

Humphrey TAC-TAC²-TAC³ Air Pilot Operators

These air pilot operators are for use with TAC, TAC², and TAC³ push-button valves and the Model ESB Electric Switch Bracket to convert them to air pilot operation. The operators feature snap action for time-delay circuits, automatic "one-shot" reset, or a combination of snap action and automatic reset. Model 34 operators are recommended for use with TAC valves. Model 341 operators are recommended for use with TAC² and TAC³ valves.



34A 341A Air Pilot Operators

Models 34A and 341A air pilot operators thread directly onto the collars of push-button valves and the Model ESB Electric Switch Bracket. The air pressure applied to the pilot port drives a V-cup sealed piston to actuate the valve's push-button. The 341A

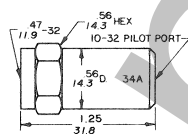
air pilot operator provides approximately twice the actuation force of the 34A at the same pilot pressure and is used for lower pilot pressure requirements or to amplify weak pilot signals, especially to 41PP and 42PP valves with positive detents.
Weight: 34A 1.1 oz. (31.2 gms.)
341A 1.0 oz. (25.3 gms.)

34AS 341AS Air Pilot Operators with Snap Action

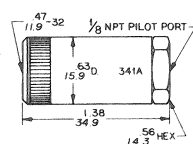
Models 34AS and 341AS air pilot operators thread directly onto the collars of push-button valves and the Model ESB Electric Switch Bracket. They are used primarily for time-delay circuits and other slow-building pilot pressure applications. The actuation of the op-

erator is delayed until pilot pressure reaches 35 psig $\pm$ 5 psig. At this pressure, the operator piston snaps forward to actuate valve or switch and remains shifted until pilot pressure is exhausted. Maximum cycle life is obtained at 40-65 psig, 125 psig maximum. Weight: 34AS 3.9 oz. (110.6 gms.)
341AS 4.2 oz. (119.1 gms.)

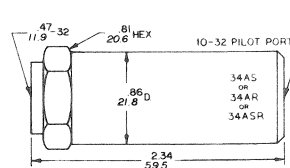
34A



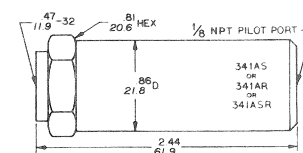
341A

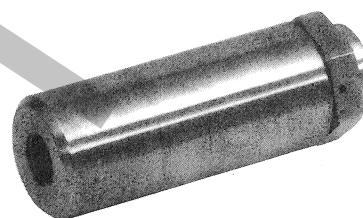
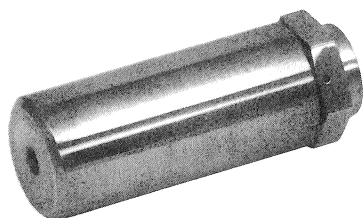


34AS/AR/ASR



341AS/AR/ASR





34AR 341AR Air Pilot Operators with Reset

Models 34AR and 341AR air pilot operators thread directly onto the collars of push-button valves and the Model ESB Electric Switch Bracket. When used on a spring-return valve, they provide a momentary "one-shot" output signal (40 psig/min.), which actuates the operator piston immediately. The operator's pressure-balanced piston then resets, even in the presence of a pilot signal. This reset occurs within 0.3 seconds at 40 psig, within 0.5 at 100 psig, and within

0.7 seconds when used with 4PP, 41PP, or 42PP valves. Maximum cycle life is obtained at 40-65 psig, 125 psig maximum.

Any erratic action of the operators is often caused by small diameter or long pilot lines, restricted fittings, low flow pilot valves, slow building or exhausting pilot signals, or excessive moisture or space between operator and valve body and can be eliminated by correcting these conditions. Weight: 34AR 3.9 oz. (110.6 gms.) 341AR 4.1 oz. (116.2 gms.)

34ASR 341ASR Air Pilot Operators with Snap Action and Reset

Models 34ASR and 341ASR air pilot operators provide both snap action and reset features in a single unit and thread directly onto the collars of push-button valves and the Model ESB Electric Switch Bracket. Actuation is delayed until pilot pressure reaches 35 psig $\pm$ 5 psig, and then the operator piston snaps forward to actuate push-button valve or electric switch. At that point the piston becomes pressure balanced and the spring

resets the operator while removing actuator force from the valve. After snap action, the piston resets within approximately 0.3 seconds at 40 psig, within 0.5 seconds at 100 psig, and with 0.7 seconds when used with 4PP, 41PP, or 42PP valves.

NOTE: The recommended maximum pilot pressure is 60 psig. If this pressure is exceeded, the operator will recycle — snapping and resetting a second time. Weight: 34ASR 3.9 oz. (110.6 gms.) 341ASR 4.1 oz. (116.2 gms.)

Specification

Minimum Pilot Pressure 34A

VALVED PRESSURE		30 psig	2.1 bars	60 psig	4.2 bars	100 psig	7.0 bars
PILOT PRESSURE							
MODEL	2P	22.0	1.5	24.0	1.7	25.0	1.7
	3P	18.0	1.2	19.0	1.3	21.0	1.4
	4P	20.0	1.4	20.0	1.4	20.0	1.4
	4PP	5.0	0.3	5.0	0.3	6.0	0.4
	31P	35.0	2.4	41.0	2.8	51.0	3.5
	41P	42.0	2.9	42.0	2.9	42.0	2.9
	41PP	35.0	2.4	35.0	2.4	35.0	2.4
	42P	55.0	3.8	69.0	4.8	85.0	5.9
	42PP/PA	16.5	1.1	18.0	1.2	20.5	1.4
	ESB	5.0	0.3				

Minimum Pilot Pressure 341A

VALVED PRESSURE		30 psig	2.1 bars	60 psig	4.2 bars	100 psig	7.0 bars
PILOT PRESSURE							
MODEL	2P	11.0	0.8	12.0	0.8	13.0	0.9
	3P	10.0	0.7	10.0	0.7	12.0	0.8
	4P	11.0	0.8	11.0	0.8	11.0	0.8
	4PP	2.5	0.1	2.5	0.1	3.0	0.2
	31P	22.0	1.5	27.0	1.9	32.0	2.2
	41P	22.0	1.5	24.0	1.7	24.0	1.7
	41PP	20.0	1.4	20.0	1.4	20.0	1.4
	42P	34.0	2.3	43.0	3.0	57.0	3.9
	42PP/PA	10.5	0.7	10.5	0.7	12.5	0.8
	ESB	2.5	0.1				

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	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