


B	2008-08-26	Updated water pressure and Kv values	DsE
A	2008-07-17	1 st issue	DsE
REV	DATE	DESCRIPTION	SIGN
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="text-align: center;"> <h2>CCI Valve Technology AB</h2> </div> <div style="text-align: right;">  </div> </div>			
PREPARED BY	DATE	TITLE: Technical Specification for Tag no: 01/02-PGC18AA001	
DsE	2008-07-17		
CHECKED BY	DATE		
LgM	2008-07-25	DOCUMENT NUMBER: V297690.30	

Technical Specification.

Water pressure reducing valve equipment.

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Date / Rev. / User Id : 2008-07-17 / B / Dybeus, Erik
 Customer : Alstom / 744297 P12 73077 11324
 Project : Maritza East 1
 Inq. No. 744297 Amendment no.
 Reference No. VO297690
 Tag No. 01/02-PGC18AA001
 No. of valves 1

Operating data		100%Cooling	89% Cooling	100%Bypass	Design
Water Inlet					
Q1	[kg/h]	372000,0	372000,0	372000,0	10,00 55,0
p	[bar a]	5,50	5,50	5,50	
t	[°C]	27,0	27,0	27,0	
h	[kJ/kg]	113,6	113,6	113,6	
v	[m³/kg]	0,00100	0,00100	0,00100	
Water Cooling Outlet					
Q2	[kg/h]	372000,0	330000,0	0	10,00 55,0
p	[bar a]	5,21	5,17		
t	[°C]	27,0	27,0		
h	[kJ/kg]	113,6	113,6		
v	[m³/kg]	0,00100	0,00100		
Water Bypass Outlet					
QB	[kg/h]	0	42000,0	372000,0	10,0 55,0
p	[bar a]		5,40	5,28	
t	[°C]		27,0	27,0	
h	[kJ/kg]		113,6	113,6	
v	[m³/kg]		0,00100	0,00100	
Calculated data		100%Cooling	89% Cooling	100%Bypass	
Water Valve					
Kv calc Cooling / Bypass	[-]	685,2/0	569,8/131,8	0/786,7	
Inlet pipe	[DN]	250 STD			
Diam ID/OD/t	[mm]	254,46/273/9,27			
Inlet Velocity	[m/s]	2,0	2,0	2,0	
Outlet pipe	[DN]	250 STD			
Diam ID/OD/t	[mm]	254,46/273/9,27			
Outlet Velocity	[m/s]	2,0	2,0	2,0	
Bypass pipe	[DN]	250 STD			
Diam ID/OD/t	[mm]	254,46/273/9,27			
Bypass Velocity	[m/s]	2,0	2,0	2,0	

System design consideration CCI document "Installation Guidelines II500.0o/5en"

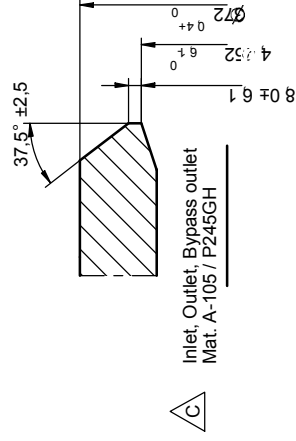
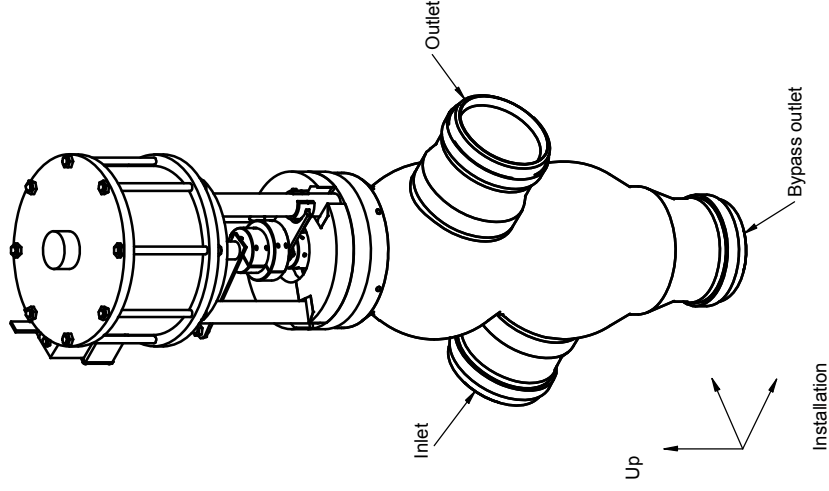
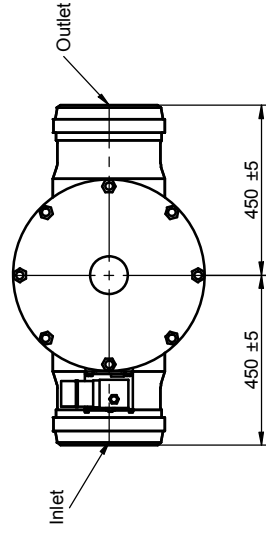
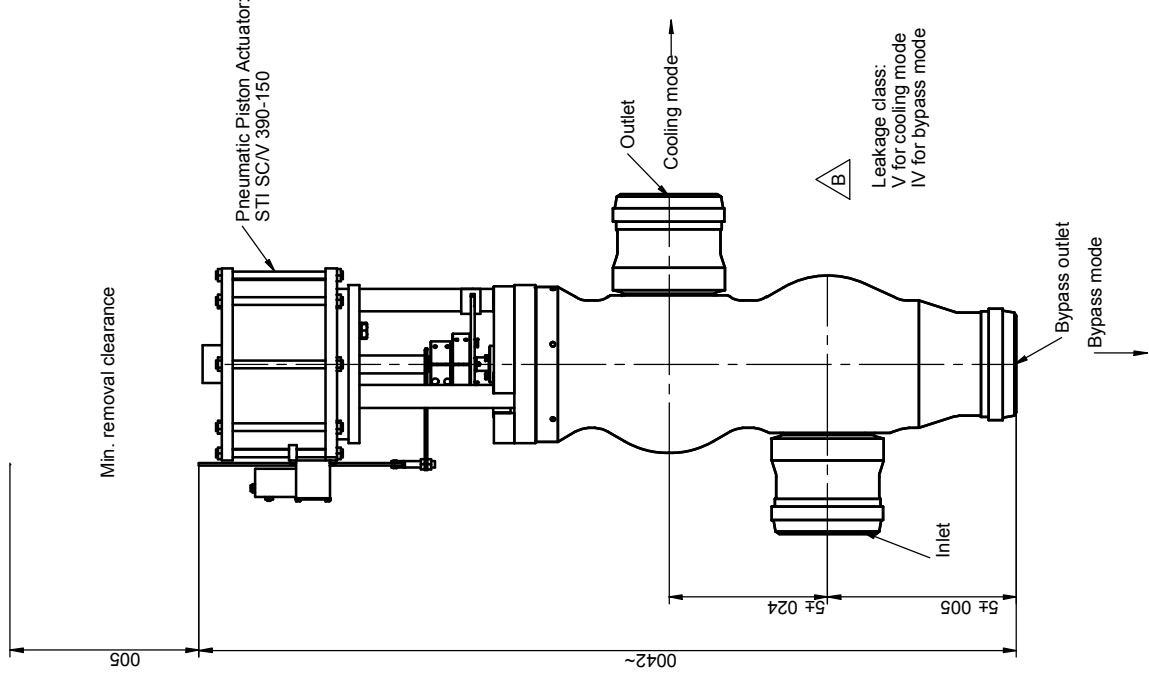
Selected CCI Water pressure reducing equipment.

Reference No. VO297690

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Date / Rev. / User Id : 2008-07-17 / B / Dybeus, Erik

Tag No.	297690.30 01/02-PGC18AA001
Valve type	VHB - 200T3 Control Valve
Valve design	Double-seated
Seat	200
Leakage class	V Cooling mode, IV Bypass mode
Kvc [-]	843,3
Kvs [-]	843,3
Kv Bypass [-]	786,7
Control plug type	Cage
Characteristic	Linear
Spare capacity [%]	0
Full Stroke [mm]	120
Actuating force [kN]	56,7
Shut-off- Δp [bar a]	N/A
Connections	
Inlet [DN]	250 BWE
Rating	ASME B16.25, Fig. 2a
Outlet [DN]	250 BWE
Rating	ASME B16.25, Fig. 2a
Bypass [DN]	250 BWE
Rating	ASME B16.25, Fig. 2a
Materials	
Inlet	A-105
Body	A-105
Outlet	A-105
Bypass	A-105
Stem	X19CrMoVNbN111 (AISI 616)
Plug	X19CrMoVNbN111 (AISI 616)
Seat	Haynes 25
Packings	Graphite
Design code	ASME B16.34 B31.1
Actuator type	STI SC/V 390-150
Model	Pneumatic Piston
Stroke / MaxForce [mm/kN]	150 / 57,0
Positioner / Air supply conn	STI SA/CL-EP / 1/4"
Stroking time Mod / QC	4,0 s / 4,0 s
Power supply	5,0 bar(g)
Input signal	4-20 mA
Increasing signal	Valve go to more Bypass mode
Power supply failure	Valve go to Cooling mode
Accessories	1 Air bottle 1 Trip valve 1 Solenoid valve 1 Air filter regulator 1 Limit switch opened 1 Limit switch closed



Max allowed moment : 54 kNm
force : 58kN

IND	ALTERATION	DATE	SIGN
A	First issue	2008-06-19	SnA
B	Text added. Text corrected. Max allowed for cae and moment changed.	2008-07-02	SnA
C	Text changed.	2008-02-10	SnA







Customer	: Astom Power
Project	: Maritz East I Power Station
Po. No.	: 744297
Tag No.	: 01/02-PGC 18 AA001
Vo No.	: 297690.30
Weight	: ~1200 kg
Inlet	: 10" BWE ASME B16.25, fig. 2a
Outlet	: 10" BWE ASME B16.25, fig. 2a
Bypass	: 10" BWE ASME B16.25, fig. 2a

[illegible]

Maritza East | Power Station



Space for stamp of Municipality of Gualtovo	Space for further stamps
Area for stamp of ECE Control OOD (CS)	Space for stamp of authorized Bulgarian Designer
ALSTOM Main Contractor / Power Generation AG Power Boiler GmbH	Partner of Main Contractor /

Responsible dept.	CCI	Created by	SnA		Checked by	OnM	Approved by	SgM	A2	Format
Scale	-				Class. no. (e.g. KKS)	-		Yes / No		
Derived from	-	Replaces	-		Doc. Type	EA	Document Status	Released	Sub Site No.	-
Logo of Legal Owner		S1145226				Sub Contractors Doc Number		Consortium Partner Document Code		
		Title: Subtitle				01/02-PGC18 AA001		Project Doc Number		
		H2 generator cooling collector inlet						MTZ12/M/-----M24/EA/011		
ALSTOM Power Turbo Systems		CCI Valve Technology AB				Box 603, 661 29 Saffie - SWEDEN		 		
		This is the property of CCI Valve Technology AB. It is strictly confidential and must not be copied, traded or loaned without their permission.				VHB-200T3				
		Dimensional drawing				Box 603, 661 29 Saffie - SWEDEN				
Order no. REF. LAB.		S1145226				Date		Lang Sheet		
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