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Title: 34B,34C,34CW,34CH,34T,34F Manual/Mechanical Operators

ISO Date: July 28, 2004

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**.

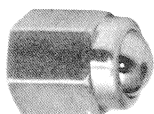
Design And Specifications

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.

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Humphrey TAC-TAC²-TAC³ Manual/Mech. Operators

These operators are used to convert TAC, TAC², and TAC³ push-button valves to manual or mechanical operation.



34B Ball Operator

Model 34B ball operator threads onto the collar of any TAC Series push-button valve. The ball is not retained until threaded onto valve. The 0.078-inch thickness of the #8-60 or #8-600 mounting bracket plus the 0.015-inch thickness of the lockwasher properly spaces the 34B to prevent prestroking of the button. Stroke is 0.093-inch. Actuating forces are shown in the accompanying chart. Weight: 0.88 oz. (24.8 gms.).



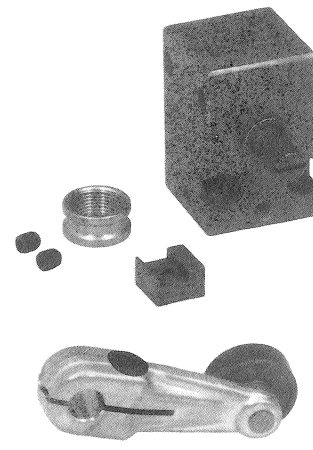
34C Cam Operator

Model 34C operator's actuating force varies by valve type and pressure as shown in the accompanying chart. Adjustment of cam roller height is made through the use of a mounting bracket and locknuts. The cam surface should release roller quickly for best valve response. Weight: 1 oz. (38.4 gms.).



34CW Cam Operator with One-Way Actuation

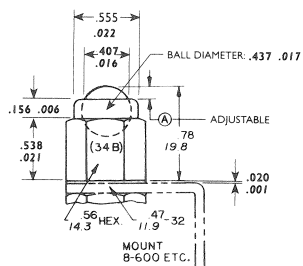
Model 34CW cam operator actuates valve when the pawl is contacted from lever side. The pawl then folds out of the way in the opposite direction. The spring-loaded Nylatron pawl has high tensile strength and excellent wear characteristics and is self-lubricating. Actuation forces are shown in accompanying chart. Weight: 1 oz. (38.4 gms.).



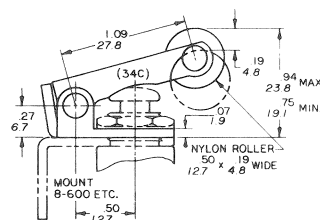
34CH Heavy-Duty Cam Operator

Model 34CH heavy-duty cam operator is for use with all TAC series valves except TAC³ valves. Its spline actuator shaft adapts to Cam Roller 28-60A (Order cam roller separately) and other commercially available actuator styles. The mean stroke is 15° each for prestroke, fully open, and over-stroke. Dimensions: 1.5"H x 1"W x 1"D. Weight: 3 oz. (85 gms.).

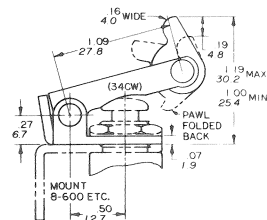
34B



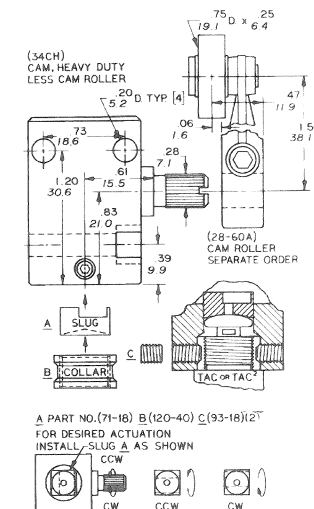
34C



34CW



34CH



34CH Assembly Instructions

- Position square **slug** into 34CH for desired actuation. The slug drill point rests on valve button.
- Thread **collar** fully onto valve.
- Insert valve/collar behind slug and secure by tightening #8-32 set screws at 90°.
- Mount 34CH, not valve, to equipment.
- Attach cam roller to spline actuator.



34T Fingertip Operator

Model 34T fingertip operator may be used with any TAC Series push-button valve to provide easier actuation. Actuation forces are shown in accompanying chart.



34F Foot, Knee, or Hand Operator

Model 34F foot, knee, or hand operator may be used with any TAC Series push-button valve except the TAC³. To install, disassemble the 34F by removing screws. Mount valve shoulder to bracket and retain with locknut

and lockwasher. Back and sides are left open for plumbing. Non-skid rubber pads on both sides. Mount to equipment with two 0.187-inch Dia. holes on 1.625-inch centers, 0.562 inches from back.

Specification

Force To Actuate in Ounces/Grams

Models 34C & 34CW

| VALVED PRESSURE | 30 psig | (2.1 bars) | 60 psig | (4.2 bars) | 100 psig | (7.0 bars) |
|-----------------|---------|--------------|---------|------------|----------|------------|
| 2P | 15 | 425 | 16 | 454 | 18 | 510 |
| 3P | 19 | 539 | 27 | 765 | 38 | 1077 |
| 4P | 22 | 624 | 22 | 624 | 23 | 652 |
| 4PP | 6 | 170 | 7 | 198 | 8 | 227 |
| 31P | 40 | 1134 | 44 | 1247 | 52 | 1474 |
| 41P | 44 | 1247 | 52 | 1474 | 67 | 1899 |
| 41PP | 26 | 737 | 28 | 794 | 34 | 964 |
| 42P | 49 | 1389 | 66 | 1871 | 94 | 2665 |
| 42PP/PA | 14 | 397 | 17 | 482 | 22 | 624 |
| ESB | 7 | 198 | | | | |
| 34CH* | 40 | 1134 Maximum | | | | |

*Use with TAC/TAC² Only.

Force to Actuate in Ounces/Grams

Model 34B†

| VALVED PRESSURE | 30 psig | (2.1 bars) | 60 psig | (4.2 bars) | 100 psig | (7.0 bars) |
|-----------------|---------|--------------|---------|------------|----------|------------|
| 2P | 32 | 907 | 36 | 1021 | 48 | 1361 |
| 3P | 38 | 1077 | 54 | 1531 | 76 | 2155 |
| 4P | 44 | 1247 | 44 | 1247 | 46 | 1304 |
| 4PP | 12 | 340 | 14 | 397 | 16 | 454 |
| 31P | 64 | 1814 | 72 | 2041 | 88 | 2495 |
| 41P | 87 | 2466 | 104 | 2948 | 135 | 3827 |
| 41PP | 52 | 1474 | 57 | 1616 | 67 | 1899 |
| 42P | 97 | 2750 | 132 | 3742 | 189 | 5358 |
| 42PP/PA | 26.5 | 751 | 34 | 964 | 43.5 | 1233 |
| ESB | 13 | 369 | | | | |
| 34CH | 40 | 1134 Maximum | | | | |

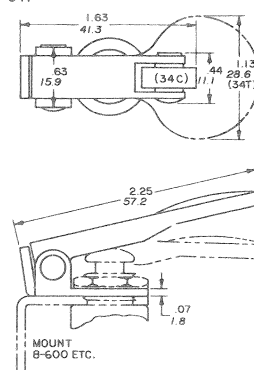
†Same force required to push valve button.

Force To Actuate in Ounces/Grams

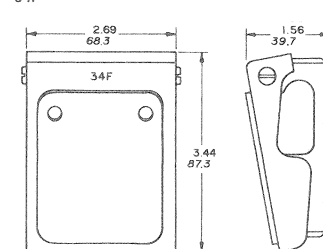
Model 34T

| VALVED PRESSURE | 30 psig | (2.1 bars) | 60 psig | (4.2 bars) | 100 psig | (7.0 bars) |
|-----------------|---------|------------|---------|------------|----------|------------|
| 2P | 10 | 284 | 12 | 340 | 14 | 397 |
| 3P | 14 | 397 | 18 | 510 | 29 | 822 |
| 4P | 16 | 454 | 16 | 454 | 17 | 482 |
| 4PP | 5 | 142 | 6 | 170 | 7 | 198 |
| 31PP | 28 | 794 | 32 | 907 | 40 | 1134 |
| 41P | 32 | 907 | 38 | 1077 | 50 | 1418 |
| 41PP | 19 | 539 | 21 | 595 | 25 | 709 |
| 42P | 35 | 992 | 48 | 1361 | 69 | 1956 |
| 42PP/PA | 10 | 284 | 13 | 369 | 16 | 454 |
| ESB | 5 | 142 | | | | |

34T



34F



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