

Control Valve Data Sheet

Item No. / Qty	1	1	Ref. No.	
Tag No.	LICA-55		Purchaser	AEU
Service			End user	MINUDOBRENYA
<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	4 in.	4 in.	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0101-005 Flange facing finish : Serration ASME B16.5(125 ~ 250AARH)	
Rating / Conn. Type	ANSI150	RF	SV0201-002 Seat leakage: Less than 0.1%CV (Equivalent IEC, JIS Class III)	
Body material	SCPH2		SV0507 Actuator yoke material: SCPH2 or WCB	
Trim material	SCS24		COLD WEATHER SPEC	
Flow characteristic	EQ%		Min Ambient Temp : Valve Body : -45 degC,	
Bonnet	PLAIN (-17 to 230 degC)		Min Ambient Temp : Accessories :- 40 degC,	
Actuator / Handle	HA2R	---	Old Production No : 415-8074-5400 (1977)	
Action	AIR TO OPEN		V0A-4902-00/1	
Gland packing / Grease	V-PTFE(DIR/REV)	---		
Gasket	V543,V8590			
Air supply / Spring range	2.8kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS III			
Color: Body/Diaph./Yoke	SILVER	SILVER	SILVER	
Paint	Standard			
<Accessories>				
Positioner	HTP-1D (SP0004)			
Structure				
Input signal	0.2-1.0 kgf/cm2			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450		1	
Regulator2				
Limit switch				
Action				
Solenoid valve	NFX8327B011		1	
Action / Power	En: Close, De: Control		AC100V 50Hz	
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	STEAM CONDENSATE		LIQUID	
	MAX	NOR	MIN	Unit
Flow rate	56	51.2		m3/h
Inlet pressure	4.65	4.65		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	5.0	0.5		kgf/cm2
Shut-off press.		5.0		kgf/cm2
Temperature	67	67		degC
Density/Gravity(Liq)	0.98	0.98		water=1
Density/Gravity(G,V)				MW
Viscosity				mPa-s
Flash	Cavitation			%
Calculated CV	28.98	83.68		
Travel	41	76		%
Inlet velocity	1.982	1.812		m/s
Predictive SPL	65	54		dBA
<Piping spec.>				
Strength Calc. Sheet				
Design				kgf/cm2G
Temp.				degC
Size	4 in.	4 in.		
Sch No.	40	40		
Thickness	6	6		
Azbil Corporation				

Control Valve Data Sheet

Item No. / Qty	2	1	Ref. No.	
Tag No.	LICA-58A		Purchaser	AEU
Service			End user	MINUDOBRENYA
<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	4 in.	4 in.	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0101-005 Flange facing finish : Serration ASME B16.5(125 ~ 250AARH)	
Rating / Conn. Type	ANSI150	RF	SV0201-002 Seat leakage: Less than 0.1%CV (Equivalent IEC, JIS Class III)	
Body material	SCPH2		SV0507 Actuator yoke material: SCPH2 or WCB	
Trim material	SCS24		COLD WEATHER SPEC	
Flow characteristic	EQ%		Min Ambient Temp : Valve Body : -45 degC,	
Bonnet	PLAIN (-17 to 230 degC)		Min Ambient Temp : Accessories :- 40 degC,	
Actuator / Handle	HA2R	---	Old Production No : 415-8074-5800 (1977)	
Action	AIR TO OPEN		V0A-4902-00/2	
Gland packing / Grease	V-PTFE(DIR/REV)	---		
Gasket	V543,V8590			
Air supply / Spring range	2.8kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS III			
Color: Body/Diaph./Yoke	SILVER	SILVER	SILVER	
Paint	Standard			
<Accessories>				
Positioner	HTP-3D (SP-0004)			
Structure				
Input signal	0.6-1.0 kgf/cm2			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450		1	
Regulator2				
Limit switch				
Action				
Solenoid valve	NFX8327B011		1	
Action / Power	En: Close, De: Control		AC100V 50Hz	
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	STEAM CONDENSATE		LIQUID	
	MAX	NOR	MIN	Unit
Flow rate	55.0	51.7		t/h
Inlet pressure	4.65	4.65		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	5.0	0.5		kgf/cm2
Shut-off press.		5.0		kgf/cm2
Temperature	67	67		degC
Density/Gravity(Liq)	0.98	0.98		water=1
Density/Gravity(G,V)				MW
Viscosity				mPa-s
Flash	Cavitation			%
Calculated CV	29.05	86.22		
Travel	41	77		%
Inlet velocity	1.986	1.867		m/s
Predictive SPL	65	55		dBA
<Piping spec.>				
Strength Calc. Sheet				
Design				kgf/cm2G
Temp.				degC
Size	4 in.	4 in.		
Sch No.	40	40		
Thickness	6	6		
Azbil Corporation				

Control Valve Data Sheet

Item No. / Qty	3	1	Ref. No.	
Tag No.	LICA-58B		Purchaser	AEU
Service			End user	MINUDOBRENYA
<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	2 in.	2 in.	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0101-005 Flange facing finish : Serration ASME B16.5(125 ~ 250AARH)	
Rating / Conn. Type	ANSI150	RF	SV0201-002 Seat leakage: Less than 0.1%CV (Equivalent IEC, JIS Class III)	
Body material	SCPH2		SV0507 Actuator yoke material: SCPH2 or WCB	
Trim material	SCS24		Positioner : Reverse Action	
Flow characteristic	EQ%		COLD WEATHER SPEC	
Bonnet	PLAIN (-17 to 230 degC)		Min Ambient Temp : Valve Body : -45 degC,	
Actuator / Handle	PSA1R	SIDE	Min Ambient Temp : Accessories :- 40 degC,	
Action	AIR TO OPEN		Old Production No : 415-8074-5900 (1977)	
Gland packing / Grease	V-PTFE(DIR/REV)	---	V0A-4902-00/3	
Gasket	V543,V8590			
Air supply / Spring range	2.8kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS III			
Color: Body/Diaph./Yoke	SILVER	SILVER	SILVER	
Paint	Standard			
<Accessories>				
Positioner	HTP-2R (SP-0004)			
Structure				
Input signal	0.2-0.6 kgf/cm2			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450	1		
Regulator2				
Limit switch				
Action				
Solenoid valve				
Action / Power				
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	B.F.WATER		LIQUID	
	MAX	NOR	MIN	Unit
Flow rate	18.1	0		t/h
Inlet pressure	5.5	5.5		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	8.0	6.0		kgf/cm2
Shut-off press.		8.0		kgf/cm2
Temperature	49	49		degC
Density/Gravity(Liq)	1.0	1.0		water=1
Density/Gravity(G,V)				MW
Viscosity				mPa-s
Flash				%
Calculated CV				
Travel				%
Inlet velocity				m/s
Predictive SPL				dBA
<Piping spec.>				
Strength Calc. Sheet				
Design			kgf/cm2G	
Temp.			degC	
Size	2 in.	2 in.		
Sch No.	40	40		
Thickness	3.9	3.9		
Azbil Corporation				

Control Valve Data Sheet

Item No. / Qty	4	1	Ref. No.	
Tag No.	FrRC-105		Purchaser	AEU
Service			End user	MINUDOBRENYA
			Project	
<Control valve>			<Remarks>	
Model	HAH		SV0703-105 Indicating unit : "kgf/cm2"	
Description	High Pressure Service Angle Type Control Valves		SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	2 in.	Cv=7.0	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0201-003 Seat leakage: Less than 0.01%CV (Equivalent IEC, JIS Class IV)	
Rating / Conn. Type	320K	LENS RING	SV0402-001 Packing follower with O-ring	
Body material	SF440A		SV0507 Actuator yoke material: SCPH2 or WCB	
Trim material	SUS440C		COLD WEATHER SPEC	
Flow characteristic	EQ%		Min Ambient Temp : Valve Body : -45 degC,	
Bonnet	PLAIN (0 to 200 degC)		Min Ambient Temp : Accessories :- 40 degC,	
Actuator / Handle	HA4D	---	Old Production No : 415-8076-0200 (1977)	
Action	AIR TO CLOSE(Side to Bottom)		V0A-4902-00/4	
Gland packing / Grease	P6610CH+P6528	400		
Gasket	V543			
Air supply / Spring range	4.0kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS IV			
Color: Body/Diaph./Yoke	SILVER	SILVER	SILVER	
Paint	Standard			
<Accessories>				
Positioner	HTP-1D (SP-0004)			
Structure				
Input signal	0.2-1.0 kgf/cm2			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450	1		
Regulator2				
Limit switch	VCX7001-JL	1		
Action	Full Open on			
Solenoid valve	NFX8327B011	1		
Action / Power	En: Open, De: Control	AC100V 50Hz		
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	LIQUID AMMONIA		LIQUID	
	MAX	NOR	MIN	Unit
Flow rate	80	13.8		m3/h
Inlet pressure	255	255		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	200	200		kgf/cm2
Shut-off press.		255		kgf/cm2
Temperature	39	39		degC
Density/Gravity(Liq)	0.6	0.6		water=1
Density/Gravity(G,V)				MW
Viscosity				mPa-s
Flash				%
Calculated CV	5.115	0.8824		
Travel				%
Inlet velocity	11.32	1.953		m/s
Predictive SPL				dBA
<Piping spec.>				
Strength Calc. Sheet				
Design			kgf/cm2G	
Temp.			degC	
Size	2 in.	2 in.		
Sch No.	40	40		
Thickness	3.9	3.9		
Azbil Corporation				

Control Valve Data Sheet

Item No. / Qty	5	1	Ref. No.	
Tag No.	LRCA-401		Purchaser	AEU
Service			End user	MINUDOBRENYA
			Project	
<Control valve>			<Remarks>	
Model	HAH		SV0703-105 Indicating unit : "kgf/cm2"	
Description	High Pressure Service Angle Type Control Valves		SV0601-001 Air piping Connection: 1/4 NPT	
Body/Port size	1-1/2 in.	Cv=7.0	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0201-003 Seat leakage: Less than 0.01%CV (Equivalent IEC, JIS Class IV)	
Rating / Conn. Type	320K	LENS RING	SV0402-001 Packing follower with O-ring	
Body material	SUS316L		SV0507 Actuator yoke material: SCPH2 or WCB	
Trim material	SUS316L STELLITE		COLD WEATHER SPEC	
Flow characteristic	EQ%		Min Ambient Temp : Valve Body : -45 degC,	
Bonnet	PLAIN (0 to 200 degC)		Min Ambient Temp : Accessories :- 40 degC,	
Actuator / Handle	VA5D	---	Old Production No : 415-8076-3400 (1977)	
Action	AIR TO CLOSE(Side to Bottom)		V0A-4902-00/5	
Gland packing / Grease	P6610CH+P6528	400		
Gasket	V544 (SUS316L)			
Air supply / Spring range	2.6kgf/cm2	0.2-1.8kgf/cm2		
Seat leakage	CLASS IV			
Color: Body/Diaph./Yoke	No-painting	SILVER	SILVER	
Paint	Standard			
<Accessories>				
Positioner	HTP-1D (SP-0004)			
Structure				
Input signal	0.2-1.0 kgf/cm2			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450	1		
Regulator2				
Limit switch	VCX7001-JL	1		
Action	Full Open on			
Solenoid valve	NFX8327B011	1		
Action / Power	En: Open, De: Control	AC100V 50Hz		
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	CARBAMATE SOLUTION		LIQUID	
	MAX	NOR	MIN	Unit
Flow rate	57.5	15.2		t/h
Inlet pressure	255	255		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	255	200		kgf/cm2
Shut-off press.		255		kgf/cm2
Temperature	106	106		degC
Density/Gravity(Liq)	1.15	1.15		water=1
Density/Gravity(G,V)				MW
Viscosity	1.0	1.0		cP
Flash	Cavitation			%
Calculated CV	4.347	1.17		
Travel				%
Inlet velocity	12.58	3.326		m/s
Predictive SPL				dBA
<Piping spec.>				
Strength Calc. Sheet				
Design			kgf/cm2G	
Temp.			degC	
Size	3 in.	3 in.		
Sch No.	40	40		
Thickness	5.5	5.5		
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Control Valve Data Sheet

Item No. / Qty	6	1	Ref. No.	
Tag No.	PIC-52		Purchaser	AEU
Service			End user	MINUDOBRENYA
			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	6 in.	5 in.	SV0602-002 Air piping: Vinyl covered copper tube. Joint:Cr plated with vinyl cap	
Conn. Size. / Rated CV			SV0101-005 Flange facing finish : Serration ASME B16.5(125 ~ 250AARH)	
Rating / Conn. Type	ANSI300	RF	SV0201-002 Seat leakage: Less than 0.1%CV (Equivalent IEC, JIS Class III)	
Body material	SCPH2		SV0212 Cage plug with piston ring	
Trim material	SCS24		SV0507 Actuator yoke material: SCPH2 or WCB	
Flow characteristic	EQ%		HART AVP SP No.5	
Bonnet	EXT-1 (230 to 450 degC)		COLD WEATHER SPEC	
Actuator / Handle	HA3R	SIDE	Min Ambient Temp : Valve Body : -45 degC,	
Action	AIR TO OPEN		Min Ambient Temp : Accessories :- 40 degC,	
Gland packing / Grease	P6610CH+P6528	PS6	Old Production No : 415-8077-1000 (1977)	
Gasket	V543,V8590		V0A-4902-00/6	
Air supply / Spring range	2.8kgf/cm2	0.8-2.4kgf/cm2		
Seat leakage	CLASS III			
Color: Body/Diaph./Yoke	SILVER	SILVER		
Paint	Heat Resistant			
<Accessories>				
Positioner	AVP302-CSD2B-XDYT-X			
Structure	ATEX Flameproof, 1/4 NPT, M20x1.5			
Input signal	4-20 mADC			
Regulator	ARU3AS-03-8N-LT-5-G-BR-G450			
Regulator2				
Limit switch				
Action				
Solenoid valve				
Action / Power				
Booster				
Air lock valve				
<Process data>				
Fluid name/Phase	STEAM		STEAM	
	MAX	NOR	MIN	Unit
Flow rate	44	36.5		t/h
Inlet pressure	24	24		kgf/cm2G
Outlet pressure				kgf/cm2G
Differential press.	9	9		kgf/cm2
Shut-off press.		24		kgf/cm2
Temperature	231	231		degC
Density/Gravity(Liq)				water=1
Density/Gravity(G,V)	11.95	11.95		kg/m3(A)
Viscosity	0.01711	0.01711		mPa-s
Flash				%
Calculated CV	190.2	157.4		
Travel	88	82		%
Outlet velocity	0.1686	0.1398		Mach
Predictive SPL	95	93		dBA
			<Piping spec.>	
			Strength Calc. Sheet	
			Design	
			Temp.	
			Size	
			Sch No.	
			Thickness	
			Azbil Corporation	