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Title: 2V, 3V, 4V, 31V, 41V, 41T, 41R TAC Valves

ISO Date: April 10, 2006

Don't Take Chances

Compressed air is an extremely powerful medium. Always take maximum precautions when handling any component of a compressed air system. **Never** attempt to construct, replace, operate or service any component of a compressed air system unless you have been specifically and properly trained to do so. **Always** disconnect the supply air, and exhaust the air system before attempting to remove or service a component of that system. Failure to heed these warnings could result in SERIOUS, EVEN FATAL, PERSONAL INJURY.

Design And Specifications

The design and specifications and other product information contained in this catalog is for general reference purposes based upon customary and usual manufacturing standards and product applications. However, it is difficult to predict or to anticipate the functioning or suitability of the product for any particular application or use. Therefore, nothing herein shall be deemed a representation or warranty of the product design or specifications and Buyer shall have the responsibility for investigating and testing the product in any particular application or use and all risks attendant in such use.

Humphrey Products Company
1-800-477-8707
Kalamazoo, MI 49003
www.humphrey-products.com

Humphrey TAC and TAC² Manual Air Valves

Although these toggle, rocker, and push-pull valves have their primary application in general industrial and instrumentation applications (including control panels), they are also widely used in mobile equipment and adapt well to vehicle dashboards. V and PPX models are 2-position, 3-way and 4-way valves; V models have single-direction throw with pinned lever. 41T and 41R models are rugged, 3-position, 4-way valves which can be used as a 2-position or 3-position valve.



2V 3V

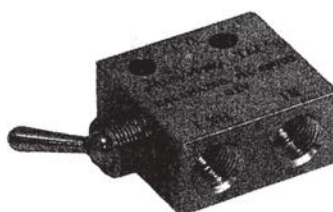
Model 2V is a 2-position, 2-way, normally closed, detented valve, having a single direction throw with pinned lever. The 2V has no exhaust port and will trap downstream pressure if supply pressure is maintained but not exceeded. IN and CYL port threads are #10-32 female. Alternate IN is 1/8-inch NPT male. These valves are furnished with locknuts and lockwashers for 15/32-32 x 9/32 toggle collar threads. Weight: 1.25 oz. (35.2 gms.).

Model 3V is a 3-way version of the 2V valve.



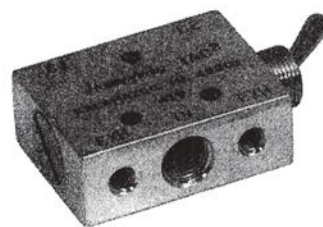
4V

Model 4V is a 2-position, 4-way, normally closed/normally open, detented valve, which can be converted to 3-way by plugging one CYL port with Humphrey PF fitting. IN and CYL ports are #10-32 female. These valves have single-direction throw with pinned lever and are furnished with locknuts and lockwashers for 15/32-32 x 9/32 toggle collar threads. Weight: 2.38 oz. (67.3 gms.).



31V

Model 31V is a 2-position, 3-way, normally closed, detented valve with single-direction throw with pinned lever. It can be used as a 2-way valve by plugging the exhaust port. Ports are 1/8-inch NPT. The 31V valve can be mounted with two #10 screws or with body threads for bracket or panel mounting. Dimensions: 1.31"H x 1.25"W x 0.63"D. Weight: 4.25 oz. (120.5 gms.).

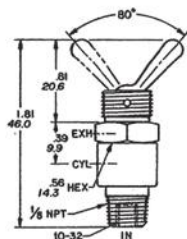


41V

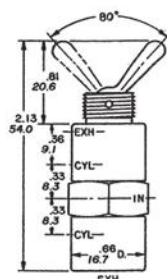
Model 41V is a 2-position, 4-way, normally closed/normally open, detented valve with single-direction throw with pinned lever. Exhaust may be captured by removing port flow controls and using Humphrey BF or BF1 fittings. Exhaust may be muffled with Humphrey 150-30A muffler. Exhaust ports have #10-32 threads; all other ports have 1/8-inch NPT threads. Furnished with exhaust port flow controls. The 41V may 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.).



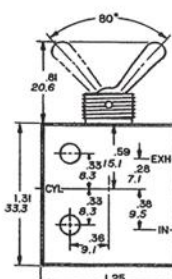
2V/3V



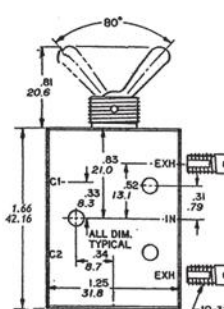
4V



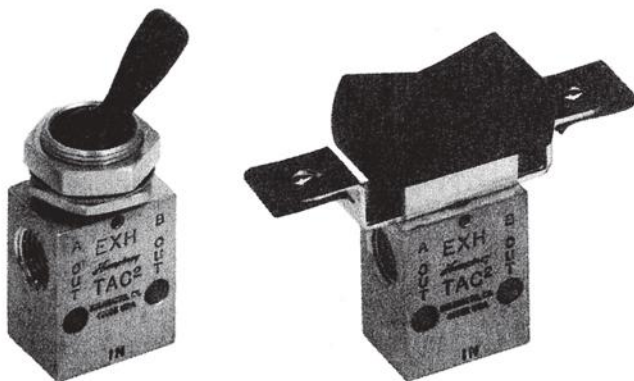
31V



41V

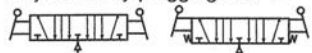


NOTE:
MOUNTING
THREAD IS
15/32 - 32 x 9/32



41T 41R

Models 41T and 41R are 3-position, 4-way valves with several functional options. They may be detented or spring-return or both. They can be used as 2-position valves by bypassing position #2. They can be used as 3-way valves by plugging A or B

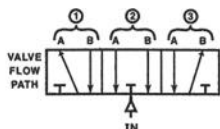


port. These valves have separate unthreaded exhaust ports at 180° and rugged matte black toggle or rocker actuators. All models may be side mounted. Toggle valves may be panel mounted with two supplied locknuts (0.187-inch and 0.93-inch thick) and lockwasher. Flow is 7.5 scfm at 125 psig. Weight: 3 oz. (85 gms.)

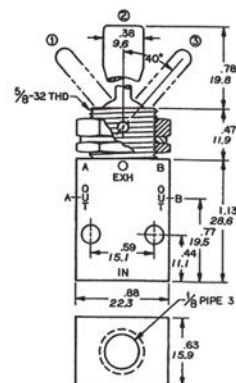


TOGGLE-ROCKER ACTION BY POSITION

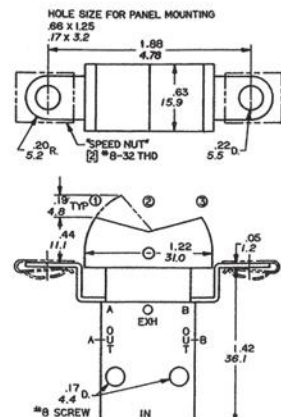
| TOGGLE NO. | 1 | 2 | 3 | ROCKER NO. |
|------------|---------------|--------|---------------|------------|
| 41T-D3 | Detent | Detent | Detent | 41R-D3 |
| 41T-S3 | Spring-Return | Detent | Spring-Return | 41R-S3 |
| 41T-DS3 | Detent | Detent | Spring-Return | 41R-DS3 |



41T



41R



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)

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

Air Flow to Atmosphere

| MODEL | 25 PSIG CFM | (1.7 BARS) LPM | 125 PSIG CFM | (8.6 BARS) LPM |
|------------|----------------|-------------------|-----------------|-------------------|
| 2V, 3V | 0.2 | 6.8 | 7.0 | 198.1 |
| 4V | 0.6 | 16.9 | 9.0 | 254.7 |
| 31V, 41V | 4.0 | 113.2 | 20.0 | 566.0 |
| 41T 41R | 2.0 | 56.6 | 7.0 | 198.1 |

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 INLET |
|-------------|----------|----------|-----------------|---------------|----------|------------------|---------------------------------|-------------------------|----------------|---------------|-----------------|
| OPTION 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.

**Fluoroelastomer

Order example: 2P

OS 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 | STD | NA | 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 | STD | NA | OS | NA | STD | Specify | STD |

For 42 Series TAC³ Valves, see TAC³ Air Piloted and Push-Button Valves, p. 12 of Humphrey Price List.

*Fluoroelastomer

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.

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 |
| 34T |

Order example: 34F