700-160L RA										
FLUID: Steam		SERVICE CONDITIONS								
	FLOW (kg/sec)	P1 (bar a)	P2 (bar a)	Temp. (deg C)	Cv	CV (%)	Travel (%)	Valve Outlet Vel. (ft/min)	Noise * (dBA)	Remarks
COND 1	2.5	1.03	0.341	200	885	84%	73%	61943	79	
COND 2										
COND 3										
COND 4										
COND 5										
SHUTOFF		10	1		Allowable Leakage:			* Estimated Noise Level with 3.5" of Insulation		
DESIGN		10		250	Class IV					
BODY AND BONNET										
Style: SD - Severe Duty, Globe Size: 10 inch ASME Class: 150 Standard Body Inlet: Butt Weld, Sch STD per ANSI B16.25, Fig. 2b Body Outlet: Butt Weld, Sch STD per ANSI B16.25, Fig. 2b Material: A-216 WCB Inlet Pipe: 14 In. (350 mm), Sch STD Outlet Pipe: 14 In. (350 mm), Sch STD					Bonnet Type: Bolted Packing Material: Grafoil Packing Hardware: Stainless Steel Packing Nut Torque: 7 ft-lbs. Options: Single Packed Inlet Reducer: 10" X 14" Sch STD, Length: 13.00 In., Material: A-234 WPB Outlet Expander: 10" X 14" Sch STD, Length: 13.00 In., Material: A-234 WPB					
TRIM										
Size: 10 inch with 5 Starts Style: ONE STAGE HUSH (Balanced w/U-Cup Seals) Flow Direction: UNDER THE WEB Stem Diameter: 1.00 in. Characteristic: ONE STAGE HUSH					Seat Type: METAL Trim Material: 400/47 SST Max. Cv Available: 1058 @Max. Trim Travel of 4" (±1/8) Min. Controllable Cv of Trim: 9.5					
ACTUATOR										
Style: 700 DIAPHRAGM Size: 160L (Square Inch) Action: Spring Closing (Reverse) Handwheel: Top Mounted Frame Material: Ductile Iron Air Pressure Available: 5.0 bar g (73 psig) Air Pressure Required: 2.7 bar g (39 psig)					Actuator Mounting Style: 4x Studded Actuator Spring: 357580 Spring Rate: 768 (lbs/inch) Max. Stem Thrust Required to Close: 1264 (lbs) Max. Stem Thrust Required to Open: 463 (lbs) Spring Precompression (Diaphragm Air Pressure): 13 (psig) Pressure @ Full Valve Travel (With No Internal Valve Pres.): 32 (psig)					
ACCESSORIES										
Positioner: Copes SIPART PS2, Single Acting Positioner Input Range: 4-20 mA Position FeedBack Module (4-20ma) : YES Alarm Module : NO HART Module : NO					Airlock: None Filter/Regulator: Bellofram 51FR w/Gauges Qty: 1 Solenoid Valve: None Booster Relay: SMC IL100-03 Qty: 1 Additional Acc'y:					
Piping: Copper Tubing Limit Switches: None										
COMMENTS										Review: 11.
Valve open / closed 10 seconds or less										
Model = SD10 Body Option: BDY510080201 Bonnet Option: BNT510380201 Trim Option: TRM510012412502 Hardware Pack Option: HDP5215112 Actuator Option: ACT51016**21 Stem Option: STM53010011212 Gasket Option: GSK5101001061 Accessory Kit Option: AC7A25100*12020 I.D. Plate: OPT264515										
		03	CMR	Issued for contract use				Mar-24-2007		
		02	IJW	Revised Per Client Specification Rev A				Jul-25-2006		
		01	DMS	REVISED PER CUSTOMER COMMENTS				Jan-24-2006		
		00	DMS	INITIAL BID				Jan-18-2006		
		Rev	Initials	Description				Date		
Program Rev Level: 9.2.11 S					File Name: K:\...\Technical\Contract Docs\Data Sheets\DS-CW32608.VS3 (9.2.11)					

ITEM	DESCRIPTION
1	BODY
2	BONNET
3+	PLUG
4+	CAGE
5+	SEAT
6+	STEM
7	GLAND BRIDGE
8	GLAND FOLLOWER
9+	BONNET GASKET
10	GLAND WASHER
11	ACTUATOR BOLT ING
12	GLAND STUD
13	BONNET NUT
14	BONNET STUD
15	BONNET NUT
16++	GLAND PACKING
18++	SPIROL PIN
20++	TRIM GASKET
25+	"U" CUP SEAL
33+	SEAL RETAINER
39+	RETAINING RING

RECOMMENDED SPARES
+ OPERATIONAL SPARES
++ COMMISSIONING SPARES

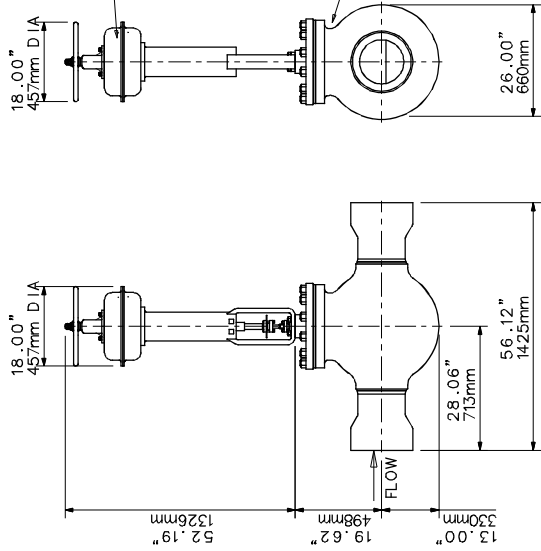


ALLOW 12.00" (305mm) FOR
ACTUATOR REMOVAL

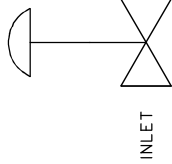
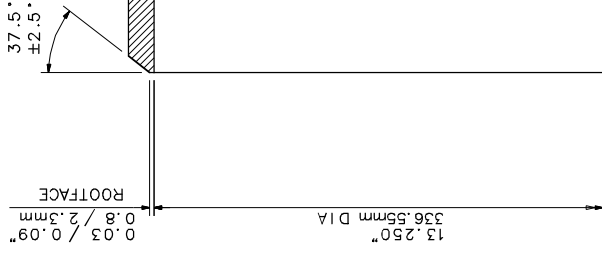
700-160R-5 REVERSE ACTING
PNEUMATIC DIAPHRAGM ACTUATOR
WITH TOP MOUNTED HANDWHEEL
COPES SIPART PS2 POSITIONER
WITH GAUGES & FEEDBACK MODULE
BELLOFRAM 51FR FILTER /
REGULATOR WITH GAUGE
SNC IL100-03 BOOSTER RELAY
COPPER TUBING

VALVE WEIGHT 2099 lb (952kg)
ACTUATOR WEIGHT 280 lb (127kg)

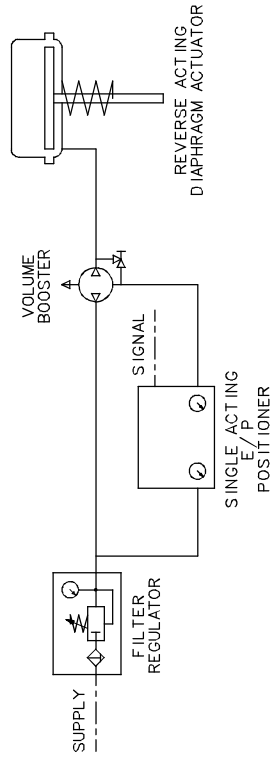
10" ANSI 150 GLOBE VALVE
BUTTWELD END CONNECTION



BUTTWELD END DETAIL
BOTH ENDS IDENTICAL
TO SUIT 14" SCH STD
CONNECTION



ORIENTATION



CONNECTIONS

SUPPLY - 0.250" NPT FEMALE
SIGNAL - ELECTRICAL

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GENERAL ARRANGMENT DRAWING OF 10" ANSI 150 GLOBE VALVE
WITH HUSH TRIM & CV700-160R5 REVERSE ACTING
PNEUMATIC DIAPHRAGM ACTUATOR WITH TOP MOUNTED HANDWHEEL

DO NOT SCALE
IF IN DOUBT - ASK!

CUSTOMER NAME
PROJECT NAME
CUSTOMER PO No
CUSTOMER TAG No
VENDOR NAME
VENDOR CONTRACT No
VENDOR JOB No
ITEM DESCRIPTION

ALSTON POWER GENERATION AG
MARTIZA EAST 1, BULGARIA
D61-450057376
CINAM15A4072
COPES-VULCAN, WINSFORD
ENGLAND
No WG00789
CW32608
GLAND STEAM EXHAUST VALVE

COPES-VULCAN			
JRL	SCALE	BY	DATE
CMN	MATL		
APPROVED	USED ON		
TRACED	DATE		
DRAWING NO CD32608			
ISSUE 00			