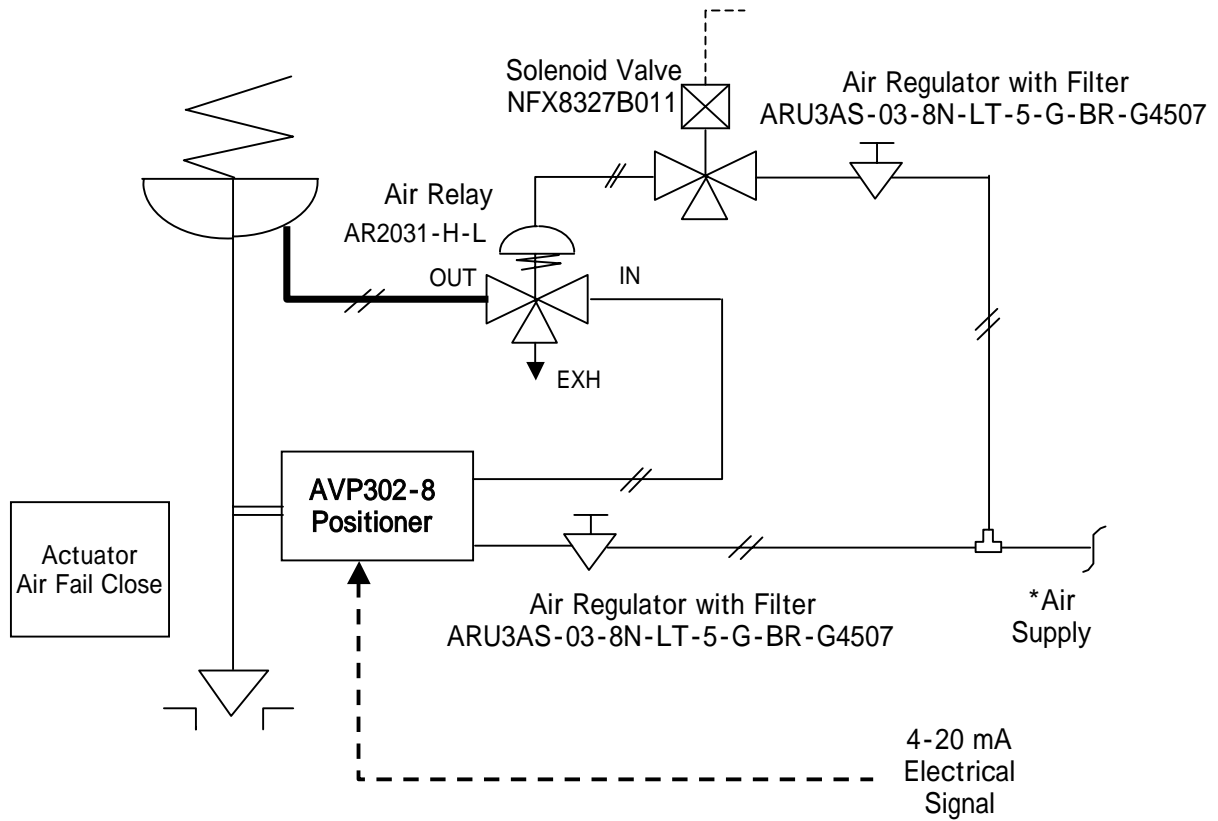


Item No. / Qty	1	1	Ref. No.	
Tag No.	FRCA-1		Purchaser	
Service			End user	
			Project	
<Control valve>			<Remarks>	
Model	HCB		SV0703-105 Indicating unit : "kgf/cm2"	
Description	Pressure Balanced Cage Type Control Valves		SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	8 in.	8 in.	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV		650	SV0101-004 Flange facing finish : Serration ANSI B16.5 (Spiral)	
Rating / Conn. Type	ANSI600	M&F(F)	SV0201-007 Seat leakage: Less than 0.5%CV (Equivalent IEC, JIS Class II)	
Body material	SCS13A		SV0212 Cage plug with piston ring	
Trim material	SCS14A STELLITE		Old Production No : 414-8103-0100 (1976)	
Flow characteristic	EQ%		HART AVP SP No.2	
Bonnet	EXT-1 (230 to 450 degC)			
Actuator / Handle	VA5R	---		
Action	AIR TO OPEN			
Gland packing / Grease	P6610CH+P6528	650		
Gasket	V543,V8590			
Air supply / Spring range	2.8kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS II			
Color: Body/Diaph./Yoke	XXX	SILVER	SILVER	
Paint	Corrosion Resistant			
<Accessories>				
Positioner	AVP302-7SD2B-XDYL-X			
Structure	GOST-R Flameproof, 1/4 NPT, M20x1.5			
Input signal	4-20 mADC			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450	1		
Regulator2				
Limit switch	VCX7001	1		
Action	Full Close on			
Solenoid valve	NFX8327B011	1		
Action / Power	En: Close, De: Control	AC100V 50Hz		
Booster				
Air lock valve				
Air valve	AR2031-H-L	1		
<Process data>				
Fluid name/Phase	Natural Gas		GAS	
	MAX	NOR	MIN	Unit
Flow rate	46000	41700		m3/h(N)
Inlet pressure	40.2	40.2		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	0.8	0.8		kgf/cm2
Shut-off press.		47.6		kgf/cm2
Temperature	371	371		degC
Density/Gravity(Liq)				kg/m3
Density/Gravity(G,V)	17.2	17.2		MW
Viscosity				mPa-s
Flash				%
Calculated CV	410.7	371.8		
Travel	85	82		%
Outlet velocity	0.03713	0.03366		Mach
Predictive SPL	58	58		dBA
			<Piping spec.>	
			Strength Calc. Sheet	
			Design	
			kgf/cm2G	
			Temp.	
			degC	
			Size	
			10 in. 10 in.	
			Sch No.	
			Thickness	
Yamatake Corporation				



Stroke speed

Full open to full close : 10 sec or less

Approved _____

Checked _____

Drawn _____

DATE : _____

AIR PIPING DIAGRAM

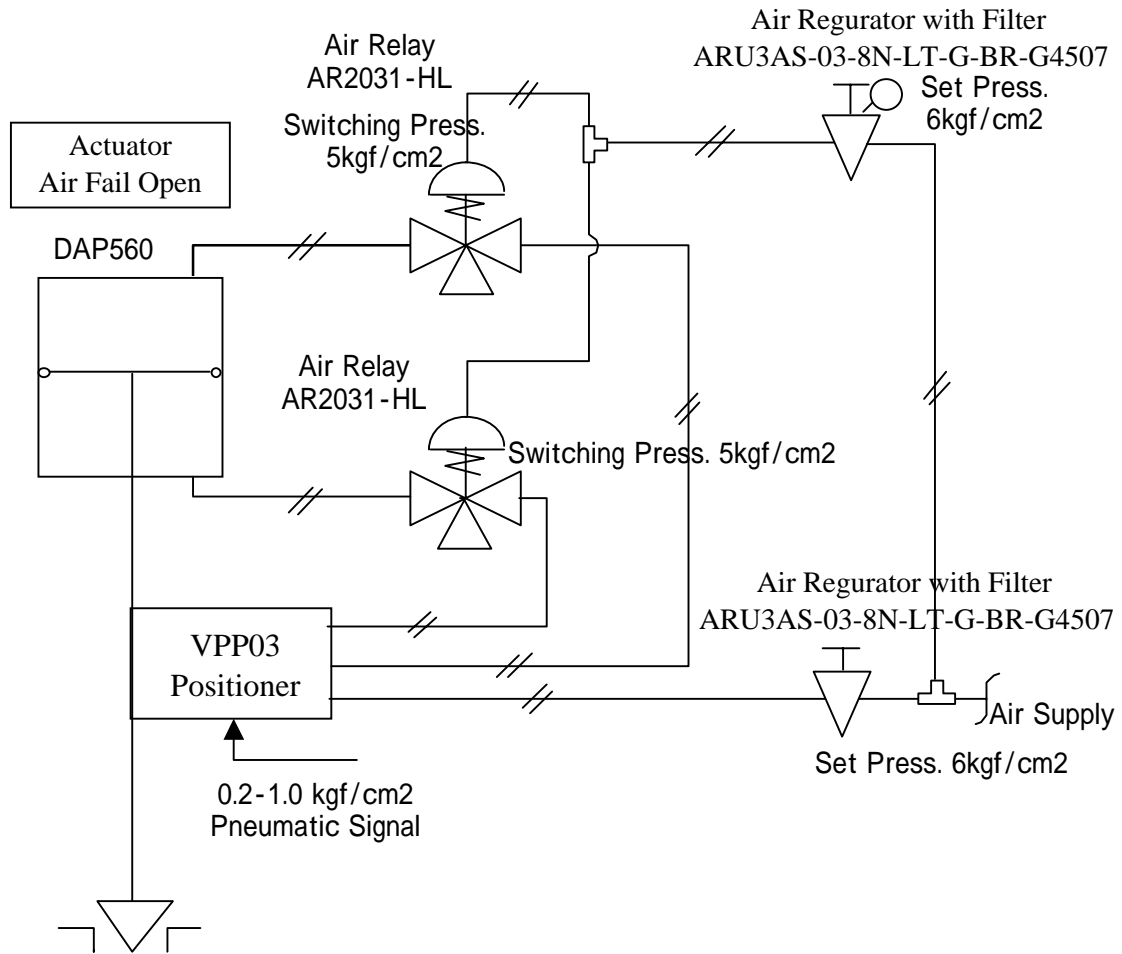
Yamatake Corporation

Item No. / Qty	2		1		Ref. No.	
Tag No.	FRCA-2				Purchaser	
Service					End user	
					Project	
<Control valve>					<Remarks>	
Model	VDC				SV0703-105 Indicating unit : "kgf/cm2"	
Description	Cage Type Double Seated Control Valve				SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	14 in.		14 in.		SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			1820		SV0101-004 Flange facing finish : Serration ANSI B16.5 (Spiral)	
Rating / Conn. Type	ANSI600		RF		SV0201-007 Seat leakage: Less than 0.5%CV (Equivalent IEC, JIS Class II)	
Body material	SCS13A				SV0212 Cage plug with piston ring	
Trim material	SCS14 STELLITE				Old Production No : 414-8103-0200 (1976)	
Flow characteristic	EQ%					
Bonnet	FIN (200 to 450 degC)					
Actuator / Handle	DAP560		SIDE			
Action	AIR TO CLOSE					
Gland packing / Grease	P6610CH+P6528		PS6			
Gasket	V543					
Air supply / Spring range	6.0kgf/cm2		0.2-1.0kgf/cm2			
Seat leakage	CLASS II					
Color: Body/Diaph./Yoke	XXX		SILVER		SILVER	
Paint	Corrosion Resistant					
<Accessories>						
Positioner	VPP03-1					
Structure						
Input signal	0.2-1.0 kgf/cm2					
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450		2			
Regulator2						
Limit switch						
Action						
Solenoid valve						
Action / Power						
Booster						
Air lock valve						
Air valve	AR2031-H-L				2	
<Process data>						
Fluid name/Phase	H.P. STEAM			STEAM		
	MAX	NOR	MIN	Unit		
Flow rate	116.5	105.7		t/h		
Inlet pressure	40.2	40.2		kgf/cm2G		
Outlet pressure				kgf/cm2G		
Differential press.	0.8	0.8		kgf/cm2		
Shut-off press.		47.5		kgf/cm2		
Temperature	371	371		degC		
Density/Gravity(Liq)				kg/m3		
Density/Gravity(G,V)	14.58	14.58		kg/m3(A)		
Viscosity	0.0223	0.0223		mPa-s		
Flash				%		
Calculated CV	1273	1155				
Travel				%		
Outlet velocity	0.03777	0.03427		Mach		
Predictive SPL	59	59		dBA		
					<Piping spec.>	
					Strength Calc. Sheet	
					Design	
					Temp.	
					Size	
					Sch No.	
					Thickness	
					14 in.	
					14 in.	
Yamatake Corporation						

Tag. No.

FRCA-2

Old Production No. 414-8103-0200



Approved	Air Signal	Control Valve Action
Checked	Increase	Open to Close
Drawn	Air Fail	Open

DATE : _____

AIR PIPING DIAGRAM

Yamatake Corporation