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Title: 2P, 4P, 4PP, 4PPX, 3P, 31P, 31PPX, 41P, 41PP, 41PPX, 42P, 42PP, 42PA
TAC Series 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 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.).
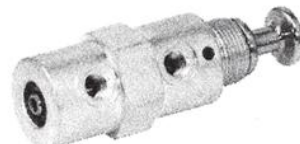
4P
Model 4P is a 4-way, normally closed/normally open valve with spring-return. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Weight: 2.8 oz. (79.4 gms.).
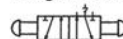
4PP
Model 4PP is a detented 4-way, normally closed/normally open valve with two push-buttons. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Weight: 2.75 oz. (78 gms.).

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.)
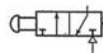
N740
Model N740 is a 3-way, normally closed, spring-return valve. This valve is used in low pressure, low actuation applications. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Pressure range is 0-15 PSIG. Air flow to atmosphere at 15 PSIG is 1.5 CFM. Actuation force: 6 oz. Weight: 0.96 oz. (30.0 gms.)
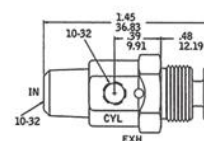
N740A
Model N740A is a 3-way, normally closed, spring-return valve. This valve is used in low pressure, low actuation applications. Mechanical operator consists of a shaft with spherical radius on the end. IN and CYL port threads are #10-32 female. EXH ports are not threaded. Pressure range is 0-15 PSIG. Air flow to atmosphere at 15 PSIG is 1.5 CFM. Actuation force: 6 oz. Weight: 0.96 oz. (30.0 gms.)
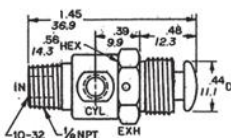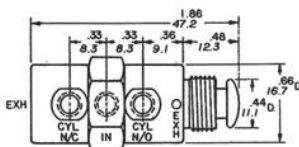
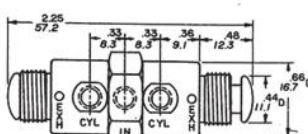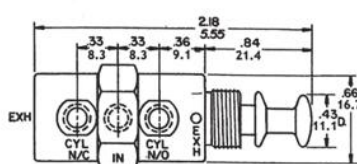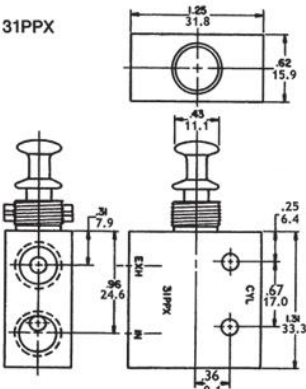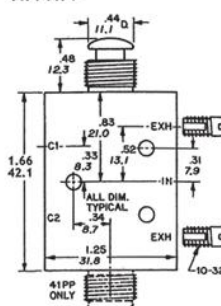**NOTE: MOUNTING THREAD IS 15/32 - 32 x 9/32**

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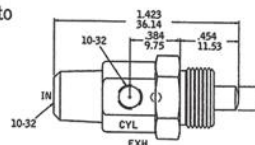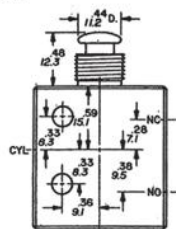
31P

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.).
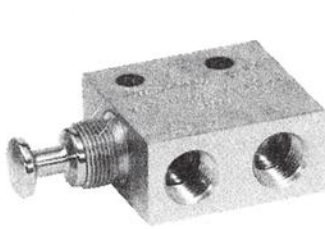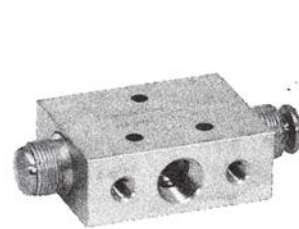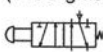
31PPX

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 ⅛" 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.).

41PP

Model 41PP is a detented 4-way, normally closed/normally open valve with two push-buttons. IN and CYL port threads are ⅛" 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.).
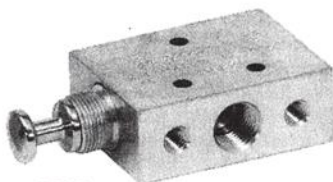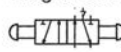
41PPX

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.)
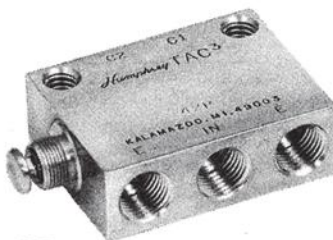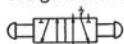
42P

Model 42P is a 4-way, 5 port, normally closed/normally open, single push-button, spring-return valve. All ports are ¼" pipe. This valve can be mounted with two ⁵⁄₁₆"-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.)
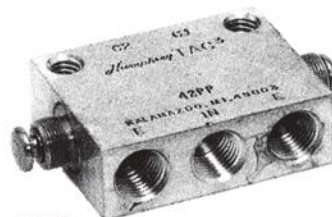
42PP

Model 42PP is a 4-way, 5 port, normally closed/normally open, double push-button, detented valve. All ports are ¼" pipe. This valve can be mounted with two ⁵⁄₁₆"-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.)

42PA

Model 42PA is a 4-way, 5 port, normally closed/normally open, detented valve. One side has push-button; other side has ⅛" air-pilot port. Body ports are ¼" pipe. This valve can be mounted with two ⁵⁄₁₆"-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.
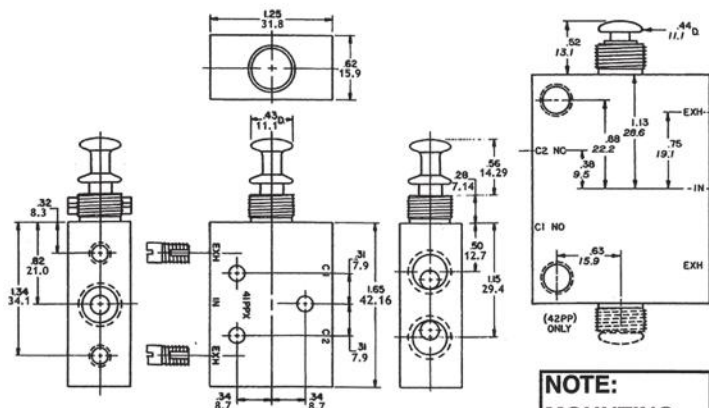
Specifications

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
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

41PPX

42P/42PP

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

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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	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.   *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