

Model DFLP Linear Actuator

Technical Sales Bulletin



Figure 1 *Dyna-Flo Size 154 DFLP Actuator with a 12 inch 370 Valve.*

The Model DFLP pneumatic piston actuator is designed for high powered demanding applications. Multiple mounting configurations and actions can easily be achieved due to the universal design.

The Model DFLP, when combined with a positioner, is suitable for throttling applications. Additionally, DFLPs can be used for on/off service when paired with a two-position control signal. A volume tank is required to hold fail position.

The high level of quality specifications used in the manufacture of the Model DFLP linear actuators ensures superior performance and customer satisfaction.

Features

Rugged Long Lasting Construction

Dyna-Flo's expert CNC machining process and superior quality parts come together to make DFLP actuators a rugged, long lasting product. DFLP actuators are manufactured to deliver a high level of safety and performance.

Positioner Flexibility

The Model DFLP is designed to accept the latest in positioners, either electronic or pneumatic.

Long Stroke

DFLP actuators are available with a maximum travel of 8-1/8 inches. Refer to Table 3.

Superior Cylinder Design

The advanced composite cylinder is lightweight, high cycle, and corrosion resistant making it superior to aluminum and steel designs.



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SPECIFICATIONS

Available Actuator Sizes

113 and 154

Available Stem Connection and Yoke Boss Sizes

Stem Size [Yoke Boss Size]	Actuator Size	
	113	154
3/4 Inch [3-9/16 Inch]	✓	
1 Inch [5 Inch]	✓	✓
1-1/4 Inch [5H]	✓	✓

Available Actuator Configurations

- Double-Acting
- Throttling (with Positioner)
- On-Off (with Switching Device)

Cylinder Operating Pressure

Minimum Recommended:

- 20 Psig (138 kPa)
- When used with a positioner, always set supply pressure 5 psi (35 kPa) above actuator requirement but do not exceed maximum values below

Maximum Allowable Operating Pressure:

Refer to Table 4.

Maximum Travel

Refer to Table 3.

Stroking Time

Stroking Time is dependent on actuator size, length of travel, and Positioner (if used). For more information consult the Dyna-Flo Sales Office.

Material Temperature Limitations

-40°F to 180°F (-40°C to 82°C) with standard Elastomers.

Pressure Connections

1/4 inch FNPT, and 3/4 inch FNPT (for optional pipe-away vent).

Actuator Mounting

Vertical on valve yoke 360° rotatable for optimum accessory orientation.

Construction Materials

Refer to Table 2 for construction materials.

Contact your Dyna-Flo sales office for more information and other options.

Valve Dimensions

Refer to Figure 2 for actuator diagram.

Refer to Table 1 for actuator dimensions.

Approximate Actuator Weights

Size 113: 245 lb (111 Kg)

Size 154: 295 lb (134 Kg)

For more information and other options contact your Dyna-Flo sales office.

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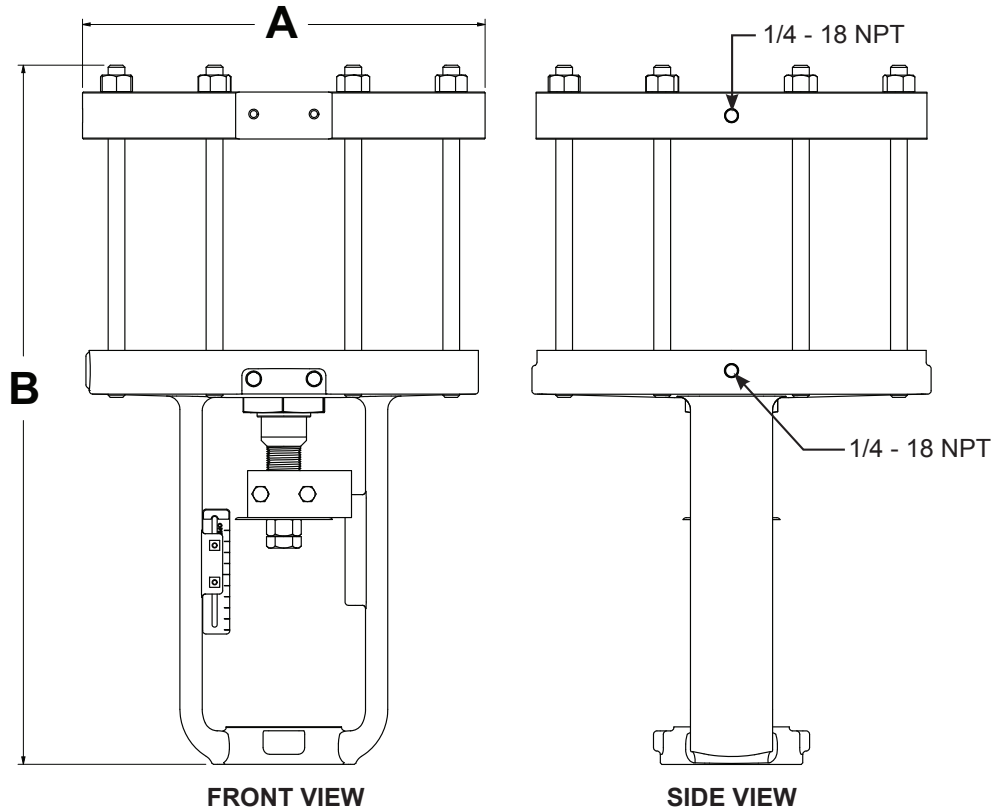


Figure 2 Actuator Dimensional Diagram

Table 1			
Actuator Dimensions			
Actuator Size	Dimensional Reference inch (mm)		
	A	B	
		4-1/8" Travel	8-1/8" Travel
3113	15.00 (381)	26.13 (664)	-
4113	15.00 (381)	28.00 (711)	36.13 (918)
5113	15.00 (381)	28.00 (711)	36.13 (918)
4154	16.75 (425)	28.13 (715)	36.13 (918)
5154	16.75 (425)	28.13 (715)	36.13 (918)



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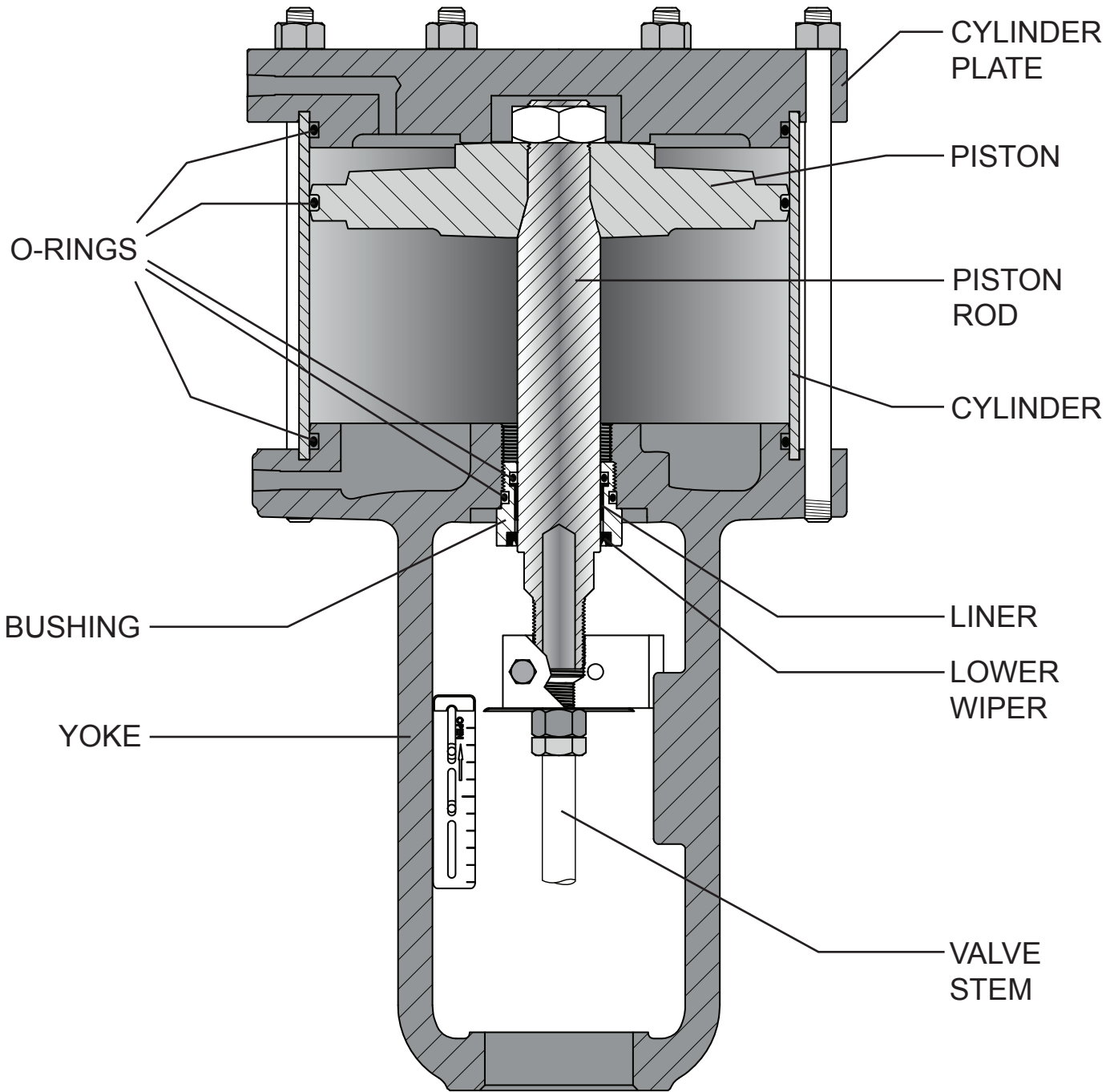


Figure 3 Model DFLP Cross-Section

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Table 2

Construction Materials

Part Description	Material
Yoke	Cast Iron
Cylinder	Fiberglass
Cylinder Plate	Aluminum
Piston Rod	S17400 H900
Piston	Aluminum
Bushing	Brass
Liner	Nylon
Lower Wiper	Polyurethane
O-Rings	Nitrile
Valve Stem	Valve Specific

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Table 3

Maximum Allowable Travel - Inch (mm)

ACTUATOR SIZE	CLAMP STYLE CONNECTING BLOCK (STANDARD)	CLEVIS STYLE CONNECTOR
3113-4	3 (76.2)	4-1/8 (104.8)
4113-4	4 (101.6)	4-1/8 (104.8)
4113-8	8 (203.2)	8-1/8 (206.4)
5113-4	4 (101.6)	4-1/8 (104.8)
5113-8	8 (203.2)	8-1/8 (206.4)
4154-4	4 (101.6)	4-1/8 (104.8)
4154-8	8 (203.2)	8-1/8 (206.4)
5154-4	4 (101.6)	4-1/8 (104.8)
5154-8	8 (203.2)	8-1/8 (206.4)

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Table 4

Piston Area, Max Pressure, and Max Available Thrust

ACTUATOR SIZE	MAX PRESSURE Psi (kPa)	PISTON DIAMETER inch (mm)	AREA inch ² (cm ²)	THRUST lbf (N)
3113	85 (586)	12.00 (305)	113.10 (730)	9,605 (42,725)
4113	110 (758)	12.00 (305)	113.10 (730)	12,430 (55,291)
5113	110 (758)	12.00 (305)	113.10 (730)	12,430 (55,291)
4154	110 (758)	14.00 (356)	153.94 (993)	16,940 (75,353)
5154	110 (758)	14.00 (356)	153.94 (993)	16,940 (75,353)



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MODEL NUMBERING SYSTEM

SAMPLE PART NUMBER: DFLP-3113-J-NN

				YOKE BOSS SIZE		3	
3	3-9/16 INCH	4	5 INCH	5	5H		
				ACTUATOR SIZE		113	
113		113		154		154	
						TRAVEL	
A	3/4 INCH	B	1-1/8 INCH	C	1-1/2 INCH	D	2 INCH
E	2-1/2 INCH	F	3 INCH	G	4 INCH	H	5-1/2 INCH
I	3-1/2 INCH	J	8 INCH	4	4-1/8 INCH	8	8-1/8 INCH
						PAINT	
-	DFPS-01 (STANDARD)			2	DFPS-02 (SEVERE SERVICE)		-
3	DFPS-03 (HIGH TEMPERATURE)			4	DFPS-04 (HEAVY DUTY)		
						OPTIONS	
N	NONE						N
						HANDWHEEL / TRAVEL STOP	
N	NONE			4	ADJUSTABLE UP TRAVEL STOP		N

DFLP - - - - -

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