

CONOFLOW PNEUMATIC LEVER ACTUATORS GB52SC - GB53SC Series



Conoflow's Pneumatic Lever Actuators are rugged and powerful units used to automatically position dampers, louvers, variable pitch fans and to make various mechanical adjustments to process machinery. Low profile (only 18" high) requires less headroom. A sturdy ductile iron yoke with large mounting base provides rigid mounting. The steel lever arm has eight take-off positions for stroke flexibility.

The Lever Actuator is a combination piston actuator and lever mechanism. These actuators are available in piston diameters of 6" and 8" with a maximum lever travel of 12". Force produced is a function of the supply pressure which may be varied from 20 to 100 PSI (137 to 690 kPa) and the lever take-off position.

The actuator assembly is completely enclosed to protect all moving parts from corrosive atmospheres and adverse weather conditions. All exterior parts are coated with a corrosion-resistant paint.

OPTIONAL ACCESSORIES:

- 1) Model GFH60XTKEGI Airpak® (Filter-Regulator) with gauge, specify 0-60 or 0-125 PSI (0-414 or 0-861 kPa) range. (Bracket mounting is standard.)
- 2) I/P or E/P Transducer. Specify range. (See Transducer Data Sheets).
- 3) Airlock Feature, Solenoid Valve, Limit Switch and other accessories are available, consult the factory.

DIMENSIONAL DATA - ADVERTISING DRAWINGS:

GB52SC - GB53SC: A7-111
Piping: A50-48

SPECIFICATIONS

OPERATING CHARACTERISTICS	GB52SC(1)	GB53SC(1)
Piston Diameter	6"	8"
Effective Area	28.5 sq. in. (183.37 CM ²)	50 sq. in. (322.58 CM ²)
Air Consumption w/Positioner	Static: 0.30 SCFM (0.008 m ³ /min) at 40 PSI (275 kPa) supply Dynamic: 5.0 SCFM (0.142 m ³ /min) (max) at 100 PSI (690 kPa) supply	
Positioner	Suitable for all standard instrument air signals; direct or reverse acting, top or bottom loading (2)	
Standard Accessories (For units with Positioners only)	Integrally piped cushion-loading regulator and gauge (for units with positioners only)	
Materials of Construction	Cylinder: Aluminum Piston: Aluminum Stem: 303 Stainless Steel Lipseals: Buna "N"	Yoke and Base: One Piece Ductile Iron Lever: Steel Fulcrum Arm: Steel Lever and Fulcrum Pins: Steel
Approximate Shipping Weight	30 lbs. (14 Kg)	40 lbs. (18 Kg)

NOTES:

1. For catalog number make-up, refer to Control Engineering Data Sheets.
 - (A) Lever type actuators utilize clevis and fulcrum with 8 take-off positions. Lower stem guide on base assures constant alignment.
 - (B) Lever Actuator mounting is base type with four 1/2" holes on a 3-3/4" bolt circle.
 - (C) Maximum lever travel is 12"
2. For proper positioner selection, refer to positioner data sheets.

TRAVEL AND FORCES DEVELOPED						FORMULA FOR FORCES NOT SHOWN IN CHART	
LEVER HOLES (3/8" Dia.)	LEVER TRAVEL	AVAILABLE FORCE (lbs.)					
		DIFFERENTIAL PRESSURE ACROSS PISTON					
		GB52SC		GB53SC			
		50 PSI (345 kPa)	70 PSI (483 kPa)	50 PSI (345 kPa)	70 PSI (483 kPa)		
G	5"	315	445	755	1,060		
H	6"	265	375	630	880		
J	7"	225	320	540	755		
K	8"	200	280	475	660		
L	9"	175	250	420	590		
M	10"	160	225	375	530		
N	11"	150	200	345	480		
P	12"	135	185	315	440		

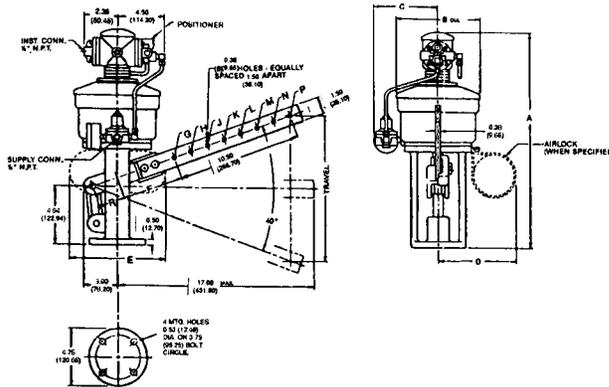
F1 = Force as shown in chart (at known ΔP1)
 F2 = Force to be determined
 ΔP1 = ΔP as shown in chart
 ΔP2 = Known ΔP (not shown in chart)

F2 = F1(ΔP2/ΔP1)

e.g., Force available at 5" (127 mm) travel with 60 PSI (414 kPa) differential across GB53SC Actuator:

F2 = 1060 x 60/70
 F2 = 908.5 lbs. of thrust

DIMENSIONS



Positioner Type	Normal Lever Position	As Instrument Signal increases Lever Moves	On Air Failure (With Airlock) Lever Moves
GJ1103 GC31 GJ2103	Up	Down	Up
GJ1215 GJ1230 GC32 GC3230 GJ13.5 GJ1330	Down	Up	Up
GC33 GC3330 GJ2215 GJ2230	Down	Up	Down
GJ14 GC34	Up	Down	Down

MODEL	A	B	C	D	E	F	R
GB52SC	18.38	7.25	6.13	6.75	8.13	5.75	1.64
	(466.85)	(184.15)	(155.70)	(171.45)	(206.50)	(146.05)	(41.66)
GB53SC	19.25	9.38	7.25	6.75	8.13	5.19	2.19
	(488.95)	(238.25)	(184.15)	(171.45)	(206.50)	(131.83)	(55.63)

TRAVEL AND FORCES DEVELOPED							
LEVER HOLES (3/8" Dia.)	LEVER TRAVEL (in. (mm))	AVAILABLE FORCE (lbs.)					
		DIFFERENTIAL PRESSURE ACROSS PISTON					
		GB52SC			GB53SC		
		50 PSI (345 kPa)	70 PSI (483 kPa)	80 PSI (548 kPa)	50 PSI (345 kPa)	70 PSI (483 kPa)	80 PSI (548 kPa)
G	5 (127)	315	448	756	1,060	1,060	
H	6 (152)	265	375	630	880	880	
J	7 (178)	225	320	540	775	775	
K	8 (203)	200	280	475	660	660	
L	9 (229)	175	250	420	590	590	
M	10 (254)	160	225	375	530	530	
N	11 (279)	150	200	345	480	480	
P	12 (305)	135	185	315	440	440	