

S. No.	Description/Specifications/Cat/ Part No. of Scientific/Technical/ Administrative Stores	Qty. Required	
1	2	3	
1	Control Valve (72-PRC-60.1), ND 100	No.	1
2	Control Valve (72-PRC-60.2), ND 100	No.	1
3	Control Valve (73-FIH-12.2), ND 15	No.	1
4	Control Valve (73-DRC-40), ND 20	No.	1
5	Control Valve (73-FIH-12.1), ND 15	No.	1
6	Control Valve (73-LRC-40.2), ND 50	No.	1
7	Control Valve (33-FRCP-40.8), ND15	No.	1
8	Control Valve (34-FRCP-124.1), ND15	No.	1
9	Control Valve (34-FRCP-124.2), ND15	No.	1

Note: 1. Make: Preferable, Ecoflo Turkey, Or Equivalent.
 2. Complete technical literature should be provided.

				PROJECT					
Customer:				No.	By	Date	Revision	Sheet 1 of 5	
Equipment:		Control Valve		1				Made By	Date
Plant:								Chek'd by	Date
Requisition No.								Appr. By	Date
Contract No.									
GENERAL	1	Item No.							
	2	Tag Nos		72-PV-60.1			72-PV-60.2		
	3	Service Tags		72-PRC-60.1			72-PRC-60.2		
	4	Line No./Vessel No.		N.A			N.A		
	5	Line Size/Sch. No.		ND 100			ND 100		
Body	6	Type of Body		Straight			Straight		
	7	Body Size	Port Size	MFR-STD		MFR-STD	MFR-STD	MFR-STD	
	8	Guiding	No. of Ports			01	01		
	9	End conn. & Rating		RF face flange 150 lb			RF face flange 150 lb		
	10	Body Material		SS-304L			SS-304L		
	11	Packing Material		PTFE			PTFE		
	12	Lubricator	Isolating Valve						
	13	Bonnet Type		MFR-STD			MFR-STD		
	14	Trim Form		Equal Percentage			Equal Percentage		
	15	Trim Material Seat/Plug		SS-304L			SS-304L		
ACTUATOR	16	Shaft Material		SS-304L			SS-304L		
	17	Reqd. Seat Thickness		MFR-STD			MFR-STD		
	18	Max. Allow Sound Level dBa							
	19	Model No. & Size		MFR-STD			MFR-STD		
	20	Type of Actuator		Pneumatic			Pneumatic		
	21	Close at	Open at	3 PSI		15 PSI	3 PSI	15 PSI	
	22	Flow Action to							
	23	Fail Position		Closed			Closed		
	24	Handwheel & Location		Top			Top		
	POSIT.	25	MFR & Model No.		MFR-STD			MFR-STD	
26		Filt. Reg.	Gauges	Yes		Yes	Yes	Yes	
27		Input Signal		4-20 mA			4-20 mA		
28		Output Signal		0.2-1bar			0.2-1bar		
29		Air Supply Pressure		1.4 bar			1.4 bar		
TRANSMITT	30	Make & Model No.							
	31	Input Signal							
	32	Output Signal							
OPTIONS	33								
	34								
	35								
SERVICE	36	Flow Units		Sm3/h			Sm3/h		
	37	Fluid		Air			Air		
	38	Quty. Max		100			300		
	39	Quty. Opr.	Quty. Min	0		0			
	40	Valve Cv	Valve FI						
	41	Press. IN	Press. OUT	-50 mmWG		-1050mmwG	500 mmWG	-1050mmwG	
	42	Max. Shutt Off Δ P		0.1 bar			0.1 bar		
	43	Temp. Max.	Operating	Amb		Amb	Amb	Amb	
	44	Density	Mol. Wt.	1.2 kg/m3		1.2 kg/m3			
	45	Opr. Viscosity	% Flash	15x10 ⁻⁶ m ² /s		15x10 ⁻⁶ m ² /s			

Note: All wetted parts to be of SS-304L.

				PROJECT					
Customer:				No.	By	Date	Revision	Sheet 2 of 5	
Equipment:		Control Valve		1				Made By	Date
Plant:								Chek'd by	Date
Requisition No.									
Contract No.								Appr. By	Date
GENERAL	1	Item No.							
	2	Tag Nos		73-FV-12.2			73-DV-40		
	3	Service Tags		73-FIH-12.2			73-DRC-40		
	4	Line No./Vessel No.		N.A			N.A		
	5	Line Size/Sch. No.		ND 15			ND 20		
Body	6	Type of Body		Straight			Straight		
	7	Body Size	Port Size	MFR-STD		MFR-STD	MFR-STD	MFR-STD	
	8	Guiding	No. of Ports			01			01
	9	End conn. & Rating		RF face flange 300 lb			RF face flange 150 lb		
	10	Body Material		SS-304L			SS-304L		
	11	Packing Material		PTFE			PTFE		
	12	Lubricator	Isolating Valve						
	13	Bonnet Type		MFR-STD			MFR-STD		
	14	Trim Form		Linear			Linear		
	15	Trim Material	Seat/Plug	SS-304L			SS-304L		
	16	Shaft Material		SS-304L			SS-304L		
	17	Reqd. Seat Thickness		MFR-STD			MFR-STD		
	18	Max. Allow Sound Level dBa							
ACTUATOR	19	Model No. & Size		MFR-STD			MFR-STD		
	20	Type of Actuator		Pneumatic			Pneumatic		
	21	Close at	Open at	3 PSI		15 PSI	3 PSI	15 PSI	
	22	Flow Action to							
	23	Fail Position		Closed			Closed		
	24	Handwheel & Location		Top			Top		
POSIT.	25	MFR & Model No.		MFR-STD			MFR-STD		
	26	Filt. Reg.	Gauges	Yes		Yes	Yes	Yes	
	27	Input Signal		4-20 mA			4-20 mA		
	28	Output Signal		0.2-1bar			0.2 -1 bar		
	29	Air Supply Pressure		1.4 bar			1.4 bar		
TRANSMITT	30	Make & Model No.							
	31	Input Signal							
	32	Output Signal							
OPTIONS	33								
	34								
	35								
SERVICE	36	Flow Units		Kg/h			l/h		
	37	Fluid		Steam			Nitric Acid 11M		
	38	Quty. Max		20			225		
	39	Quty. Opr.	Quty. Min	13		2	188	173	
	40	Valve Cv	Valve FI						
	41	Press. IN	Press. OUT	3 Kg/cm2		0 Kg/cm2	0.12 Kg/cm2	0.02 Kg/cm2	
	42	Max. Shutt Off Δ P		3 Kg/cm2			0.1 Kg/cm2		
	43	Temp. Max.	Operating	180		143	50° C	40° C	
	44	Density	Mol. Wt.	1.82 kg/m3			1000/1305/1325 kg/m3		
	45	Opr. Viscosity	% Flash	6x10 ⁻⁶ m ² /s			0.77x10 ⁻⁶ m ² /s		

Note: All wetted parts to be of SS-304L.

				PROJECT						
Customer:				No.	By	Date	Revision	Sheet 3 of 5		
Equipment:		Control Valve		1				Made By	Date	
Plant:								Chek'd by	Date	
Requisition No.								Appr. By	Date	
Contract No.										
GENERAL	1	Item No.								
	2	Tag Nos		73-FV-12.1			73-LV-40.2			
	3	Service Tags		73-FIH-12.1			73-LRC-40.2			
	4	Line No./Vessel No.		N.A			N.A			
	5	Line Size/Sch. No.		ND 15			ND 50			
Body	6	Type of Body		Straight			Straight			
	7	Body Size	Port Size	MFR-STD		MFR-STD	MFR-STD	MFR-STD		
	8	Guiding	No. of Ports			01		01		
	9	End conn. & Rating		RF face flange 150 lb			RF face flange 300 lb			
	10	Body Material		SS-304L			SS-304L			
	11	Packing Material		PTFE			PTFE			
	12	Lubricator	Isolating Valve							
	13	Bonnet Type		MFR-STD			MFR-STD			
	14	Trim Form		Linear			Linear			
	15	Trim Material	Seat/Plug	SS-304L		SS-304L				
	16	Shaft Material		SS-304L			SS-304L			
	17	Reqd. Seat Thickness		MFR-STD			MFR-STD			
	18	Max. Allow Sound Level dBA								
	ACTUATOR	19	Model No. & Size		MFR-STD			MFR-STD		
		20	Type of Actuator		Pneumatic			Pneumatic		
		21	Close at	Open at	3 PSI		15 PSI	3 PSI	15 PSI	
		22	Flow Action to							
		23	Fail Position		Closed			Closed		
24		Handwheel & Location		Top			Top			
POSIT.	25	MFR & Model No.		MFR-STD			MFR-STD			
	26	Filt. Reg.	Gauges	Yes		Yes	Yes	Yes		
	27	Input Signal		4-20 mA			4-20 mA			
	28	Output Signal		0.2-1bar			0.2 -1 bar			
	29	Air Supply Pressure		1.4 bar			1.4 bar			
TRANSMITT	30	Make & Model No.								
	31	Input Signal								
	32	Output Signal								
OPTIONS	33									
	34									
	35									
SERVICE	36	Flow Units		l/h			Kg/h			
	37	Fluid		Nitric Acid 2M			Super heated steam			
	38	Quty. Max		230			320			
	39	Quty. Opr.	Quty. Min	183		160		0		
	40	Valve Cv	Valve FI							
	41	Press. IN	Press. OUT	0.88 Kg/cm2		0.48 Kg/cm2	6 Kg/cm2	4 Kg/cm2		
	42	Max. Shutt Off Δ P		0.4 Kg/cm2			2 Kg/cm2			
	43	Temp. Max.	Operating	50° C		30° C	200° C	183° C		
	44	Density	Mol. Wt.	1000/1058/1072 kg/m3			1.82 kg/m3			
	45	Opr. Viscosity	% Flash	0.66x10 ⁻⁶ m ² /s			6x10 ⁻⁶ m ² /s			

Note: All wetted parts to be of SS-304L.

				PROJECT				
Customer:		No.		By	Date	Revision		
Equipment:		1				Sheet 4 of 5		
Plant:						Made By	Date	
Requisition No.						Chek'd by	Date	
Contract No.						Appr. By	Date	
GENERAL	1	Item No.						
	2	Tag Nos		33-FV-40.8		34-FV-124.1		
	3	Service Tags		33-FRCP-40.8		34-FRCP-124.1		
	4	Line No./Vessel No.		N.A		N.A		
	5	Line Size/Sch. No.		ND 15		ND 15		
Body	6	Type of Body		Straight		Straight		
	7	Body Size	Port Size	MFR-S	MFR-STD	MFR-STD	MFR-STD	
	8	Guiding	No. of Ports		01		01	
	9	End conn. & Rating		NPTF, 150 lb		NPTF, 150 lb		
	10	Body Material		SS-304L		SS-304L		
	11	Packing Material		PTFE		PTFE		
	12	Lubricator	Isolating Valve					
	13	Bonnet Type		MFR-STD		MFR-STD		
	14	Trim Form		Linear		Linear		
	15	Trim Material	Seat/Plug	SS-304L		SS-304L		
	16	Shaft Material		SS-304L		SS-304L		
	17	Reqd. Seat Thickness		MFR-STD		MFR-STD		
	18	Max. Allow Sound Level dBa						
	ACTUATOR	19	Model No. & Size		MFR-STD		MFR-STD	
		20	Type of Actuator		Pneumatic		Pneumatic	
		21	Close at	Open at	3 PSI	15 PSI	3 PSI	15 PSI
		22	Flow Action to					
		23	Fail Position		Closed		Closed	
24		Handwheel & Location		Top		Top		
POSIT.		25	MFR & Model No.		MFR-STD		MFR-STD	
	26	Filt. Reg.	Gauges	Yes	Yes	Yes	Yes	
	27	Input Signal		4-20 mA		4-20 mA		
	28	Output Signal		0.2-1bar		0.2 -1 bar		
	29	Air Supply Pressure		1.4 bar		1.4 bar		
TRANSMITT	30	Make & Model No.						
	31	Input Signal						
	32	Output Signal						
OPTIONS	33							
	34							
	35							
SERVICE	36	Flow Units		l/h		l/h		
	37	Fluid		Nitric Acid 0.02M		Solvent		
	38	Qty. Max		160		104		
	39	Qty. Opr.	Qty. Min	120	90	80	40	
	40	Valve Cv	Valve FI					
	41	Press. IN	Press. OUT	0.45 bar	0.1 bar	0.13 bar	0.05 bar	
	42	Max. Shutt Off	Δ P	0.35 bar		0.08 bar		
	43	Temp. Max.	Operating	80° C	60° C	35° C	30° C	
	44	Density	Mol. Wt.	1000/1002/1050 kg/m3		800/824/1000 kg/m3		
	45	Opr. Viscosity	% Flash	0.5x10 ⁻⁶ m ² /s		1.25x10 ⁻⁶ m ² /s		

Note: All wetted parts to be of SS-304L.

				PROJECT					
Customer:		No.		By	Date	Revision		Sheet 5 of 5	
Equipment:		Control Valve		1				Made By	Date
Plant:									
Requisition No.								Chek'd by	Date
Contract No.								Appr. By	Date
GENERAL	1	Item No.							
	2	Tag Nos		34-FV-124.2					
	3	Service Tags		34-FRCP-124.2					
	4	Line No./Vessel No.		N.A					
	5	Line Size/Sch. No.		ND 15					
Body	6	Type of Body		Straight					
	7	Body Size	Port Size	MFR-STD		MFR-STD			
	8	Guiding	No. of Ports			01			
	9	End conn. & Rating		NPTF, 150 lb					
	10	Body Material		SS-304L					
	11	Packing Material		PTFE					
	12	Lubricator	Isolating Valve						
	13	Bonnet Type		MFR-STD					
	14	Trim Form		Linear					
	15	Trim Material Seat/Plug		SS-304L					
	16	Shaft Material		SS-304L					
	17	Reqd. Seat Thickness		MFR-STD					
	18	Max. Allow Sound Level dBa							
	ACTUATOR	19	Model No. & Size		MFR-STD				
20		Type of Actuator		Pneumatic					
21		Close at	Open at	3 PSI		15 PSI			
22		Flow Action to							
23		Fail Position		Closed					
24		Handwheel & Location		Top					
POSIT.	25	MFR & Model No.		MFR-STD					
	26	Filt. Reg.	Gauges	Yes		Yes			
	27	Input Signal		4-20 mA					
	28	Output Signal		0.2 -1 bar					
	29	Air Supply Pressure		1.4 bar					
TRANSMITT	30	Make & Model No.							
	31	Input Signal							
	32	Output Signal							
OPTIONS	33								
	34								
	35								
SERVICE	36	Flow Units		l/h					
	37	Fluid		Solvent					
	38	Quty. Max		30					
	39	Quty. Opr.	Quty. Min	20		0			
	40	Valve Cv	Valve FI						
	41	Press. IN	Press. OUT	0.15 bar		0.05 bar			
	42	Max. Shutt Off	Δ P	0.15 bar					
	43	Temp. Max.	Operating	35° C		30° C			
	44	Density	Mol. Wt.	800/824/1000 kg/m3					
	45	Opr. Viscosity	% Flash	1.25x10 ⁻⁶ m ² /s					

Note: All wetted parts to be of SS-304L.