Humphrey TAC-TAC²-TAC³ Air Valves

Model TAC, TAC², and TAC³ air valves may be operated by pilot or mechanical operators or manually operated by their push-buttons. Each push-button's shoulder bottoms-out on the valve body to prevent overstroke and valve damage. Operators adapt directly to the threaded button end. The push button itself is constructed of work hardening stainless steel. Appropriate locknuts and lockwashers are furnished. Port sizes are as follows: TAC, #10-32; TAC², 1/8"; TAC3, 1/4".



2P

Model 2P is a 2-way, normally closed, spring-return valve that can trap downstream pressure if the supply pressure is maintained and not exceeded. Weight: 1.25 oz. (35.4 gms.).



3P

Model 3P is a 3-way, normally closed, spring-return valve. IN and CYL port threads are #10-32 female. EXH port is not threaded. Alternate IN port is 1/8" NPT male. Weight: 1.25 oz. (35.4 gm.).







31P





4P

Model 4P is a 4-way, normally closed/normally open valve with spring-return. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Weight: 2.8 oz. (79.4 gms.).

CTTTT:



N740

Model N740 is a 3-way, normally closed, spring-return valve. This valve is used in low pressure, low actuation applications. IN and CYL port threads are # 10-32 female. EXH ports are not threaded. Pressure range is 0-15 PSIG. Air flow to atmosphere at 15 PSIG is 1.5 CFM. Actuation force: 6 oz. Weight: 0.96 oz. (30.0 gms.)



4P

31PPX



4PP

Model 4PP is a detented 4-way, normally closed/normally open valve with two push-buttons. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Weight: 2.75 oz. (78 gms.).

N740A





Model N740A is a 3-way, normally

female. EXH ports are not threaded.

atmosphere at 15 PSIG is 1.5 CFM.

Actuation force: 6 oz. Weight: 0.96 oz. (30.0 gms.)

closed, spring-return valve. This valve is

used in low pressure, low actuation appli-

4PPX

Model 4PPX is a detented version of 4P. It features a push-pull actuator with positive stop. Actuator has a short stroke of 0.093 inch. Weight: 2.8 oz. (67.3 gms.)









4PPX





NOTE: MOUNTING THREAD IS ¹⁵/32 - **32** x ⁹/32



31P

Model 31P is a multi-purpose valve with spring-return. Pressure may be applied at any port. The 31P can be used as a 3-way, normally closed/normally open valve, as a divertor or dual-pressure valve, or as a 2-way valve with the unused NC or NO port plugged. The 31P can be mounted with two #10 screws or panel mounted with body threads. Dimensions: 1.31"H x 1.25"W x 0.63"D. Weight: 4.25 oz. (120.5 gms.).





31PPX

Model 31PPX is a detented version of 31P. It features a push-pull actuator with positive stop. Actuator has a short stroke of 0.093 inch. Weight: 4.25 oz. (120.5 gms.)



41P

Model 41P is a 4-way, normally closed/normally open valve with spring-return. IN and CYL port threads are 1/8" NPT. Exhaust ports are #10-32 female. The 41P is supplied with two #97-21 metering screws for exhaust port flow controls. The 41P can be mounted with three #6 screws or with body threads for bracket or panel mounting. Dimensions: 1.65"H x 1.25"W x 0.63"D. Weight: 5.25 oz. (148.8 gms.).

CT71



41PP

Model 41PP is a detented 4-way, normally closed/normally open valve with two push-buttons. IN and CYL port threads are 1/8" NPT. Exhaust ports are #10-32 female. The 41PP valve is supplied with two #97-21 metering screws for exhaust port flow controls. It can be mounted with three #6 screws or with body threads for bracket or panel mounting. Dimensions: 1.65"H x 1.25"W x 0.63"D. Weight: 5.63 oz. (159.5 gms.).

thD CH711



41PPX

Model 41PPX is a detented version of 41P. It features a push-pull actuator with positive stop. Actuator has a short stroke at 0.093 inch. Weight: 5.40 oz. (153.1 gms.)



42P

Model 42P is a 4-way, 5 port, normally closed/normally open, single push-button, spring-return valve. All ports are ¼" button, detented valve. All ports are ¼" pipe. This valve can be mounted with two %"-18 UNC screws or with body threads for bracket or panel mounting. Dimensions: 2.25"H x 1.75"W x 0.75"D. Weight 11 oz. (311.9 gms.)



42PP

Model 42PP is a 4-way, 5 port, normally closed/normally open, double pushpipe. This valve can be mounted with two %"-18 UNC screws or with body threads for bracket or panel mounting. Dimensions: 2.25"H x 1.75"W x 0.75"D. Weight 11 oz. (311.9 gms.)

Specifications

MEDIA: Compressed Air (Consult factory for others) PRESSURE RANGE: 0 to 125 psig (0 to 8.6 bars) TEMPERATURE RANGE: -20 to 180°F (-28.9 to 82.2°C)

Air Flow to Atmosphere

| MODEL | 25 PSIG CFM | (1.7 BARS) LPM | 125 PSIG CFM | (8.6 BARS) LPM |
|-------------------------------------|----------------|-------------------|-----------------|-------------------|
| 2P, 3P | 0.2 | 6.8 | 7.0 | 198.1 |
| 4P, 4PP, 4PPX | 0.6 | 16.9 | 9.0 | 254.7 |
| 31P, 41P, 41PP, 41PPX | 4.0 | 113.2 | 20.0 | 566.0 |
| 42P, 42PP, M42P, M42PA, M42PP | 10.0 | 283.0 | 39.0 | 1103.7 |



42PA

Model 42PA is a 4-way, 5 port, normally closed/normally open, detented valve. One side has push-button; other side has 1/2" air-pilot port. Body ports are 1/2" pipe. This valve can be mounted with two %."-18 UNC screws or with body threads for bracket or panel mounting. Dimensions: 2.25"H x 1.75"W x 0.75"D. Weight 11 oz. (311.9 gms.) Dimensions of air pilot shown in the TAC3 Air-Piloted Valves section.

OPERATING SPEEDS: TAC & TAC²: to 900 CPM TAC³: to 600 CPM MATERIALS: Brass, Stainless Steel, Delrin, Buna N LUBRICATION Recommended FILTRATION Recommended. 40 Microns Minimum





Humphrey TAC Air Valves

TAC & TAC²

#10-32 and 1/8-inch ports 2-way, 3-way

VALVES

| | 2 WAY | 3 WAY | NORM. CLOSED | NORM. OPEN | DETENTED | SPRING RETURN | MOUNT. BASE (see access.) | PANEL MOUNT. NUTS | FKM** Seals | BRASS BODY | BOTTOM |
|-------------|----------|----------|-----------------|---------------|----------|------------------|---------------------------------|-------------------------|----------------|---------------|--------|
| OPTION C | CODE | | | | | | | | VAI | | |
| MODEL 2P | STD | NA | STD | NA | NA | STD | OS | STD | Specify | STD | STD |
| 2V | STD | NA | NA | NA | STD | NA | OS | STD | Specify | STD | STD |
| 2VR | STD | NA | STD | NA | NA | STD | OS | STD | Specify | STD | STD |
| 3P | NA | STD | STD | NA | NA | STD | OS | STD | Specify | STD | STD |
| 3V | NA | STD | NA | NA | STD | NA | OS | STD | Specify | STD | STD |
| 3VR | NA | STD | STD | NA | NA | STD | OS | STD | Specify | STD | STD |
| 31P | * | STD | STD | * | NA | STD | OS | STD | Specify | STD | NA |
| 31PPX | * | STD | NA | NA | STD | NA | OS | STD | Specify | STD | NA |
| 31V | * | STD | STD | NA | STD | NA | OS | STD | Specify | STD | NA |
| 31VR | * | STD | STD | * | NA | STD | OS | STD | Specify | STD | NA |

*Plug exhaust port on 31 series for 2-way. For Normally Open, plumb Supply to appropriate port. Order example: 2P **Fluoroelastomer

Obs indicates part must be ordered separately. REMEMBER: Option Codes marked STD, NA are not used as part of the Model Number when ordering.

TAC & TAC²

#10-32 and 1/8-inch ports 4-way

VALVES

| | NORM. CLSD/ NORM. OPEN 2 POS | NORM. CLSD/ NORM. OPEN 3 POS/OPN CTR | DETENTED | SPRING RETURN | 3 DETENTED POSITIONS | 3 SPRING RETURN POSITIONS | DETENT SPRING CTR'D DETENT | MOUNT. BASE (see access.) | PANEL MOUNT. NUTS | BRASS BODY | FKM* Seals | BOTTOM INLET |
|-------------|------------------------------------|--|----------|------------------|----------------------------|---------------------------------|----------------------------------|---------------------------------|-------------------------|---------------|---------------|-----------------|
| OPTION | CODE | | | | | | | | | | VAI | |
| MODEL 4P | STD | NA | NA | STD | NA | NA | NA | OS | STD | STD | Specify | NA |
| 4PP | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 4PPX | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 4V | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 41P | STD | NA | NA | STD | NA | NA | NA | OS | STD | STD | Specify | NA |
| 41PP | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 41PPX | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 41V | STD | NA | STD | NA | NA | NA | NA | OS | STD | STD | Specify | NA |
| 41TD3 | NA | STD | NA | NA | STD | NA | NA | OS | STD | STD | Specify | STD |
| 41TS3 | NA | STD | NA | NA | NA | STD | NA | OS | STD | STD | Specify | STD |
| 41TDS3 | NA | STD | NA | NA | NA | NA | STD | OS | STD | STD | Specify | STD |
| 41RD3 | NA | STD | NA | NA | STD | NA | NA | OS | NA | STD | Specify | STD |
| 41RS3 | NA | STD | NA | NA | NA | STD | NA | OS | NA | STD | Specify | STD |
| 41RDS3 | NA | STD | NA | NA | NA | NA | STD | OS | NA | STD | Specify | STD |

For 42 Series TAC³ Valves, see TAC³ Air Piloted and Push-Button Valves, p. 12 of Humphrey Price List. Order example: 41P-VAI OS indicates part must be ordered separately. REMEMBER: Option Codes marked STD, NA are not used as part of the Model Number when ordering. *Fluoroelastomer

AIR/MANUAL/MECHANICAL OPERATORS

OPERATORS

Air Pilot Operators

| | Fluoroelastomer Seals |
|--------------|-----------------------|
| OPTION CODE | VAI |
| MODEL 34A | NA |
| 34AS | Specify |
| 34AR | Specify |
| 34ASR | NA |
| 341A | NA |
| 341AS | Specify |
| 341AR | Specify |
| 341ASR | NA |

Order example: 341AR-VAI

NOTE: Valves and Accessories are shipped detached, ready to be mounted according to specific application requirements. REMEMBER: Option Codes marked STD, NA are not used as part of the Model Number when ordering.

Manual & Mechanical Operators

| MODEL | |
|---------------|--|
| 34B | |
| 34C | |
| 34CW | |
| 34CH | |
| 28-60A 34F | |
| 34F | |
| 34T | |

Order example: 34F