

## MH CONTROL AND DUMP VALVES

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Sr#	Description	Qty
1	<b><u>Control Valve</u></b> Please refer to the attached technical specifications document for further details	3
2	<b><u>On/Off Valve</u></b> Please refer to the attached technical specifications document for further details	3
<b><u>Notes:</u></b> a. Technical specifications and literature of the offered items must be provided with the quotation. b. Make and country of origin of the offered items should be mentioned in the quotation.		

## Control Valve Specifications Sheet

Control Valve Specifications Sheet				
General/Service Condition	1	Valve type	Globe Control Valve with Single acting diaphragm	
	2	Medium	Water	
	3	Line size	3"	
	4	Line schedule	40 Sch	
	5	Flow rate 1	as per table below at Sr No. 69	
	6	Flow rate 2	as per table below at Sr No. 70	
	7	Flow rate 3	as per table below at Sr No. 71	
	8	Temperature	90 deg. C	
	9	Normal Inlet pressure	500 mbar	
	10	Max Inlet pressure	650 mbar	
	11	AP across	276 mbar	
	12	Service	Modulating	
	13	AP at Shut Off	2.5 bar	
Valve Body/Bonnet	14	Style	Two way cast Globe Valve	
	15	Valve size	3"	
	16	Pressure class	150 lb	
	17	Flow direction	Flow under	
	18	Body/ bonnet material	ASTM-351-GrCF3	
	19	Type of bonnet	Below Sealed	
	20	Connection Type (IN/OUT)	Butt Welded ends as per sch 40	
Trim	21	Type	Unbalanced/Top guided	
	22	characteristic	Equal percentage	
	23	Plug/Box/Disk material	ASTM-A-182Gr-F304L	
	24	Seal material	ASTM-A-182Gr-F304L	
	25	Stem Material	ASTM A-182Gr-F304L	
Actuator	26	Action/Type	Single acting Diaphragm/Air to close spring to open	
	27	Service	Modulating	
	28	Spring action open/close	Open	
	29	Air to	Close	
	30	Max air supply for actuation	5 bar	
	31	Fail position	Valve Open	
	32	Actuation Orientation	Vertical	
Solenoid Valve	33	Manufacturer	ASCO Red Hat	
	34	De-Energized	Valve Open	
	35	Elec. Supply	110V DC	
	36	Type	Quick Exhaust 3-way, N.C	
	37	Gauges/material/scale unit	Required gauges, brass/SS Psi/bar	
	38	Tubing material/size for instrument air on solenoid and actuator	SS 304/ 1/4" NPT	
Positioner	39	Input signal	2 wire, 4-20 mA DC	
	40	Type	single acting with position transmitter	
	41	Gauges	Yes	
	42	Cam characteristics	Equal percentage	
	43	Supply	As per standard	
Limit Switch	44	Type	HERMETICALLY Sealed	
	45	On ICR Signal output	Increase	
	46	Contacts/Action	SPDT	
Airact	47	Position	Full Open & Full Close	
	48	Rating	24V DC;10A	
	49	Model	Jouco.FRS 107 NPT 1/4" Direct Mounted	
	50	Set Pressure	0-10 Bar	
	51	Filter	Yes	
	52	Gauge	Yes	
	53	Regulator	Yes	
Doc	54	Dimensional Drawing	Manufacturer should provide following documentation in English Language	
	55	Data sheets		
	56	Operation manuals		
Tests	57	Standard Test certificates	Following test will be carried out by manufacturer/supplier at their premises or any other mutually agreed lab in the presence of purchaser Engineer	
	58	Liquid penetrant test		
	59	Hydrostatic pressure test		ISA-75.19.01-2001
	60	Seat leak Test		
	61	Radiography, X-ray examination and inspection test (4 pic for body+1)		
	62	Dead band test		ISA-75.13-1996
	63	Stroking time test		ANSI/ISA-TR75.25.02-2000
	64	Frequency response test		
	65	Characteristic curve test		ISA-75.13-1996
	65	As per recommendation of supplier or		
Spares	66	Actuator diaphragms (02 Nos)		
	67	Position Transmitter (02 Nos)		
	68	Solenoid Valve (01 No)		
Flow		Table for Flow Rate		
		Flow Rate	Req Valve Open in %	
	69	11.69 m <sup>3</sup> /hr	38	
	70	28.33 m <sup>3</sup> /hr	53	
	71	67.29 m <sup>3</sup> /hr	84	

## ON-OFF Valve Specifications Sheet

General/Service Condition	1	Valve type	ON-OFF Globe Valve with Single acting diaphragm
	2	Medium	Water
	3	Line size	4"
	4	Line schedule	40 Sch
	5	Flow	18 - 38 m <sup>3</sup> /hr
	6	Service	ON-OFF
	7	Temperature	90 deg. C
	8	Normal Inlet pressure	500 mbar
	9	Max Inlet pressure	650 mbar
	10	Outlet Pressure	374 mbar
	11	Diff pressure at Shut Off	1.5 bar
Valve Body/Bonnet	12	Type	Two way cast Globe Valve
	13	Valve size	4" (Full bore)
	14	Pressure class	150 lb
	15	Flow direction	Horizontal
	16	Body/ bonnet material	ASTM-351-GrCF3
	17	Type of bonnet	Bellow Sealed
	18	Connection Type (IN/OUT)	Butt-Welded ends as per sch 40
	19	Packing Material	PTFE
	20	Seat Leakage	min Class V
Trim	21	Type	Single Seated
	22	characteristic	Quick Open
	23	Plug/box/Disk material	ASTM-A-182Gr-F304L
	24	Seat material	ASTM-A-182Gr-F304L
	25	Stem Material	ASTM-A-182Gr-F304L
Actuator	26	Action/Type	Single acting Diaphragm/Air to close spring to open
	27	Service	ON-OFF
	28	Spring action open/close	Open
	29	Air to	Close
	30	Max air supply for actuation	5 bar
	31	Fail position	Valve Open
	32	Actuation Orientation	Vertical
Solenoid Valve	33	Manufacturer	ASCO Red Hat
	34	De-Energized	Valve Open
	35	Elec. Supply	110V DC
	36	Type	Quick Exhaust 3-way, N.C
	37	Gauges/material/scale unit	Required gauges, brass/55 Psi/bar
	38	Tubing material/size for instrument air on solenoid and actuator	SS 304/ 1/4" NPT
Limit Switch	39	Type	HERMITICALLY Sealed
	40	Contacts/Action	SPDT
	41	Position	Full Open & Full Close
	42	Rating	24V DC,10A
Airset	43	Model	Jouco,FRS 107 NPT 1/4" Direct Mounted
	44	Set Pressure	0-10 Bar
	45	Filter	Yes
	46	Gauge	Yes
	47	Regulator	Yes
Doc	48	Dimensional Drawing	Manufacturer should provide following documentation in English Language
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	50	Operation manuals	
	51	Standard Test certificates	
Tests	Following test will be carried out by manufacturer/supplier at their premises or any other mutually agreed lab in the presence of purchaser Engineer		
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	53	Hydrostatic pressure test	ISA-75.19.01-2001
	54	Seat leak Test	
Spares	55	Radiography, X-ray examination and inspection test (4 pic for body+1)	
		As per recommendation of supplier or	
	56	Actuator diaphragms (02 Nos)	
	57	Solenoid Valve (01 No)	