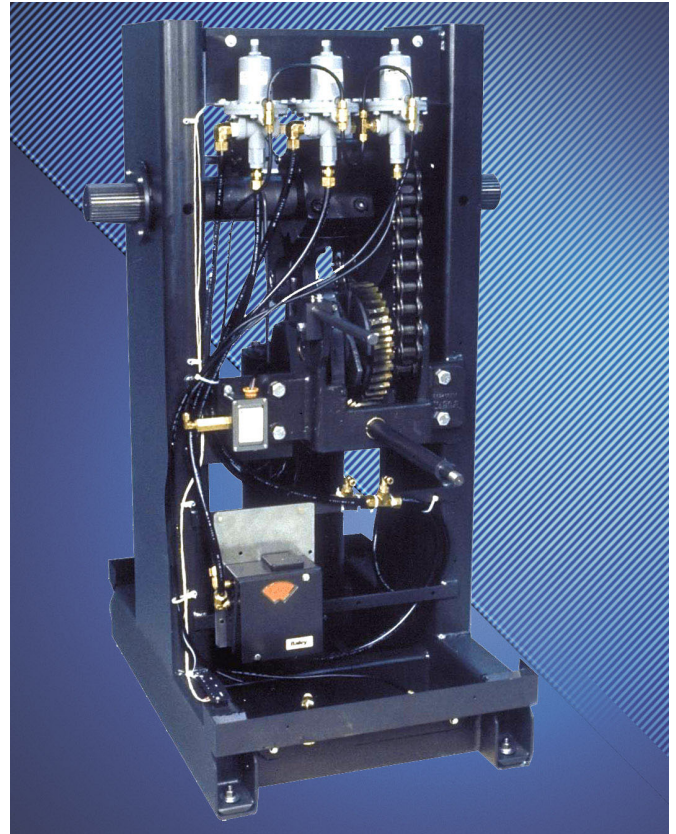


- **Wide Range of Torque Ratings** - Six actuator sizes available in ratings from 122 to 6372 Newton meters (90 to 4700 foot-pounds)
- **Easy and Flexible Installation** - Place in convenient locations and connect to driven device by standard linkage components.
- **Suitable for High Temperature Environments** - Use in ambient temperatures up to 82C (180°F), depending on control input. (Refer to Specifications for temperature limitations.)
- **Adjustable Relationship Between Control Signal and Output Shaft Position** - Adjusts easily with use of standard positioner cam characteristics (linear, square, and square root relationship) or custom-shaped cam.
- **Conventional or “Smart” Positioner Options:** Complete range of control signal options including the TZID-C with HART digital communications and explosion proof versions.
- **Quick and Smooth Transfer** - Shifts easily from automatic to manual control
- **Wide Range of Options Available** - Factory installed NEMA 4X enclosure, pneumatic or electric shaft position transmitter, alarm/travel switches, air failure lock, and heated enclosures available.



Type UP1/2/3/4/5/6
Universal Rotary Actuator UP
Pneumatic

Universal Rotary Actuators Type UP Pneumatic

The Type UP Pneumatic Universal Rotary Actuators regulate dampers, fan inlet vanes, lever-operated valves, turbine governors, fluid drives and other final control elements (See Figure 1).

These actuators accept electric or pneumatic control signals. This provides modulating or on/off control power to position devices through mechanical linkage or by direct coupling.

Types UP1 and UP2 actuators include a double-acting rotary vane power unit. Types UP3, UP4, UP5 and UP6 actuators include a double-acting piston with a motion conversion mechanism to convert linear to rotary motion.

Order the actuator with a positioner, or a single or double acting on/off solenoid valve. Refer to Table 5 for ordering information.

Actuators with a positioner include a Type AV or TZID-C Characterizable Positioners. The positioner is a push-pull action, force balance type control instrument. It offers a variety of input ranges including 21 to 103 kilopascals (3 to 15 psig), 21 to 186 kilopascals (3 to 27 psig) or 4 to 20 milliamps.

With the AV positioner, there are standard cams for linear, square, or square root relationships between the control input and output position. Custom shaping the cam provides for specific positioning control characterization of the relationship between the input signal and the output shaft position. With the TZID-C positioner, characterization is done electronically. The positioner acts as a pneumatic relay. Through a separate air supply, it produces the differential pressure that moves the actuator into position.

The TZID-C "Smart" positioner is available on all sizes of UP drives. The TZID-C offers the advantages of:

1. Configurable Smart Digital Positioner with diagnostics and digital communication capability via HART protocol (Standard)
2. AUTOSTROKE function provides for self-calibration and self-tuning
3. Modular: Options or replacement parts can be added easily in the field.
4. As a Field IT device, is part of the ABB Industrial IT solutions.
5. Integral Analog or Digital Position Feedback
6. Fail Open/Close or Fail-in-Place on loss of input signal.

7. High immunity to shock and vibration.
8. Low flow cut-off for valve or damper applications.
9. Configurable custom characterization to correct for non-linear flow characteristics of the damper or butterfly valve.
10. FM/CSA Approved for use in intrinsically safe applications. The TZID-C can be used in Div. 2, Non-Incendive applications without barriers.
11. The TZID-C200 can be used in Class I, Div. 1, Gr C-G, Explosion Proof Environments.

Please refer to the TZID-C Data Sheet for complete details.

Actuators with a solenoid valve provide on/off control. In this case, positioning of the actuator is at either of the extreme ends of travel (0 percent or 100 percent). The solenoid valve is suitable for 120 VAC or 115/125 VDC service, single or double acting.

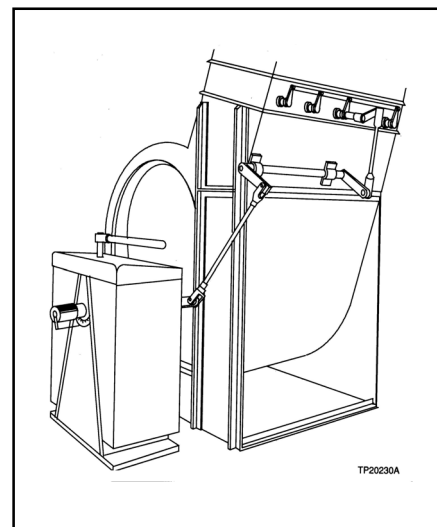


Figure 1. Typical Fan Damper Control Application

Engineering Specifications

Operating Torque

See Table 1 and Figures 2 & 3 for operating torque versus air supply pressure.

Supply Pressure

40 to 100 psig with AV Positioners
20 to 90 psig with TZID-C Positioners

Stroke Times

See Figures 6 through 16

TABLE 1. Suggested Maximum Operating Torques at Minimum and Maximum Supply Pressures

UP1			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	40	276	54
45	44.2	310	59.7
50	48.3	345	65.3
55	52.5	379	71
60	56.7	414	76.7
65	60.8	448	82.3
70	65.0	483	88
75	69.2	517	93.7
80	73.3	552	99.3
85	77.5	586	105
90	81.7	621	110.7
95	85.8	655	116.3
100	90	690	122

UP4			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	550	276	746
45	625.0	310	847.7
50	700.0	345	949.3
55	775.0	379	1051
60	850.0	414	1152.7
65	925.0	448	1254.3
70	1000.0	483	1356
75	1075.0	517	1457.7
80	1150.0	552	1559.3
85	1225.0	586	1661
90	1300.0	621	1762.7
95	1375.0	655	1864.3
100	1450	690	1966

UP2			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	165	276	224
45	188.8	310	256.2
50	212.5	345	288.3
55	236.3	379	320.5
60	260.0	414	352.7
65	283.8	448	384.8
70	307.5	483	417
75	331.3	517	449.2
80	355.0	552	481.3
85	378.8	586	513.5
90	402.5	621	545.7
95	426.3	655	577.8
100	450	690	610

UP5			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	1060	276	1437
45	1205.0	310	1633.6
50	1350.0	345	1830.2
55	1495.0	379	2026.75
60	1640.0	414	2223.3
65	1785.0	448	2419.9
70	1930.0	483	2616.5
75	2075.0	517	2813.1
80	2220.0	552	3009.7
85	2365.0	586	3206.25
90	2510.0	621	3402.8
95	2655.0	655	3599.4
100	2800	690	3796

UP3			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	325	276	441
45	364.6	310	494.7
50	404.2	345	548.3
55	443.8	379	602
60	483.3	414	655.7
65	522.9	448	709.3
70	562.5	483	763
75	602.1	517	816.7
80	641.7	552	870.3
85	681.3	586	924
90	720.8	621	977.7
95	760.4	655	1031.3
100	800	690	1085

UP6			
supply, psig	torque, ft-lbs	supply, kPa	torque, Nm
40	1900	276	2576
45	2133.3	310	2892.3
50	2366.7	345	3208.7
55	2600.0	379	3525
60	2833.3	414	3841.3
65	3066.7	448	4157.7
70	3300.0	483	4474
75	3533.3	517	4790.3
80	3766.7	552	5106.7
85	4000.0	586	5423
90	4233.3	621	5739.3
95	4466.7	655	6055.7
100	4700	690	6372

Volume Displacement for 90°
Mechanical Output Rotation

UP1:	655 cm ³ (40 in. ³) Rotary Vane
UP2:	1965 cm ³ (120 in. ³) Rotary Vane
UP3:	3685 cm ³ (225 in. ³) Cylinder [15 x 20 cm (6 x 8 in.)]
UP4:	6550 cm ³ (400 in. ³) Cylinder [20 x 20 cm (8 x 8 in.)]
UP5:	13,110 cm ³ (800 in. ³) Cylinder [20 x 41 cm (8 x 16 in.)]
UP6:	20,565 cm ³ (1255 in. ³) Cylinder [25 x 41 cm (10 x 16 in.)].

Air Supply:	For UP with TZID-C Positioner the maximum air supply is (90 psi). (100 psi) with AV positioner.
Positioner Action:	Direct or reverse is standard.
Performance Specifications:	Refer to the appropriate positioner specification for hysteresis, resolution, deadband, repeatability, etc.

Engineering Specifications

Temperature Limits

-40 to 82°C (-40 to 180°F)¹ for UP with AV positioners
-30 to 82°C (-22 to 180°F) for UP with TZID positioners
The low temperature operative limit can be extended below 0°C (32°F) without heaters if the dew point of the air supply is maintained at least 10°C (18°F) below the minimum expected ambient temperature.

Note:
1. Some actuator/positioner combinations may have slightly higher minimum, and slightly lower maximum operating temperatures. Refer to the appropriate positioner specification for temperature limitations.

Mechanical Rotation

UP1 & UP2: Rotary vane stroke is nominally set for 90° rotation, but can be adjusted over a range from 80° to 92° via adjustable mechanical stop.

UP3, UP4, UP5 & UP6: Stroke of the cylinder provides a 90° rotation of the output lever.

Positioner Refer to Positioner Specification for details on Type AV positioners or S-VI/POS-TZID-C for details on TZID-C positioners.

Solenoid Type and Coil Specifications

4-way, 2-position, 2-wire type (UP__5 and UP__6).
4-way, 2-position, 4-wire type (UP__8 and UP__9).

UP1 and UP2: NEMA 6 enclosure rating. CSA certified 120 VAC, 50/60 Hz, 10.5 W; or 125 VDC, 11.2 W

UP3, UP4, UP5 and UP6: ¹NEMA 1 enclosure rating. CSA certified 120 VAC, 50/60 Hz, 10.5 W; or 125 VDC, 11.2 W

Note:
1. The solenoid valve is mounted inside the actuator enclosure on these models, so the environmental rating of the entire unit is a function of the environmental rating of the actuator enclosure.

Positioner Input Signal:

AV1: 21 to 103kPa (3 to 15 psig); 21 to 186 kPa (3 to 27 psig); 50% range suppression and/or zero elevation capability.

AV2: 4 to 20mA (goes to 0% (normal acting) or 100% (reverse acting) on loss of input signal).

AV3: 4 to 20 mA (holds position on loss of input signal).²

TZID-C: 4 to 20 mA
“fail-safe” goes to 0% or 100%, or “fail-freeze” remains in position upon loss of input signal.

External Connections

Air Supply: UP 1 and UP2: 1/4-18 NPT female
UP3, UP4, UP5 and UP6: 1/2-14 NPTfemale

Pneumatic Signal: 1/4-18 NPT female when using Type AV11 or AV12 positioners as the control input.

Air Failure Reset: 1/4-18 NPT female

Electrical Conduit: Cutouts for 1/2 in. and 3/4 in. NPT female when using Type AV2 and AV3 positioners, or a solenoid valve for the control input.

Air Consumption (nominal) at Balance with Positioner:

AV: Typical 188.8 cm³/s (0.4 scfm)
@ 517.1 kPa (75.0 psig) supply; 283.2 cm³/s (0.6 scfm) maximum at null.
TZID-C: 38cm³/s (0.08 scfm)

Manual Operator

UP1 & UP2: Lever type with manual locking bolt.
UP3 & UP4: Split nut with locking ratchet.
UP5 & UP6: Gear type with self-locking ratchet.

Materials of Construction

Frame: Carbon Steel
 Output Shaft: Carbon Steel
 Top Covers: Sheet metal
 End Covers: Sheet metal
 Actuators: UP1 and UP2: Die Cast aluminum rotary vane housing.
 UP 3, UP4, UP5 and UP6: Carbon steel air cylinder housing and ductile iron cylinder end flanges.
 Seals on vane, vane shaft, piston & piston rod: Nitrile rubber
 Coating on metal parts
 Corrosion-resistant polyurethane

Engineering Specifications

Storage: Store in a dry, indoor location not subject to rapid temperature changes that would cause condensation to form inside the unit.

Storage Temperature Limits:

-40 to 93°C (-40 to 200°F) with AV positioners
 -30 to 85°C (-22 to 185°F) with TZID positioners

Enclosure Certification:

NEMA 3R (Standard)
 NEMA 4X - Optional - must be ordered by nomenclature, refer to Table 5 (for all except Types UP1).
 CSA (Canadian Standards Association) certified for use in general purpose (non-hazardous) locations.

Agency Approvals:

Refer to Tables 3 and 4

Options and Accessories

Shaft Position Transmitter:

Electric (external to positioner):
 Two-wire unit requiring a 12 to 42 VDC supply and providing a 4 to 20mA linear output relative to the actuator shaft position.

Electric (internal to positioner):
 Two-wire unit requiring a 12 to 34 VDC supply and producing a 4 to 20 mA linear output relative to the actuator shaft position.

Pneumatic:
 Produces a 21 to 103 kPa (3 to 15 psig) or 21 to 186 kPa (3 to 27 psig) linear output relative to the actuator shaft position. Minimum required air supply is 138 kPa (20 psig). The output may be characterized by the user (not available for Type UP1 actuators).

Potentiometric Resistive:

A potentiometer internal to the Types AV1, AV2 and AV3 positioners. Gears connect the potentiometer to the positioner output shaft. The position of the potentiometer shaft indicates the actuator shaft position. The relationship between the potentiometer and the output shaft results in one degree of rotation of the output shaft corresponding to approximately 9.9 ohms of resistive change at the potentiometer. Refer to the appropriate Type AV positioner instruction for more information.

Adjustable Alarm/Travel Switches:

Consists of four linkage-driven, cam-operated SPDT microswitches, adjustable over the full stroke of the actuator. Used as alarm contacts or for external indications.

Contact Ratings: 15A @ 125 VAC @ 60°C (140°F).
 0.5A @ 125 or 250 VDC @ 60°C (140°F).
 Switch contacts must be derated 1.5A for every 10°C (18°F) rise above 60°C (140°F)

Air Failure Lock: Locks actuator in its last position when the air supply falls below a preset value. Each actuator includes a pneumatic pushbutton and contains hardware for local or remote reset connection.

UP1 & UP2: Mechanical latch device with a three-way pneumatic trip valve as the air supply sensor.

UP3, UP4, UP5 & UP6: Uses a three-way pneumatic trip valve as the air supply sensor, that trips one four-way (UP3 and UP4) or two three-way (UP5 and UP6) lock-up valves to lock the actuator in the last position. Includes a pressure switch used to signal an air failure alarm or for a status light.

Alarm Pressure Switch Contact Ratings: 13A @ 115/230 VAC @ 60°C (140°F)
 0.5A @ 110/125VDC @ 60°C (140°F)
 Switch contacts must be derated 1.5A for every 10°C (18°F) rise above 60°C (140°F)

Note: Not available in combination with TZID-C200 Explosion Proof Positioner.

Strip Heaters (Thermostatically Controlled) Available for all except Type UP1 actuators and UP's with TZID-C200 Positioner. The low temperature operative limit can be extended below 0°C (32°F) without heaters if the dew point of the air supply is maintained at least 10°C (18°F) below the minimum expected ambient temperature.

UP2: 1 heater element, 120 VAC, 500 W.

UP3, UP4, UP5 and UP6: 2 heater elements, 120 VAC, 500 W (1000 W total).

Pressure Switch: Part No. 1941099-2 (UP1 and UP2)

Pressure Gages: Instrument (for Type AV1 positioner only) and Output (for positioner) - Part No. 5326605-4 (instrument), Part No. 5326605-6 (output, two required).

Speed Control Orifices: Regulates time constant of positioner and final control element. Installed directly into the positioner output ports. Part No. 5327327-1: 1 mm (0.04 in.). Part No. 5327327-2: Blank - Drill to suit.

Volume Boosters & Quick Exhaust Valves:

To decrease stroke time. (included as standard with TZID-C on UP5/6 Drives)

Accessories

Coalescing

Filter/Regulator: Parker No. 12E37H18AA & PS807P
1/2" NPT connections
40 SCFM capacity
250 psi max. inlet
125 psi max. outlet
with mounting bracket

TABLE 3. Type UP Actuator Shipping Weights

Actuator Type	Shipping Weight kg (lb)
UP10A/10B/10C/104/107	25 (55)
UP105/106/108/109	23 (50)
UP20A/20B/20C/204/207	45 (100)
UP205/206/208/209	43 (95)
UP3 A/3 B/3 C/3 4/3 7	145 (320)
UP3 5/3 6/3 8/3 9	143 (315)
UP4 A/4 B/4 C/4 4/4 7	163 (360)
UP4 5/4 6/4 8/4 9	162 (355)
UP5 A/5 B/5 C/5 4/5 7	336 (741)
UP5 5/5 6/5 8/5 9	334 (736)
UP6 A/6 B/6 C/6 4/6 7	369 (814)
UP6 5/6 6/6 8/6 9	367 (809)

TABLE 4. Option Shipping Weights¹

Option	Shipping Weight kg (lb)
Electric Shaft Position Transmitter	1.8 (4.0)
Pneumatic Shaft Position Transmitter	5.0 (11.0)
Alarm/Travel Switches	1.1 (2.5)
Strip Heaters	1.1 (2.5) for UP2 Actuator 2.0 (4.5) for all others
Air Failure Lock	3.6 (8.0) for UP1 Actuator 5.0 (11.0) for UP2 Actuator 5.9 (13.0) for UP3 and UP4 Actuator 6.8 (15.0) for UP5 and UP6 Actuator

Note: Add these values to those listed in Table 3 where applicable.

Quotation/Ordering Information

To receive a quotation or place an order, indicate type (refer to nomenclature) for each actuator desired. All

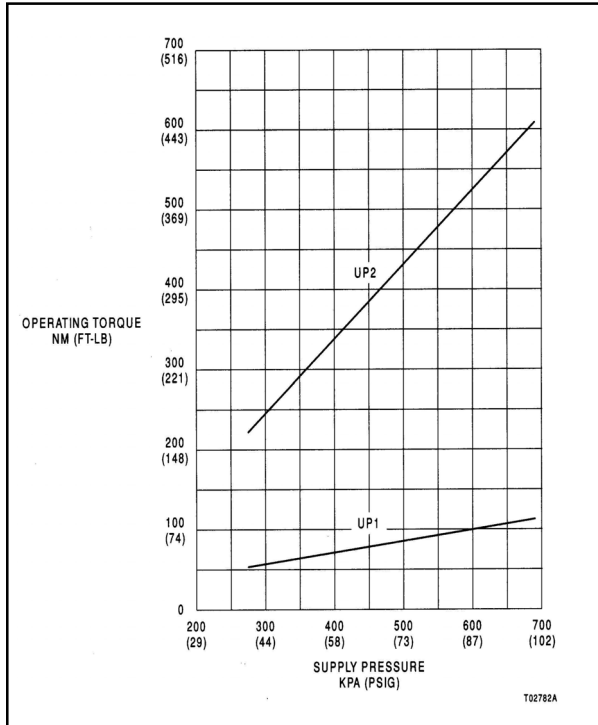


Figure 2. Operating Torque Versus Supply Pressure for Type UP1 and UP2 Actuators

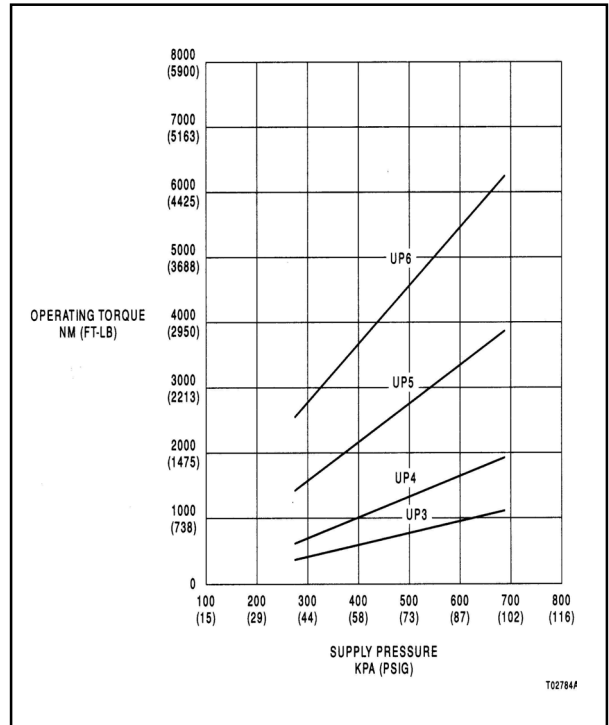


Figure 3. Operating Torque Versus Supply Pressure for Types UP3 through UP6 Actuators

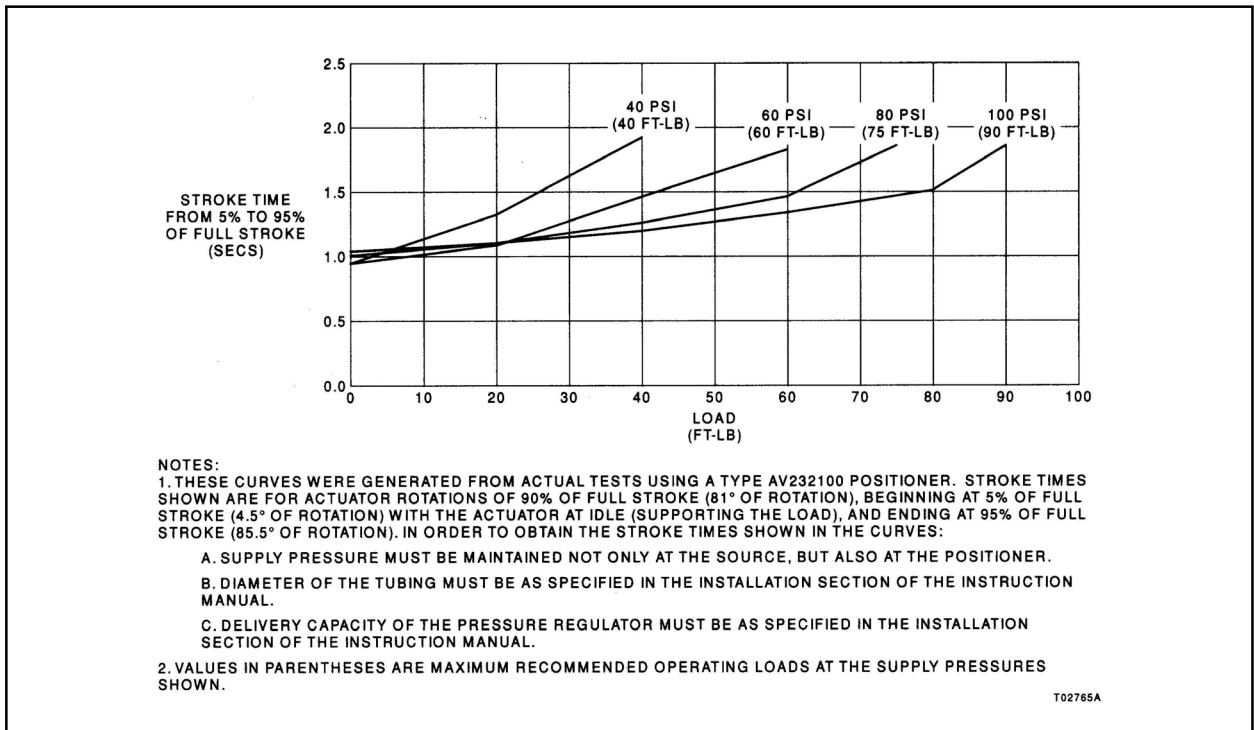


Figure 4. Stroke Times for Type UP1 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

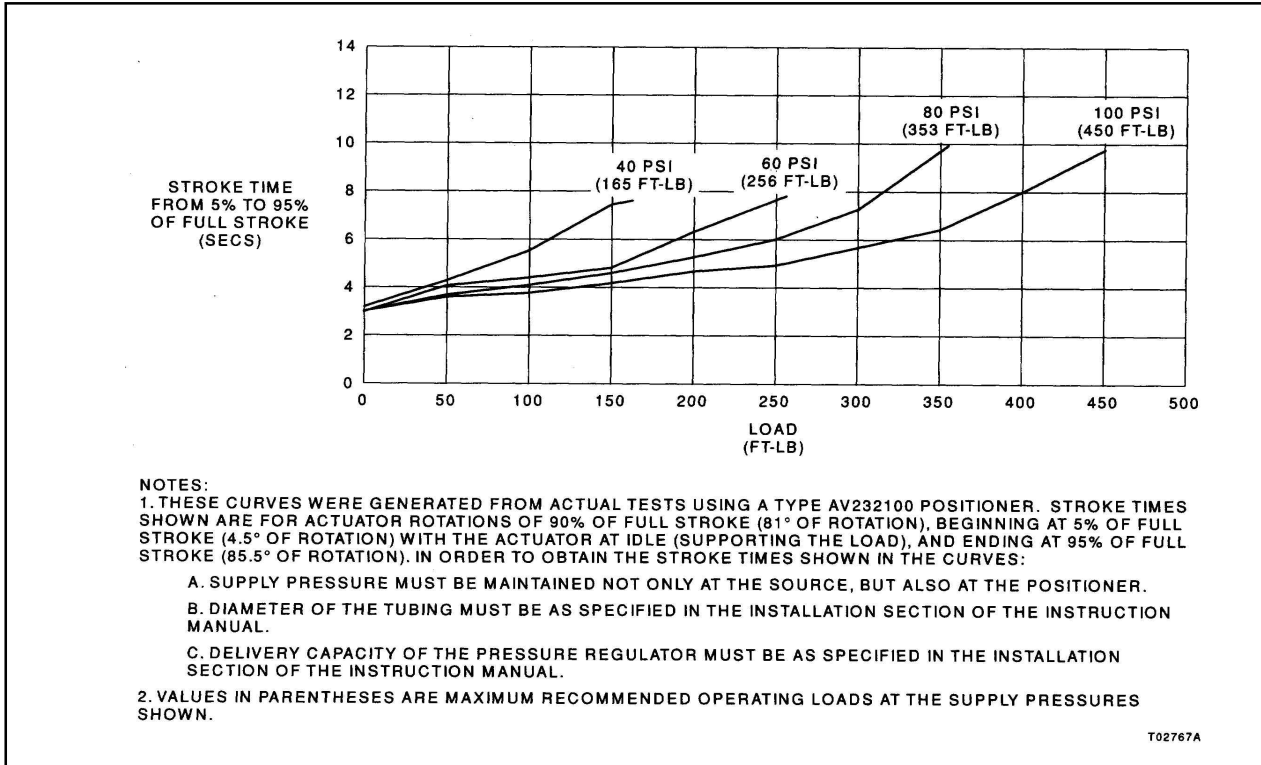


Figure 5. Stroke Times for Type UP2 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

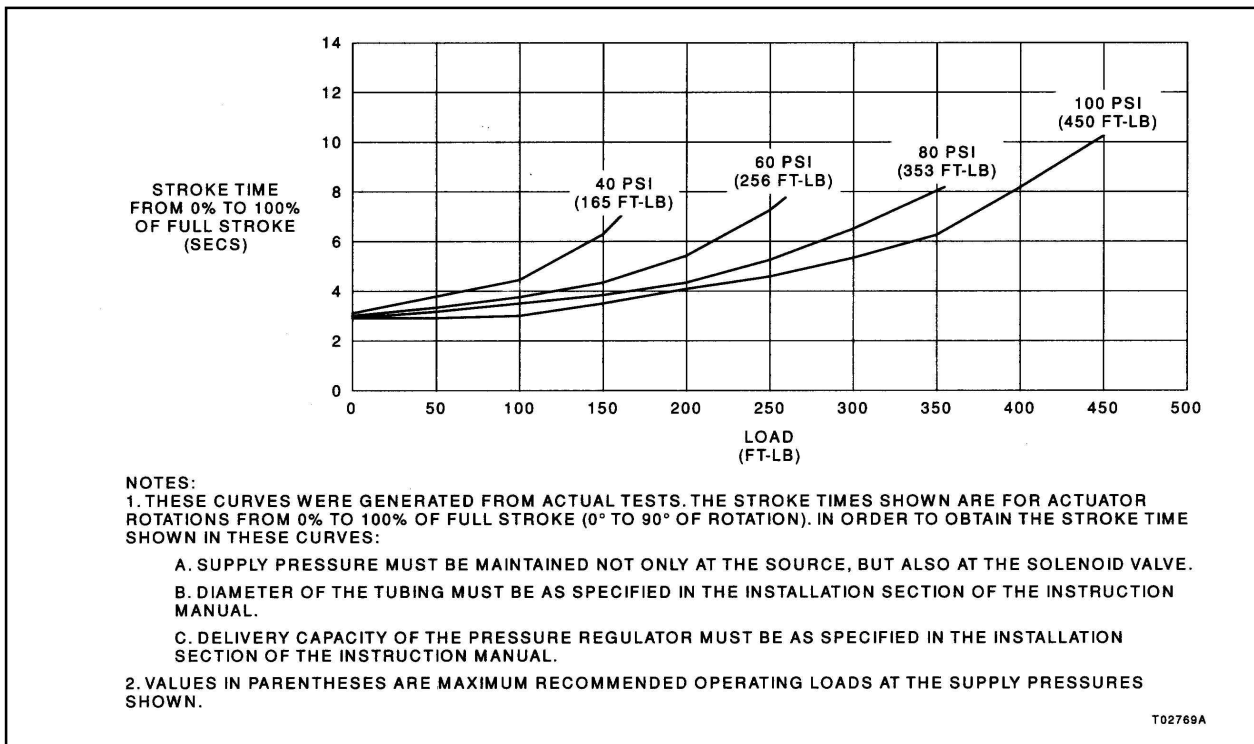


Figure 6. Stroke Times for Type UP2 Actuator with Solenoid Valve

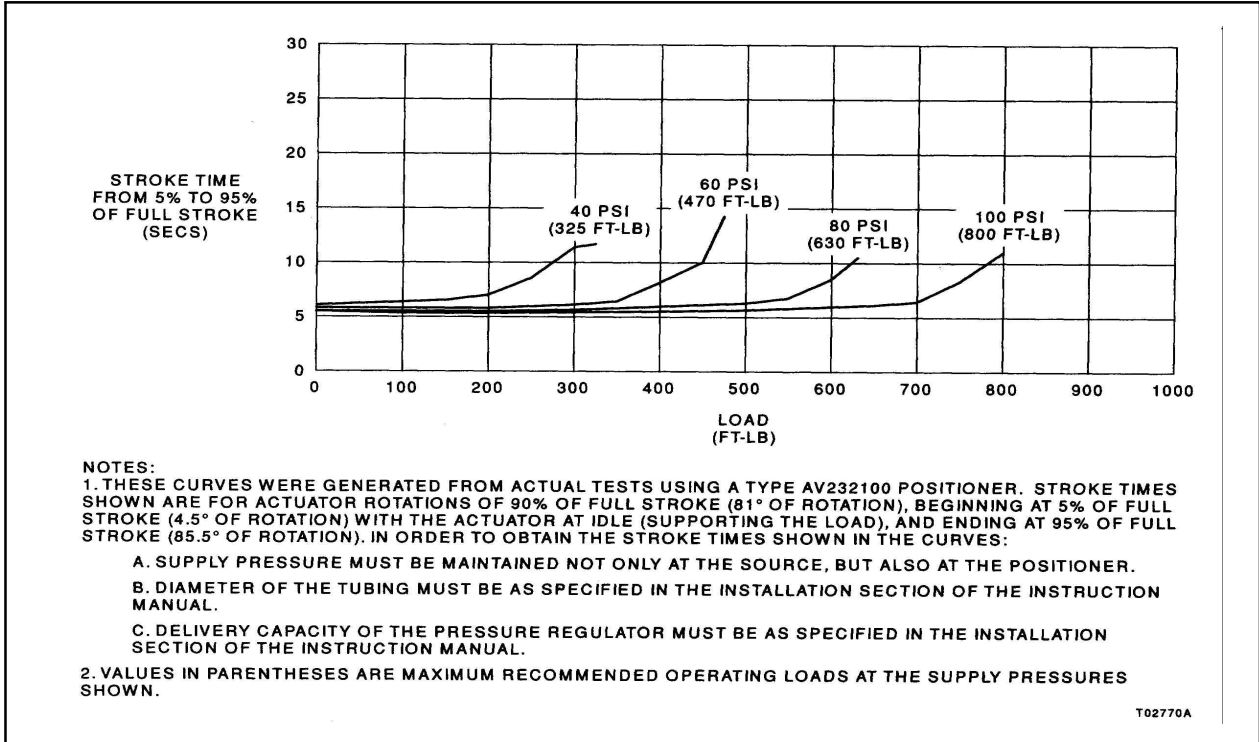


Figure 7. Stroke Times for Type UP3 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

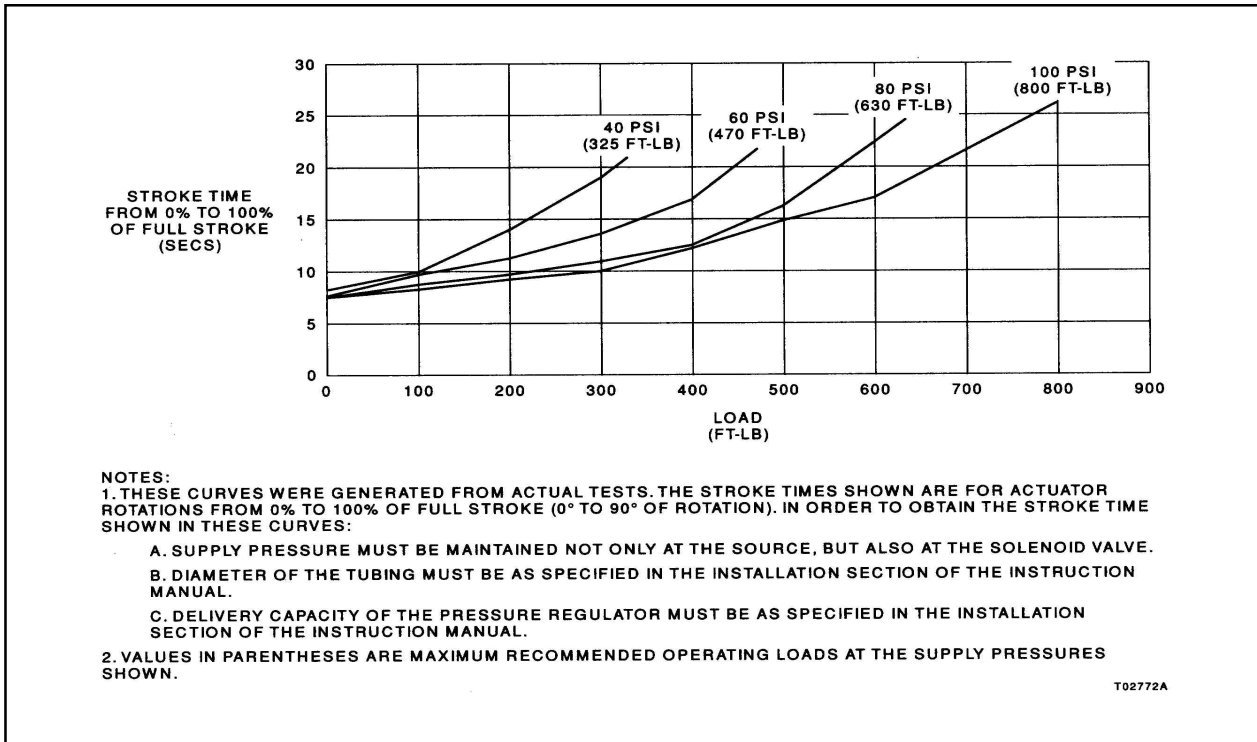


Figure 8. Stroke Times for Type UP3 Actuator with Solenoid Valve

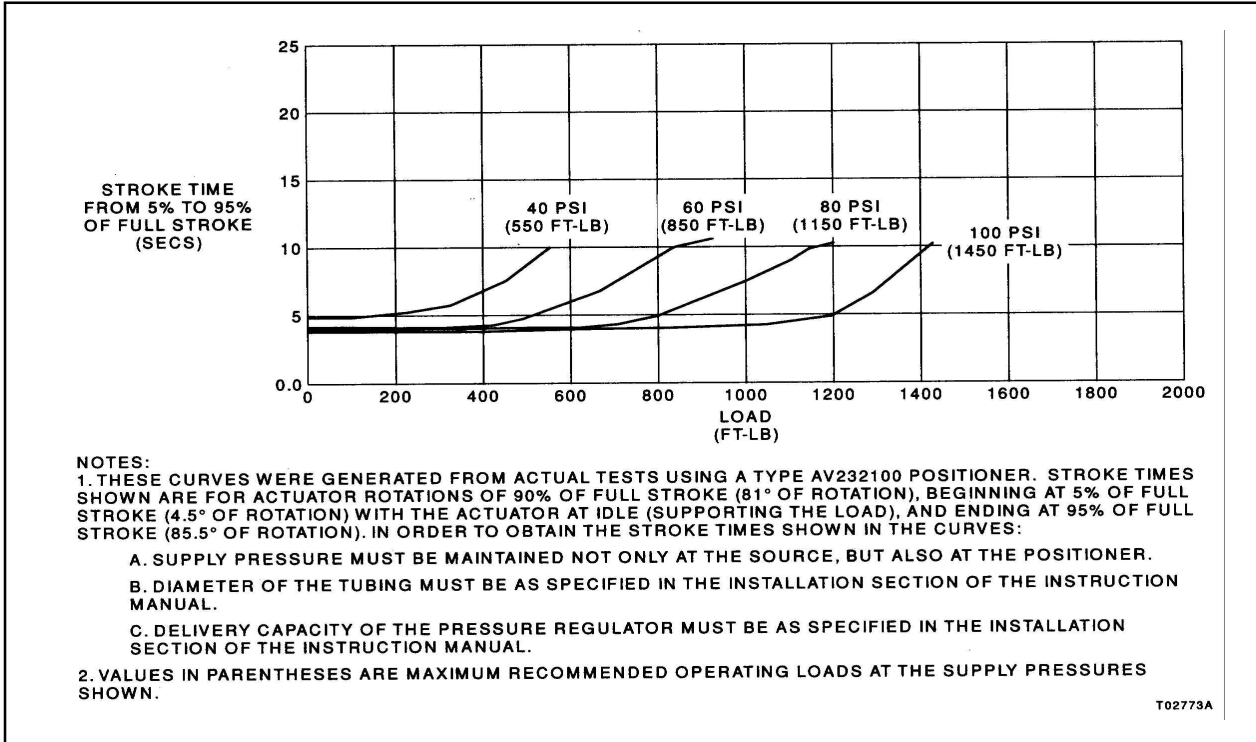


Figure 9. Stroke Times for Type UP4 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

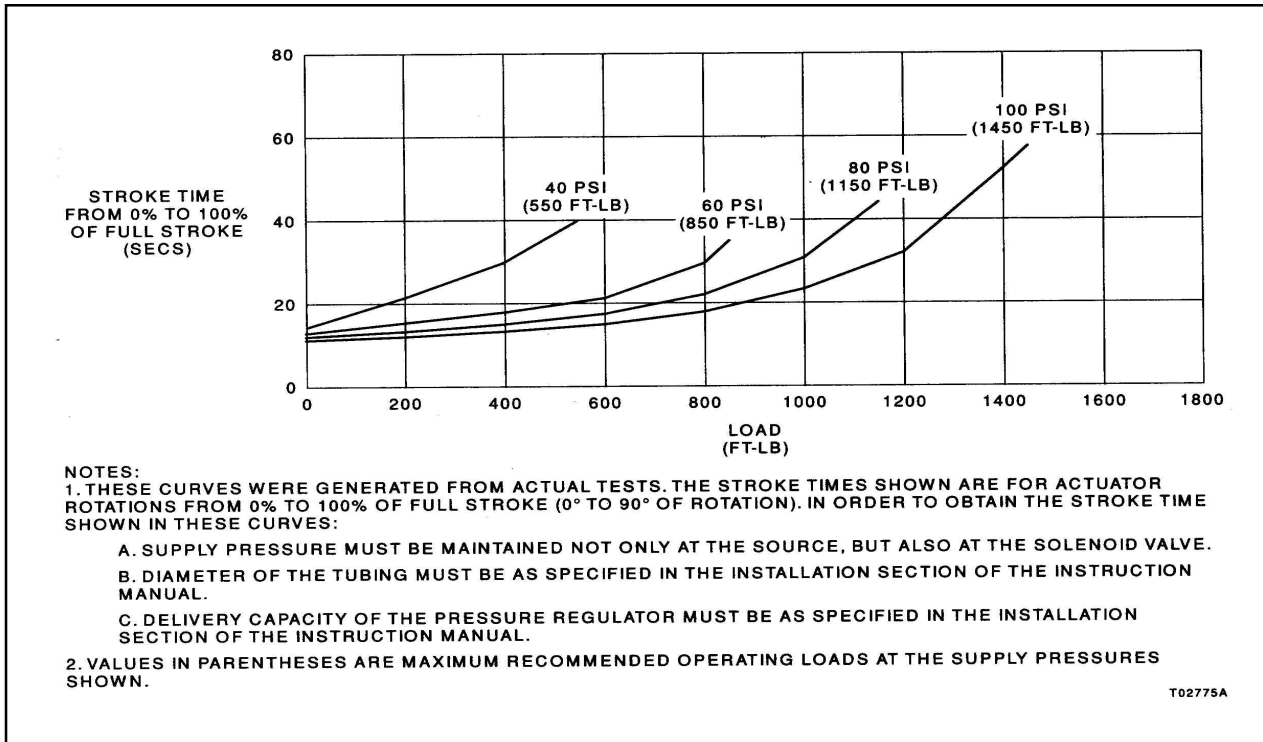


Figure 10. Stroke Times for Type UP4 Actuator with Solenoid Valve

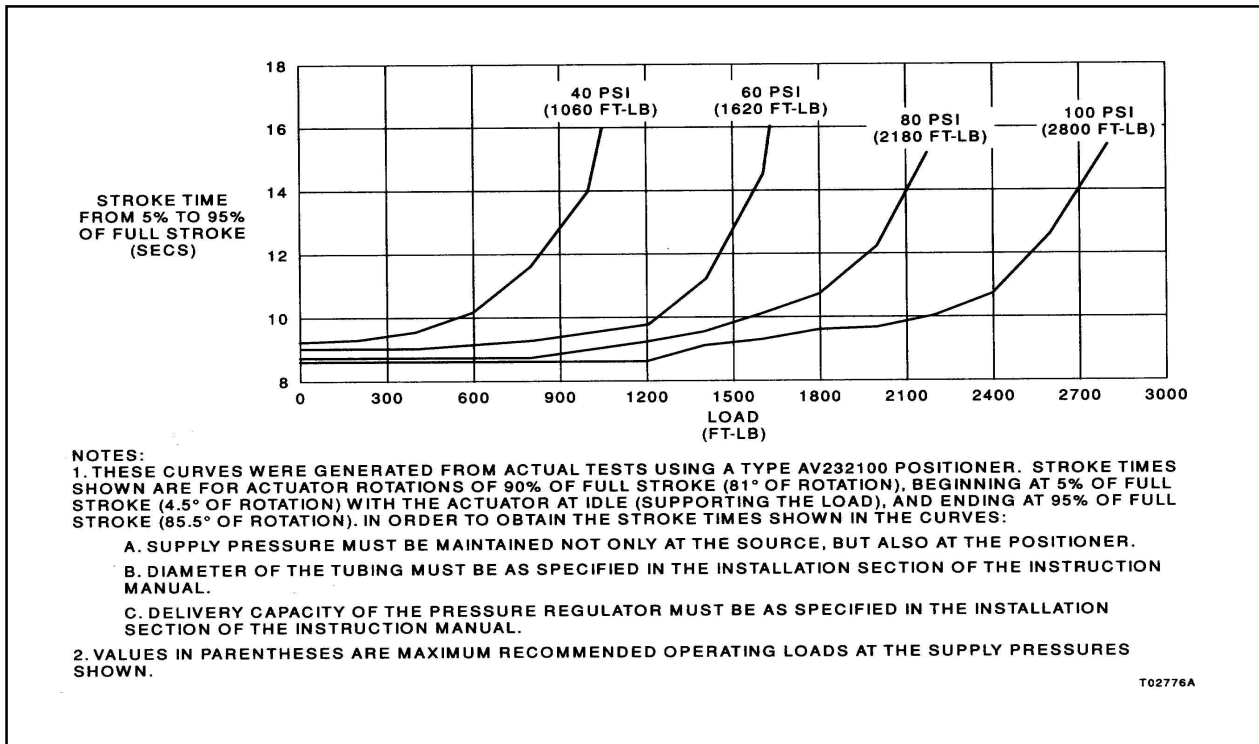


Figure 11. Stroke Times for Type UP5 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

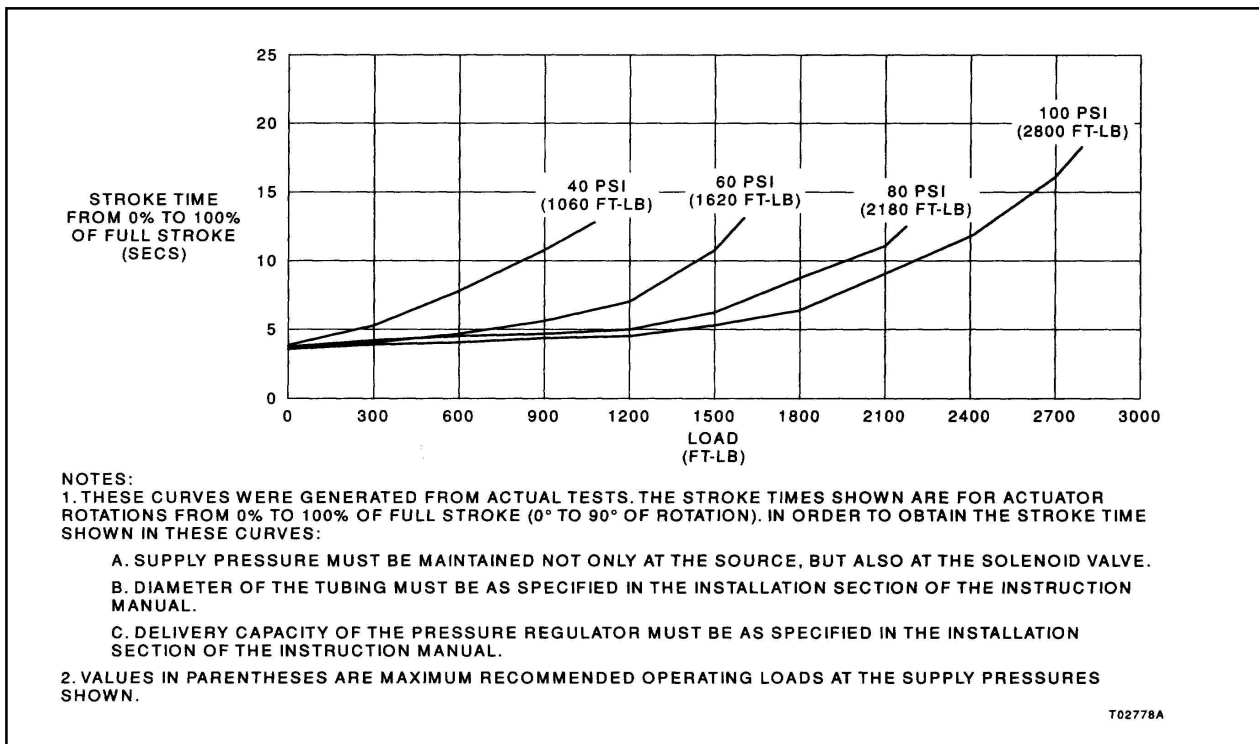


Figure 12. Stroke Times for Type UP5 Actuator with Solenoid Valve

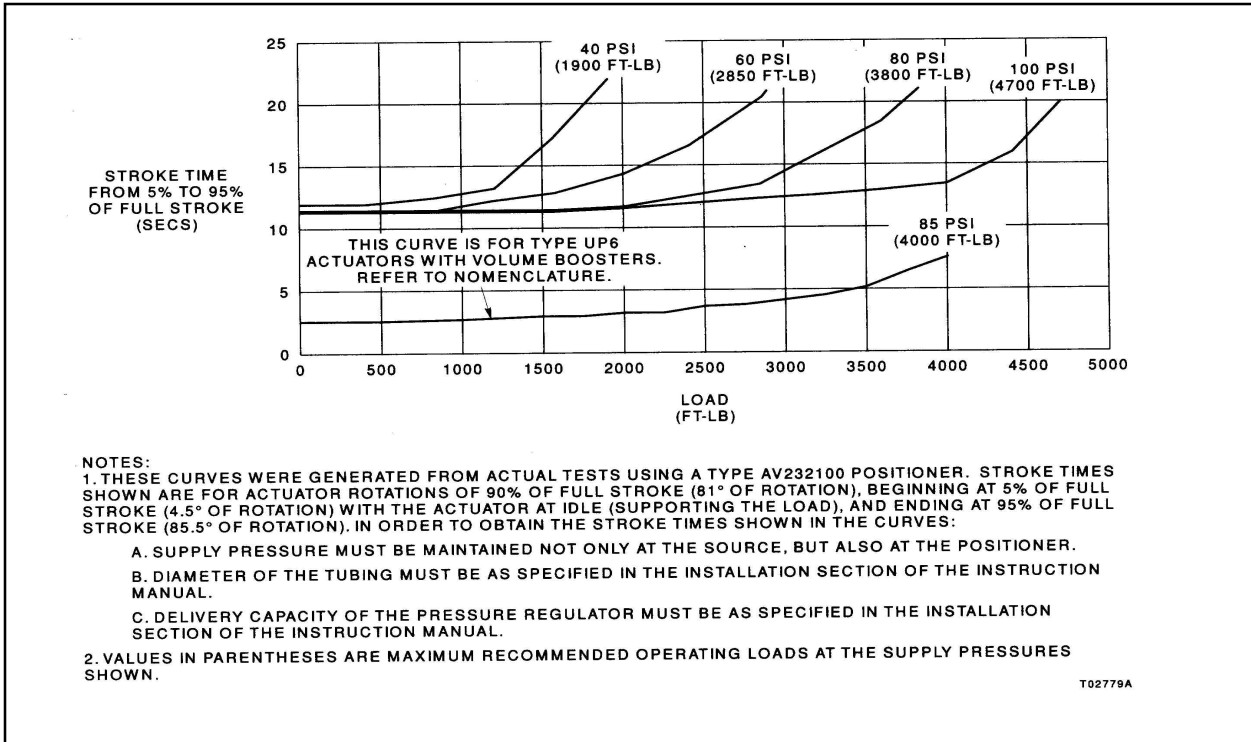


Figure 13. Stroke Times for Type UP6 Actuator with Type AV2 Positioner - 5 to 95% of Stroke

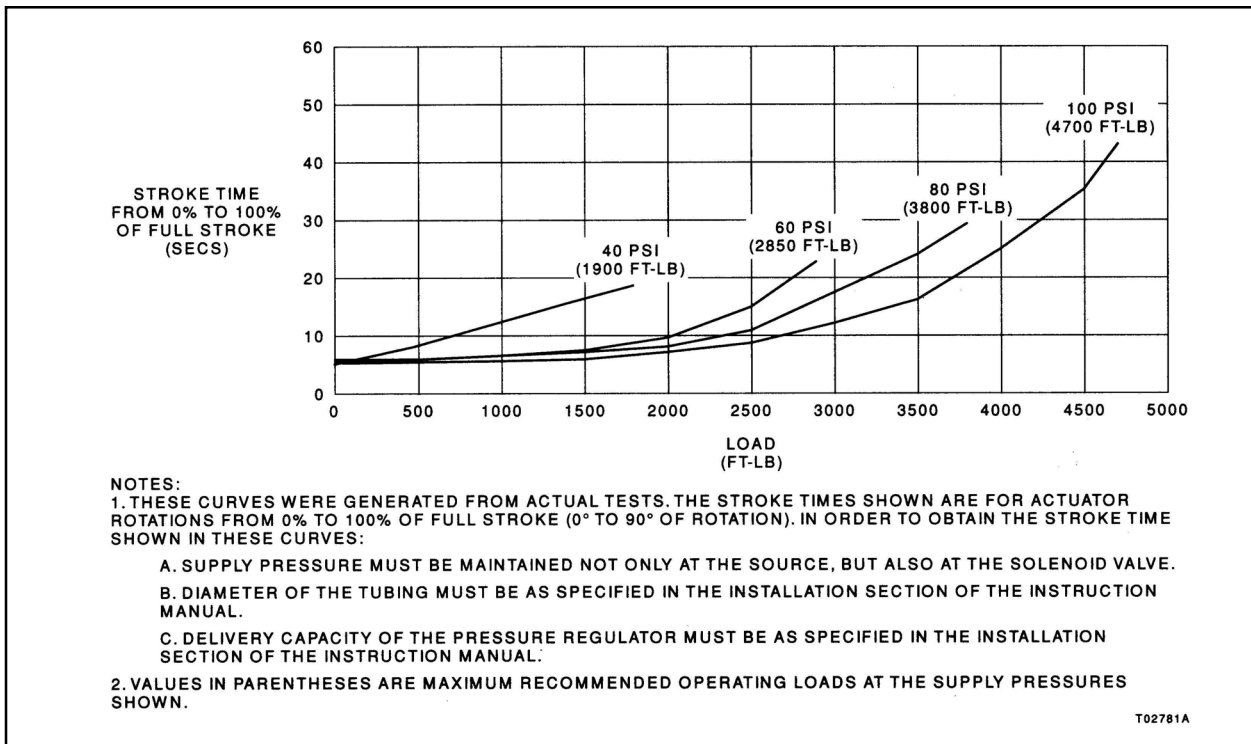


Figure 14. Stroke Times for Type UP6 Actuator with Solenoid Valve

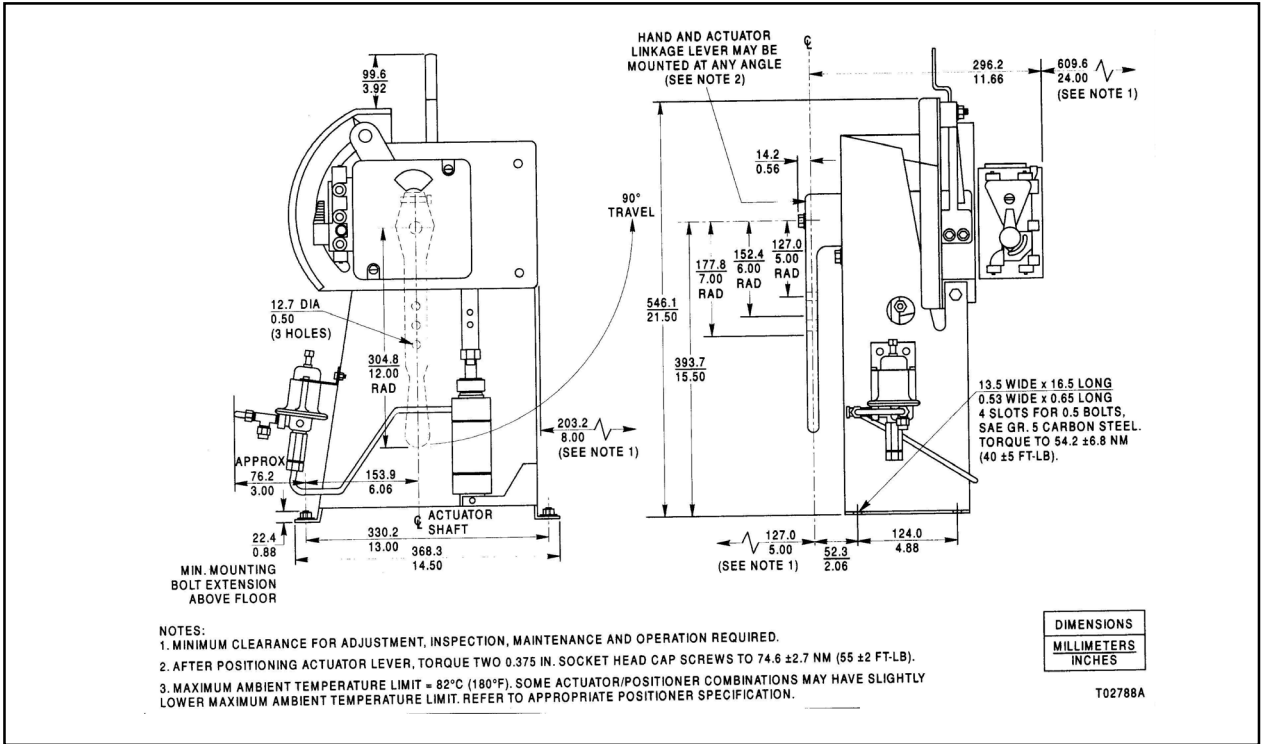


Figure 15. Type UP1 Actuator with Positioner and Air Failure Lock

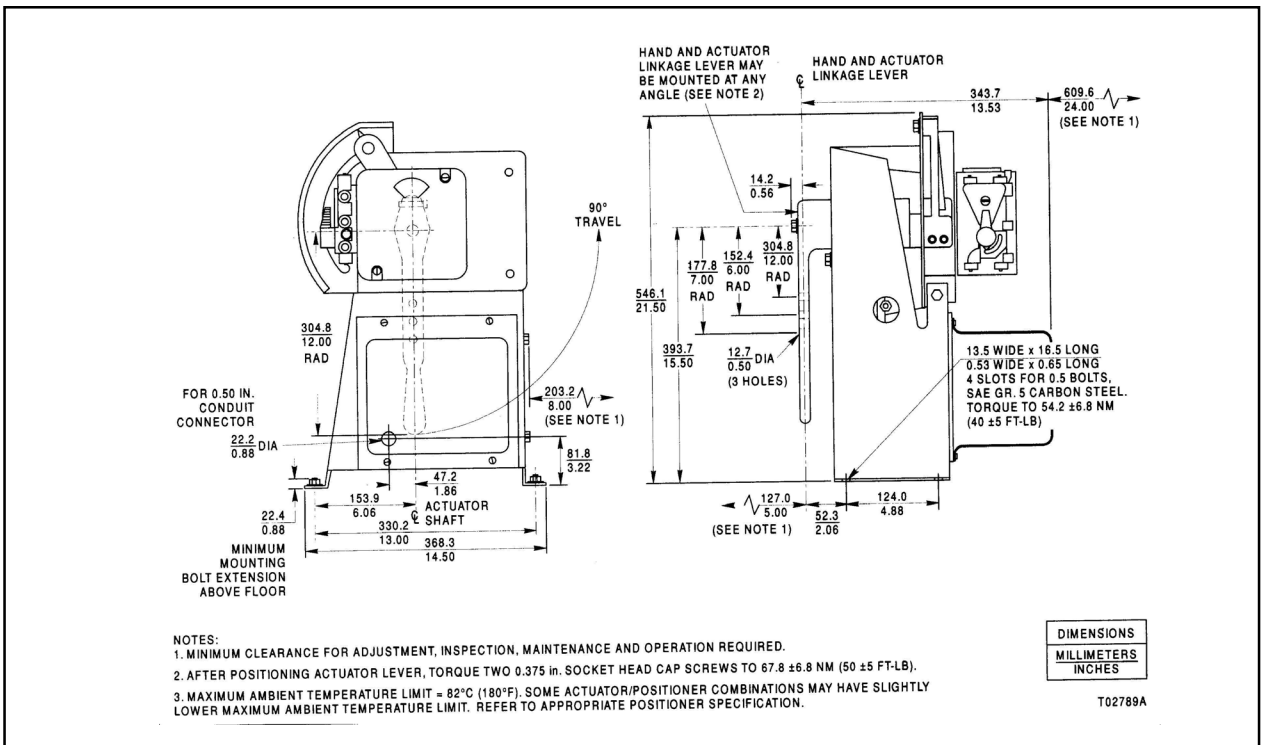


Figure 16. Type UP1 Actuator with Electric Shaft Position Transmitter and Travel Switches

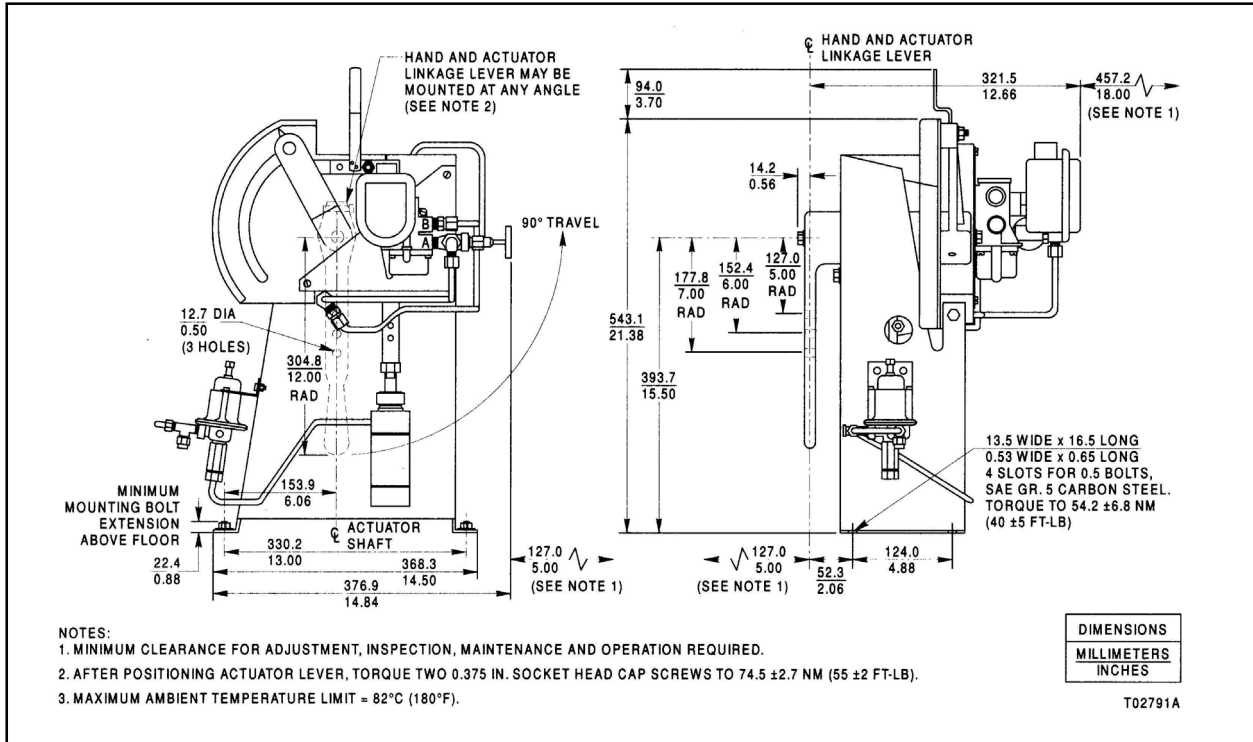


Figure 17. Type UP1 Actuator with Solenoid Valve and Air Failure Lock

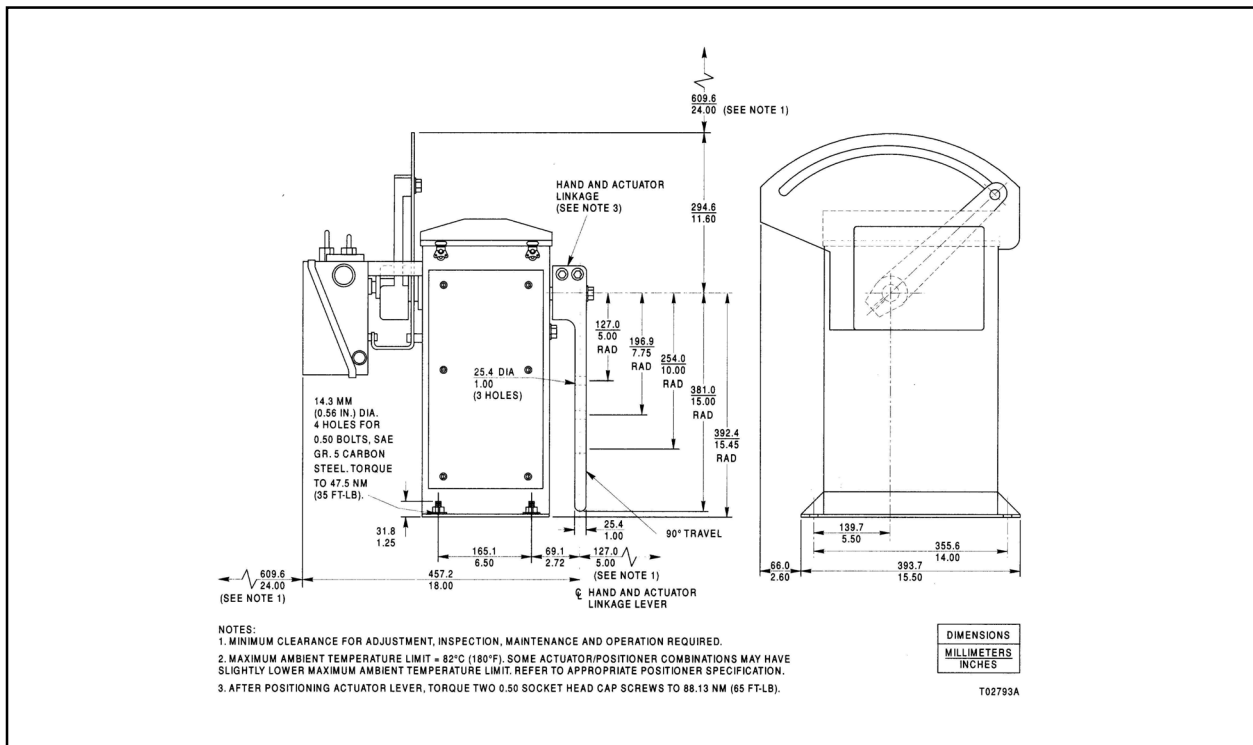


Figure 18. Type UP2 Actuator with Positioner

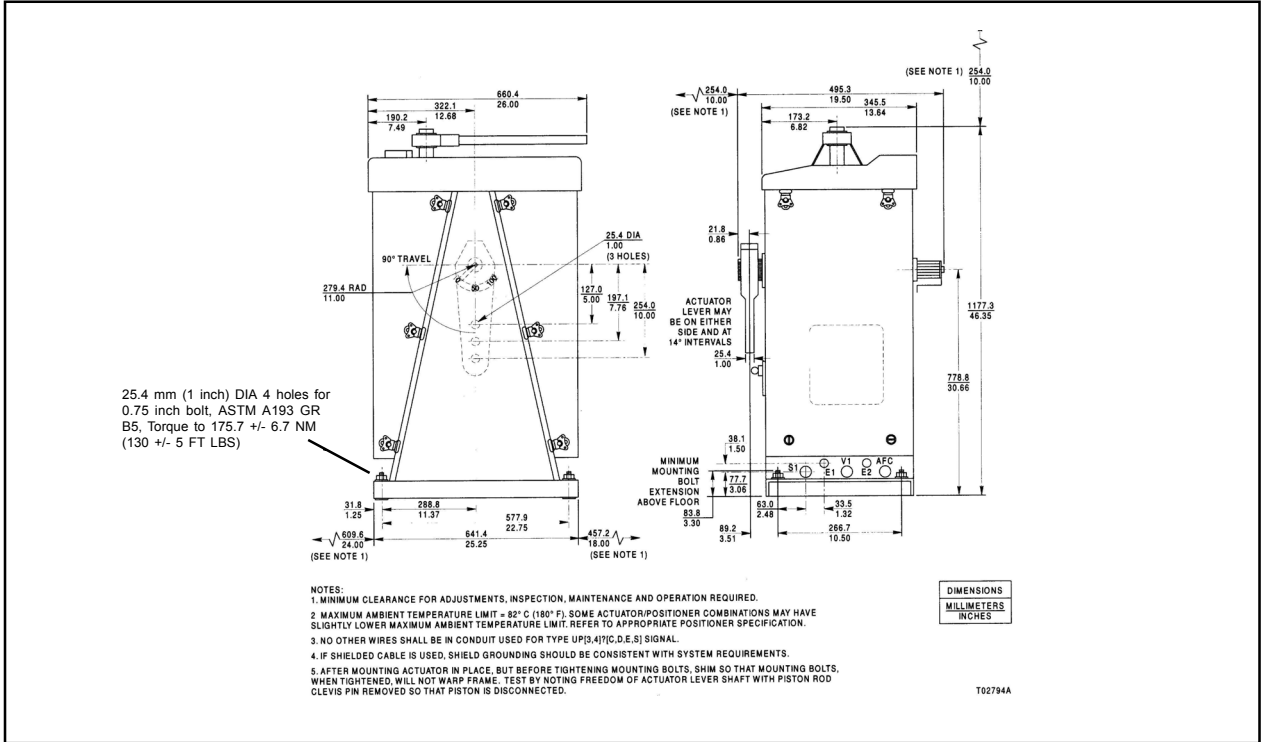


Figure 19. Type UP3 and UP4 Actuators

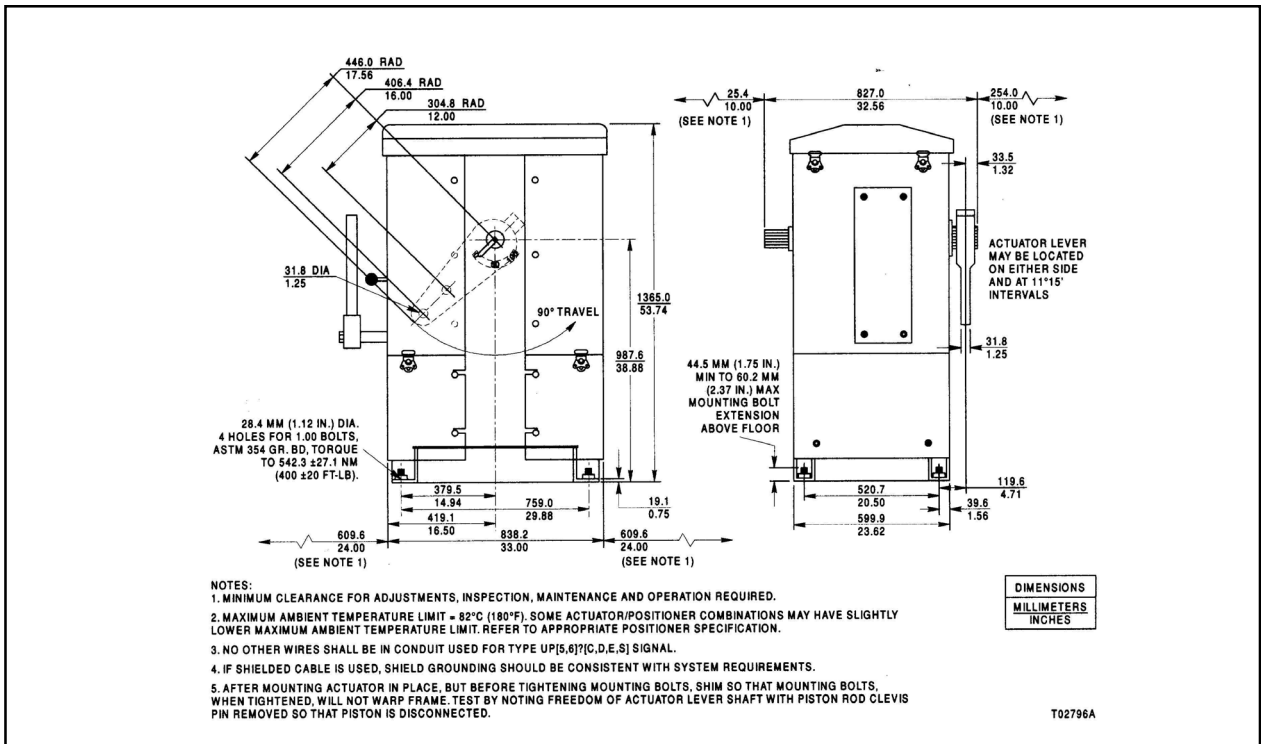
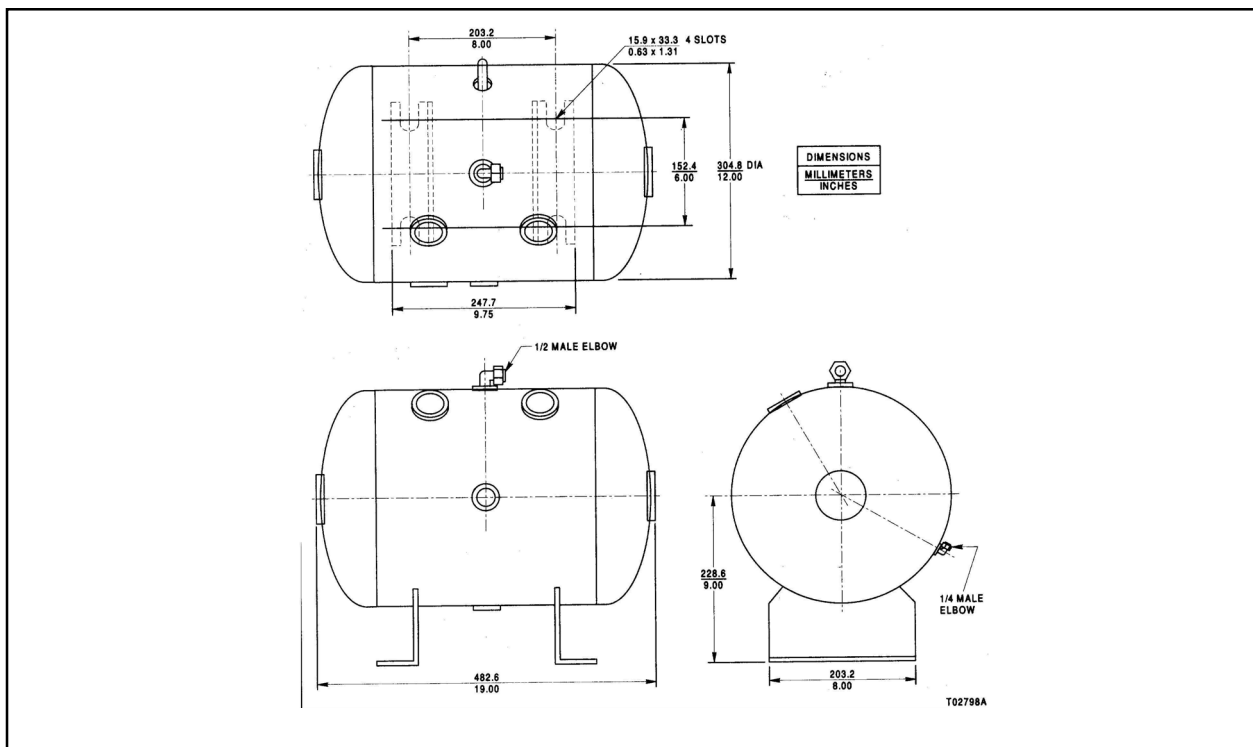
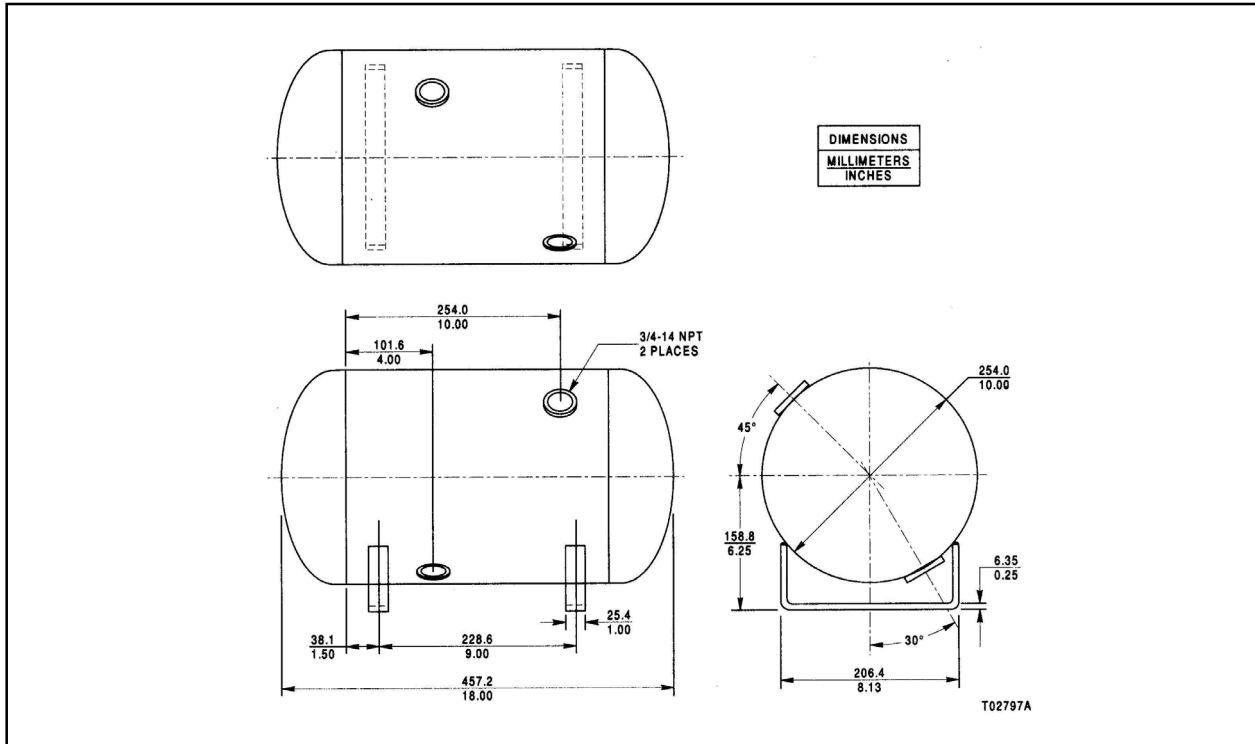


Figure 20. Type UP5 and UP6 Actuators



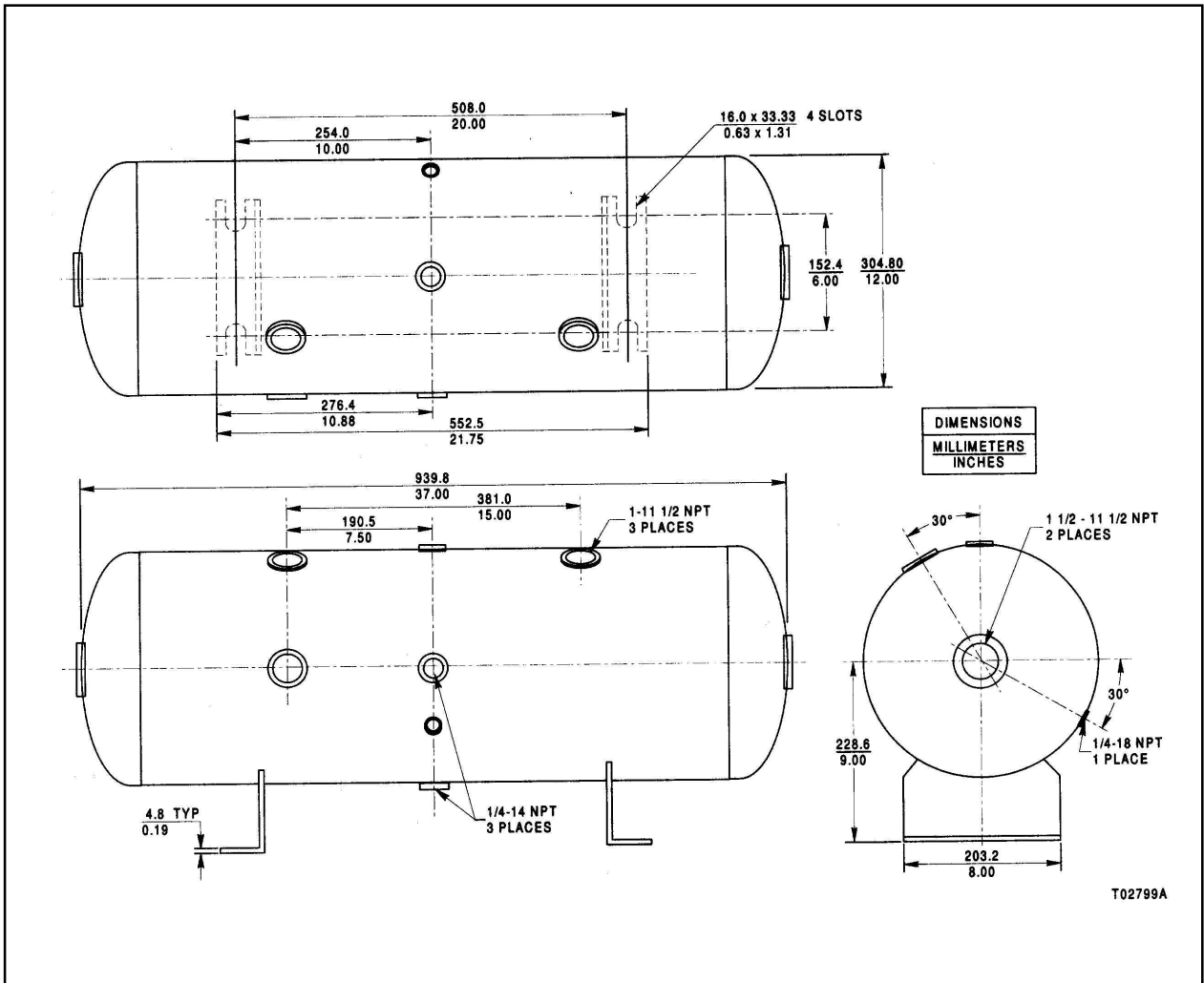


Figure 23. 64.4-Liter (17.0 Gallon) Air Tank for Type UP6 Actuators

Model Number Designation

UP1 - 90 ft./lb. rated Torque @ 100 psig supply with TZID-C option max. 90 psig	UP1	04	05	06	07	08	09	10
Enclosure Rating								
Standard, NEMA 3R		0						
NEMA-4X (Positioner Enclosure Only)		1						
Control Input								
■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0			A					
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0			B					
4-20 mA Characterizable I/P Positioner, AV2321__0 (Fail Open/Closed upon loss of signal)			C					
4-20 mA Characterizable I/P Positioner, AV3321__0 (Fail in place upon loss of signal)			D					
4-20 mA, Smart TZID-C, fail open / close			U					
4-20 mA, Smart TZID-C, fail-in-place			W					
* 4-20 mA Smart TZID-C200, fail open / close			Y	0	0			
* 4-20 mA Smart TZID-C200, fail-in-place			Z	0	0			
On-Off Solenoid (120 Vac), Single Coil			5					
On-Off Solenoid (115/125 Vdc), Single Coil			6					
On-Off Solenoid (120 Vac), Dual Coil			8					
On-Off Solenoid (115/125 Vac), Dual Coil			9					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil			F					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil			G					
Shaft Position Transmitter								
None				0				
Potentiometric Resistive Output (built into AV Positioner, for UP1_ A, B, C, D only)			A					
4-20 mA Output (built into Positioner, for UP1_ A, B, C, D,U, W,Y & Z only)			B					
Adjustable Travel Switches								
None				0				
Include 4 SPDT				1				
Air Failure Lock-Up								
None					0			
Air Failure Lock-up					1			
Actuator Heaters								
None						0		
Special Options								
❖ Stainless Steel tubing fittings								S
Instruction Manual:								
								PN25059
<i>(One copy is supplied, at no cost, with order)</i>								

* Explosion Proof Application Cl 1, Div. 1 Gr C-G
■ KPA = psi x 6.895
● 24 V supply required (not included)
❖ Consult Factory for details

Linkage Accessories:

Light Duty Driven Lever, for interconnecting between linkage and the final control element

For shaft diameter 0.500" to 0.875" (12.7 - 22.2 mm), 0.188" (4.77 mm) Groov pin diameter	5328690__1
For shaft diameter 0.938" to 1.062" (23.8 - 26.9 mm), 0.312" (7.97 mm) Groov pin diameter	5328690__2
For shaft diameter 1.125" to 1.500" (28.6 - 38.1 mm), 0.312" (7.92 mm) Groov pin diameter	5328690__3

Light Duty Linkage Components

Clevis	5313902__1
Clevis Pin Assembly	5313974__1
Ball and Socket	5323123__1
Pipe Connector, 7" (2.13 m) long	5313940__1
Pipe Connector, 10' 6" (2.3 m) long	5313940__2
Adapter Assembly	5314282__1
Reinforcing Sleeve	5328639__1
Rod Connector, 3' 7" (1.09 m) long	5313932__16

NOTE: For complete connecting linkage dimensions, specifications and application examples, see Product Specification

G81-5-1

Accessories:

Supply Air Regulator/Filter-Coalescing with gage (maximum inlet pressure 250 psi) Maximum outlet pressure 125 psi, 1/2 NPT (high capacity), 40 SCFM Parker No. 12E37H18AA / PS807P	1951439__1
Pressure Gages - for Actuators with Positioners	
Instrument - 0-30 psig range	5326605__4
Supply - 0-160 psig range	5326605__5
Output - 0-160 psig range	5326605__6
Speed Control Orifices - Regulates time constant of final control element with Positioners. Installs directly into Positioner Port.	
0.040 in hole	5327327__1
No hole (drill to suit)	5327327__2

Spare Parts:

Rotary Vane Rebuild Kit	258244__1
Shaft O-Ring, 2 required (contained in above kit)	341816__212
Vane O-Ring, 1 required (contained in above kit)	1951631__425
Lubricant (contained in above kit)	199354__1
Sealant (contained in above kit)	199926__1
0.250" O.D. Aluminum Tubing (3' required)	R1021-0022
Vane Actuator	5328575__1

Tagging Options: See UP Tagging Option Price Sheets

Model Number Designation

UP2 - 450ft./lb. rated Torque @ 100 psig supply
! for TZID-C option refer to not below

UP2 04 05 06 07 08 09 10

Enclosure Rating

Standard, NEMA 3R 0
NEMA-4X (Positioner Enclosure Only) 1

Control Input

■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0 A
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0 B
4-20 mA Characterizable I/P Positioner, AV2321__0
(Fail Open/Closed upon loss of signal) C
4-20 mA Characterizable I/P Positioner, AV3321__0
(Fail in place upon loss of signal) D
4-20 mA, Smart TZID-C, fail open / close U
4-20 mA, Smart TZID-C, fail-in-place W
* 4-20 mA Smart TZID-C200, fail open / close Y 0 0
* 4-20 mA Smart TZID-C200, fail-in-place Z 0 0
On-Off Solenoid (120 Vac), Single Coil 5
On-Off Solenoid (115/125 Vdc), Single Coil 6
On-Off Solenoid (120 Vac), Dual Coil 8
On-Off Solenoid (115/125 Vac), Dual Coil 9
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil F
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil G

Shaft Position Transmitter

None 0
Potentiometric Resistive Output (Built into Positioner,
for UP2_ A, B, C, D only) A
● 4-20 mA Output (Built into AV/TCIDC Positioners,
for UP2_ A, B, C, D, U, W, Y & Z only) B
3-15 psig Pneumatic Position Transmitter Output
(AV112000 Positioner) (For UP20A only) C

Adjustable Travel Switches

None 0
Include 4 SPDT 1

Air Failure Lock-up

None 0
Air Failure Lock-up 1
Reserve Air Tank (goes to 0 or 100% upon loss of air supply) 4

Actuator Heaters

None 0
120 Vac 1
240 Vac 2

Special Options

❖ Stainless Steel tubing fittings S

Instruction Manual: PN25059

(One copy is supplied, at no cost, with order)

! Note: The max. supply pressure for TZID-C is 90 psi (g)

* Explosion Proof Application Cl 1, Div. 1 Gr C-G

■ KPA = psi x 6.895

● 24V supply required (not included)

❖ Consult factory for details

Model Number Breakdown

UP3- 800 ft./lb. rated Torque @ 100 psig supply ! with TZID-C option max. 90 psig	UP3	04	05	06	07	08	09	10
Enclosure Rating								
Standard, NEMA 3R		0						
NEMA-4X		1						
Control Input								
■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0			A					
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0			B					
4-20 mA Characterizable I/P Positioner, AV2321__0 (Fail Open/Closed upon loss of signal)			C					
4-20 mA Characterizable I/P Positioner, AV3321__0 (Fail in place upon loss of signal)			D					
4-20 mA, Smart TZID-C, fail open / close			U					
4-20 mA, Smart TZID-C, fail-in-place			W					
* 4-20 mA Smart TZID-C200, fail open / close			Y		0		0	
* 4-20 mA Smart TZID-C200, fail-in-place			Z		0		0	
On-Off Solenoid (120 Vac), Single Coil			5					
On-Off Solenoid (115/125 Vdc), Single Coil			6					
On-Off Solenoid (120 Vac), Dual Coil			8					
On-Off Solenoid (115/125 Vac), Dual Coil			9					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil			F					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil			G					
Shaft Position Transmitter								
None				0				
Potentiometric Resistive Output (Built into AV Positioner, for UP3 _ A, B, C, D only)				A				
4-20 mA Output (Built into Positioner, for UP3 _ A, B, C, D,U,W,Y & Z only)				B				
3-15 psig Pneumatic Position Transmitter Output (AV112000 Positioner) (For UP30A only)				C				
Adjustable Travel Switches								
None					0			
Include 4 SPDT					1			
Aire Failure Lock-up								
None						0		
Air Failure Lock-up						1		
Reserve Air Tank (goes to 0 or 100% upon loss of air supply)						4		
Actuator Heaters								
None							0	
120 Vac							1	
240 Vac							2	
Special Options								
❖ Stainless Steel tubing fittings								S
Instruction Manual:	PN25059							
<i>(One copy is supplied, at no cost, with order)</i>								

* Explosion Proof Application Cl 1, Div. 1 Gr C-G
■ KPA = psi x 6.895
● 24V supply required (not included)
❖ Consult factory for details

Model Number Breakdown

	UP4	04	05	06	07	08	09	10
UP4- 1450 ft./lb. rated Torque @ 100 psig supply with TZID-C option max. 90 psig								
Enclosure Rating								
Standard, NEMA 3R		0						
NEMA-4X		1						
Control Input								
■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0			A					
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0			B					
4-20 mA Characterizable I/P Positioner, AV2321__0 (Fail Open/Closed upon loss of signal)			C					
4-20 mA Characterizable I/P Positioner, AV3321__0 (Fail in place upon loss of signal)			D					
4-20 mA, Smart TZID-C, fail-safe			U					
4-20 mA, Smart TZID-C, fail-in-place			W					
* 4-20 mA Smart TZID-C200, fail open / close			Y	0		0		
* 4-20 mA Smart TZID-C200, fail-in-place			Z	0		0		
On-Off Solenoid (120 Vac), Single Coil			5					
On-Off Solenoid (115/125 Vdc), Single Coil			6					
On-Off Solenoid (120 Vac), Dual Coil			8					
On-Off Solenoid (115/125 Vac), Dual Coil			9					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil			F					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil			G					
Shaft Position Transmitter/AVS Hardware Options								
None				0				
Potentiometric Resistive Output (Built into AV Positioner, for UP4 _ A, B, C, D only)			A					
4-20 mA Output (Built into Positioner, for UP4 _ A, B, C, D,U, W, Y & Z only)			B					
3-15 psig Pneumatic Position Transmitter Output (AV112000 Positioner) (For UP4_A only)			C					
Adjustable Travel Switches								
None				0				
Include 4 SPDT				1				
Air Failure Lock-up								
None						0		
Air Failure Lock-up						1		
Reserve Air Tank (goes to 0 or 100% upon loss of air supply)						4		
Actuator Heaters								
None							0	
120 Vac							1	
240 Vac							2	
Special Options								
❖ Stainless Steel tubing fittings								S
Instruction Manual: PN25059								
<i>(One copy is supplied, at no cost, with order)</i>								

* Explosion Proof Application Cl 1, Div. 1 Gr C-G
■ KPA = psi x 6.895
● 24V supply required (not included)
❖ Consult factory for details

Model Number Designation

UP5- 2800 ft./lb. rated Torque @ 100 psig supply with TZID-C option max. 90 psig	UP5	04	05	06	07	08	09	10
Enclosure Rating								
Standard, NEMA 3R		0						
NEMA-4X		1						
Control Input								
■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0			A					
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0			B					
4-20 mA Characterizable I/P Positioner, AV2321__0 (Fail Open/Closed upon loss of signal)			C					
4-20 mA Characterizable I/P Positioner, AV3321__0 (Fail in place upon loss of signal)			D					
4-20 mA, Smart TZID-C, fail-safe			U					
4-20 mA, Smart TZID-C, fail-in-place			W					
* 4-20 mA Smart TZID-C200, fail open / close			Y		0		0	
* 4-20 mA Smart TZID-C200, fail-in-place			Z		0		0	
On-Off Solenoid (120 Vac), Single Coil			5					
On-Off Solenoid (115/125 Vdc), Single Coil			6					
On-Off Solenoid (120 Vac), Dual Coil			8					
On-Off Solenoid (115/125 Vac), Dual Coil			9					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil			F					
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil			G					
Shaft Position Transmitter/AVS Hardware Options								
None				0				
Potentiometric Resistive Output (Built into AV Positioner, for UP5_ A, B, C, D only)			A					
4-20 mA Output (Built into Positioner, for UP5_ A, B, C, D, U, W, Y & Z only)			B					
3-15 psig Pneumatic Position Transmitter Output (AV112000 Positioner) (For UP5_A only)			C					
Adjustable Travel Switches								
None					0			
Include 4 SPDT					1			
Air Failure Lock-up								
None						0		
Air Failure Lock-up						1		
Reserve Air Tank (goes to 0 or 100% upon loss of air supply)						4		
Actuator Heaters								
None							0	
120 Vac							1	
240 Vac							2	
Special Options								
❖ Stainless Steel tubing fittings								S
Instruction Manual:	PN25059							
<i>(One copy is supplied, at no cost, with order)</i>								

* Explosion Proof Application Cl 1, Div. 1 Gr C-G
■ KPA = psi x 6.895
● 24V supply required (not included)
❖ Consult factory for details

Model Number Designation

UP6- 4700 ft./lb. rated Torque @ 100 psig supply with TZID-C option max. 90 psig		UP6	04	05	06	07	08	09	10
Enclosure Rating									
Standard, NEMA 3R			0						
NEMA-4X			1						
Control Input									
⌘ None (Slave Drive)			0						
■ 3-15 psig Characterizable Pneumatic Positioner, AV1121__0			A						
■ 3-27 psig Characterizable Pneumatic Positioner, AV1221__0			B						
4-20 mA Characterizable I/P Positioner, AV2321__0 (Fail Open/Closed upon loss of signal)			C						
4-20 mA Characterizable I/P Positioner, AV3321__0 (Fail in place upon loss of signal)			D						
4-20 mA, Smart TZID-C, fail-safe			U						
4-20 mA, Smart TZID-C, fail-in-place			W						
* 4-20 mA Smart TZID-C200, fail open / close			Y			0		0	
* 4-20 mA Smart TZID-C200, fail-in-place			Z			0		0	
On-Off Solenoid (120 Vac), Single Coil			5						
On-Off Solenoid (115/125 Vdc), Single Coil			6						
On-Off Solenoid (120 Vac), Dual Coil			8						
On-Off Solenoid (115/125 Vac), Dual Coil			9						
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Single Coil			F						
On-Off Solenoid (220 Vac, 50 Hz/240 Vac, 60 Hz), Dual Coil			G						
Shaft Position Transmitter/AVS Hardware Options									
None			0						
Potentiometric Resistive Output (Build into AV Positioner, for UP6__A, B, C, D only)			A						
4-20 mA Output (Build into Positioner, for UP6__A, B, C, D, U,W,Y & Z only)			B						
3-15 psig Pneumatic Position Transmitter Output (AV112000 Positioner) (For UP6__A only)			C						
Adjustable Travel Switches									
None			0						
Include 4 SPDT			1						
† Air Failure Control/Volume Boosters									
None			0						
Air Failure Lock-up			1						
Volume Boosters			2						
Air Failure Lock-up and Volume Boosters			3						
Reserve Air Tank (goes to 0 or 100% upon loss of air supply)			4						
Actuator Heaters									
None			0						
120 Vac			1						
240 Vac			2						
Special Options									
❖ Stainless Steel tubing fittings									S
Instruction Manual:		PN25059							
<i>(One copy is supplied, at no cost, with order)</i>									

* Explosion Proof Application Cl 1, Div 1 Gr C-G
 ⌘ Includes master/slave installation kit, P/N 258458-1
 ■ KPA = psi x 6.895
 ● 24V supply required (not included)
 ❖ Consult factory for details

Notes

Notes

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