



250-4A

Model 250-4A is a 4-way, 5-port valve with common supply and exhaust ports. Can be mounted in any position using four #10-32 holes in bottom, two slotted lugs on body, or with mounting base (Code 21).



Specifications

MEDIA:
Compressed Air (Consult factory for others)

PRESSURE RANGE:
250A NC: 10 to 125 psig (.7 to 8.6 bars)
250 NO, 250A NC with booster, 250-4A: 10 to 125 psig (.7 to 8.6 bars)
250-4AA: 20 to 125 psig (1.4 to 8.6 bars)
250AA: 15 to 125 psig (1.0 to 8.6 bars)

TEMPERATURE RANGE:
-20 to 225°F (-28.9 to 107.2°C)

OPERATING SPEEDS:
To 600 CPM

MATERIALS:
Zinc Die Cast, Zinc Plated Steel, Aluminum, Brass, Stainless Steel, Buna N

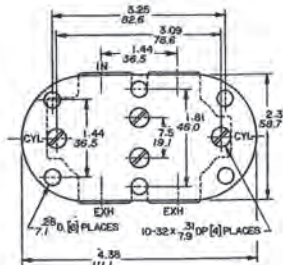
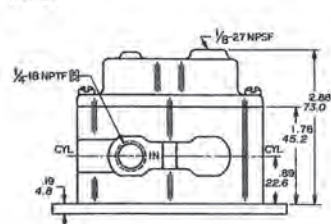
LUBRICATION: Not required
FILTRATION: Not required

Air Flow to Atmosphere

MODEL	25 PSIG		(8.6 BARS)		Weight	
	CFM	(1.7 BARS) LPM	CFM	LPM	ACTUAL LBS	KGS
250A/AA	25.0	707.5	75	2122.5	0.5	0.2
250-4A/AA					1.8	0.8

Weight

250-4A



250-4AA

Model 250-4AA is identical to the 250-4A valve but has an internal compensating orifice which maintains actuated position after momentary pilot signal, maintains "trapped" pilot reserve to compensate for minor leaks,

and speeds both the opening and the closing response time.



Fill/Exhaust Times (Seconds)

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	10 Cubic Inches (164cc)	100 Cubic Inches (1640cc)	FILL	EXHAUST	FILL	EXHAUST
250A NC	0.032	0.044	0.312	0.433	0.033	0.059	0.324	0.565
250A NO	0.035	0.044	0.311	0.384	0.036	0.055	0.305	0.438
250AA	0.032	0.044	0.312	0.433	0.033	0.059	0.324	0.565
250-4A NC	0.032	0.049	0.307	0.405	0.033	0.060	0.315	0.505
250-4A NO	0.037	0.048	0.305	0.368	0.039	0.055	0.305	0.425
250-4AA/NC	0.034	0.045	0.310	0.427	0.034	0.057	0.300	0.527
250-4AA/NO	0.037	0.048	0.305	0.368	0.039	0.055	0.305	0.425

VALVED PRESSURE	25 psig	1.7 bars	75 psig	5.2 bars	125 psig	8.6 bars	
PILOT PRESSURE							
MODEL	250A NC	21.7	1.5	48.3	3.3	88.3	6.1
	250A NO	23.0	1.6	48.3	3.3	84.0	5.3
	250AA	18.7	1.3	44.8	3.1	72.5	5.0
	250-4A	22.3	1.5	46.1	3.2	72.0	5.0
	250-4AA	8.5	0.6	25.1	1.7	41.2	2.8

Order Information on page 204.

Humphrey 250 Series Interface Valves

Humphrey 250 Series valves are 2-way or 3-way valves for interfacing low (fluidic) pilot pressures with full working pressures. These high flow valves offer exceptional performance and durability. Vibration or shock will not cause unwanted actuation. A 250 Series valve has a full 0.250-inch orifice (75 scfm at 125 psig). They mount in any position, and require a clean, dry air supply, filtered to 10 microns.



250AL

Model 250AL is a super-sensitive pilot operated interface valve for operation at the ultra-low pilot pressures encountered in jet sens-

ing and some fluidic applications. See Pilot Pressure Requirements Chart. A 250AL valve has a full 0.250-inch orifice.



250AH

Model 250AH is a sensitive pilot operated interface valve for operation at the low pilot pressures encountered in jet sensing

and some fluidic applications. See Pilot Pressure Requirement Chart. A 250AH valve has a full 0.250-inch orifice.



Options for 250 Interface Valves

- Mounting Base, Code 21.
- Brass Body.
- Bottom Inlet.

Specifications

MEDIA:
Compressed Air (Consult factory for others)

PRESSURE RANGE:
30 to 125 psig (2.1 to 8.6 bars)

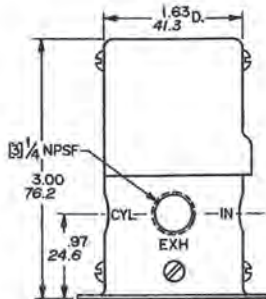
TEMPERATURE RANGE:
40 to 125°F (4.4 to 51.7°C)

OPERATING SPEEDS:
60-125 psig, 600 CPM
30-60 psig, 400 CPM

MATERIALS:
Aluminum, Brass, Zinc Plated Steel, Stainless Steel, Buna N

LUBRICATION Not required
FILTRATION Recommended,
10 Microns Minimum

Base — 2.25 Sq. w/four
0.22 D. holes on
1.59 Sq. centers.



Air Flow to Atmosphere

MODEL	25 PSIG (1.7 BARS)		125 PSIG (8.6 BARS)		ACTUAL	
	CFM	LPM	CFM	LPM	LBS	KGS
250AL	16.0	452.8	40.0	1132.0	0.77	0.35
250AH						

Weight

Fill/Exhaust Times (Seconds)

MODEL	SUPPLY PRESSURE							
	At 50 psig (3.5 bars)				At 100 psig (7.0 bars)			
	Chamber Fill 0-40 psig (0-2.8 bars)		Exhaust 50-10 psig (3.5-7 bars)		Chamber Fill 0-80 psig (0-5.5 bars)		Exhaust 100-20 psig (7.0-1.4 bars)	
	10 Cubic Inches (164cc)		100 Cubic Inches (1640cc)		10 Cubic Inches (164cc)		100 Cubic Inches (1640cc)	
	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST	FILL	EXHAUST
250AL	0.082	0.083	0.339	0.460	0.081	0.093	0.365	0.581
250AH	0.075	0.084	0.346	0.465	0.076	0.093	0.371	0.578

Pilot Pressure Requirements

Minimum pilot pressures to open the valve at valved pressures of

MODEL	MAXIMUM PILOT	HYS-TER-ESIS +	30 PSIG (Minimum (2.1 BARS)	80 PSIG (5.5 BARS)	125 PSIG (Maximum (8.6 BARS)
250AL	10 psig	30%	.8 in. of water col.	1.2 in. of water col.	2.1 in. of water col.
250AH	30 psig	30%	9 in. of water col.	9 in. of water col.	9 in. of water col.

+ Once the valve is open, the valve will close when the minimum pilot pressure is reduced by the percentage shown.

Order Information on page 204.

Humphrey Air Piloted Valves

Order Information

125/250/500/501/590 Series

1/8-, 1/4-, 1/2-, and 3/4-inch ports, 2-way, 3-way, 4-way

VALVES

	2 Way	3 Way	Norm. Closed	Norm. Open	Universal	w/Out Mounting Base	With Mounting Base	Panel Mounting Nuts	Booster (STD on NO)	FKM** Seals	Brass Body	Bottom Inlet (NC only)
Option Code	2	3	10	11	12	20	21	22	w/BOS	w/VAI	w/BRB	w/BIN
MODEL												
125A	SP	N/C	N/C	SP	NA	N/C	SP	SP	SP	SP	SP	SP
125AA	NA	N/C	N/C	NA	NA	N/C	SP	SP	SP	SP	SP	SP
125AH	SP	N/C	N/C	NA	NA	N/C	SP	SP	NA	NA	NA	SP
125LA	SP	N/C	N/C	NA	NA	N/C	SP	SP	NA	NA	NA	SP
250A	SP	N/C	N/C	SP	NA	N/C	SP	NA	SP	SP	SP	SP
250AA	NA	N/C	N/C	NA	NA	N/C	SP	NA	SP	SP	SP	SP
250AH	SP	N/C	N/C	NA	NA	N/C	SP	NA	NA	NA	NA	SP
250AL	SP	N/C	N/C	NA	NA	N/C	SP	NA	NA	NA	NA	SP
250-4A	NA	NA	NA	NA	NA	N/C	SP	NA	NA	SP	NA	NA
250-4AA	NA	NA	NA	NA	NA	N/C	SP	NA	NA	SP	NA	NA
500A	SP	N/C	N/C	*	NA	NA	STD	NA	NA	SP	STD	NA
500AB	SP	N/C	N/C	*	NA	NA	STD	NA	STD	SP	STD	NA
590A	SP	N/C	N/C	*	NA	NA	STD	NA	NA	SP	SP	NA
590AB	SP	N/C	N/C	*	NA	NA	STD	NA	STD	SP	SP	NA
501A	SP	N/C	*	*	N/C	N/C	SP	NA	NA	SP	NA	NA
501AA	NA	N/C	N/C	NA	NA	N/C	SP	NA	NA	SP	NA	NA
501-4A	NA	NA	NA	NA	NA	NA	STD	NA	NA	SP	NA	NA
501-4AA	NA	NA	NA	NA	NA	NA	STD	NA	NA	SP	NA	NA
SS250A	NA	STD	STD	NA	NA	STD	NA	NA	NA	STD	NA	NA

*These options can be achieved by plumbing supply to the appropriate port. See specific catalog section.

**Fluoroelastomer

HOW TO ORDER

Starting with Model Number specify options in order from left to right.

Example: To Order Model 125A-3-10-22 w/BRB

3-Way Operation	(125A-3)
Normally Closed	(125A-3-10)
Panel Mounting Nuts	(125A-3-10-22)
With Brass Body	(125A-3-10-22 w/BRB)

Remember: Option Codes marked STD and NA are not used as part of the Model Number when ordering. N/C indicates no charge but Option Code must be included in the Model Number. OS indicates that Option must be ordered separately and is not used as part of the Model Number.

N/C=No charge	STD=Standard
NA =Not available	SP=Specify, additional charge for this option
OS =Order separately, additional charge for this option	