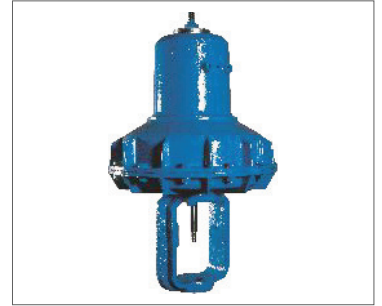


# Universal Diaphragm Actuator - Series UI, UIII and UV

## High actuating power at affordable cost

Forbes Marshall universal diaphragm actuator series UI, UIII and UV features a pneumatic actuator designed for applications that demand high actuating power. Its optional reinforced spring with compact air chamber delivers up to 14000 lbf thrust force for extreme pressure control applications. These diaphragm actuators can be fitted with standard accessories like positioner, feed-back transmitter, limit switches and air-filter regulator. Optional hand wheel is provided for emergency operations.



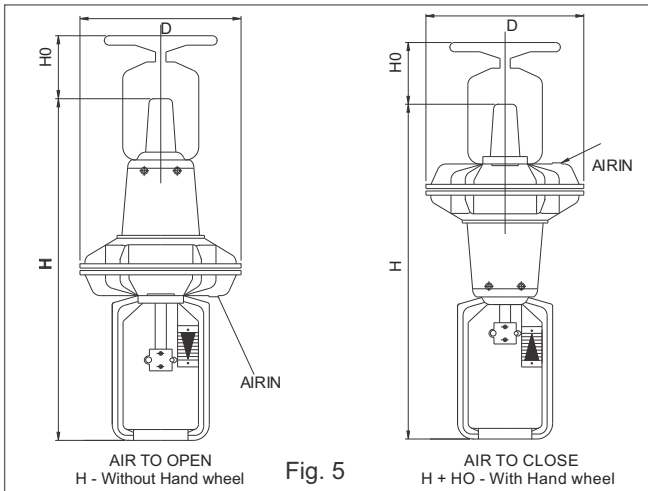
### Actuator Technical Information

Temperature range	-13°C to 90°C
Maximum operating pressure	6 bar (g)
Linearity	< 2%
Hysteresis	Max. 3%
Air supply connection	¼" NPT*

\*Others available on request

### Materials

Diaphragm housing	Diecast Aluminium
Diaphragm	Purbunan Rubber
Springs	Stainless Chrome Steel
Spindle	Stainless Chrome Steel
Yoke	S G Iron



	H+HO	H	D
UI-20	630	495	270
UI-30	640	505	270
UIII-30	920	723	392
UIII-60	950	753	392
UV-60	1290	995	530
UV-100	1300	1005	530
UV-120	1315	1020	530

### Features :

- Field reversible - flexible control action
- High thrust forces - usable in extreme pressure reductions
- Low maintenance - less inventory
- Cast aluminum housing - light weight and corrosion resistance

### Thrust force (Kgs) - Air to Close

Air Supply Range Bar	Standard UI-20 UI-30 0.2-1.0 Bar	Standard UIII-30 UIII-60 0.2-1.0 Bar	Standard UV-60 UV-100 UV-120 0.2-1.0 Bar
2.8	560	1270	2540
3.0	620	1410	2820
3.5	776	1760	3525
4.0	930	2115	4230
4.5	1085	2470	4935
5.0	1240	2820	5640
5.5	1395	3170	6345
6.0	1550	3525	7050

### Thrust force (Kgs) - Air to Open

Actuator Model	Spring Range (Bar g)		Diaphragm Area (sq. cm)	Air to Open Spring to Close Thrust Force (Kgs)	With Handwheel		Weight Without Handwheel								
	From	To			Kgs	Lbs	Kgs	Lbs							
UI-20.n	0.2	1	320	60	19	42	16.8	37							
	UI-20.n	0.4		1.2					125						
	UI-20.n	0.6		1.4					185						
	UI-20.n	0.8		1.6					250						
	UI-20.n	1		1.8					310						
	UI-20.v	1.2		2.25					370						
	UI-20.v	1.4		2.45					435						
	UI-20.v	1.6		2.65					500						
	UI-20.v	1.8		2.25					560						
	UI-20.v	2.0		2.25					620						
UI-30.n	0.2	1	320	60	19	42	16.8	37							
	UI-30.n	0.4		1.2					125						
	UI-30.n	0.6		1.4					185						
	UI-30.n	0.8		1.6					250						
	UI-30.n	1		1.8					310						
	UI-30.v	1.2		2.8					370						
	UI-30.v	1.4		3					435						
	UIII-30.n	0.2		1					720	140	49	108	45	99	
	UIII-30.n	0.4		1.2						280					
	UIII-30.n	0.6		1.4						425					
UIII-30.n	0.8	1.6	565												
UIII-30.n	1	1.8	705												
UIII-30.v	1.2	2	845												
UIII-30.v	1.4	2.2	985												
UIII-30.v	1.6	2.4	1130												
UIII-30.v	1.8	2.6	1270												
UIII-30.v	2	2.8	1410												
UIII-30.v	2.2	3	1550												
UIII-60.n	0.2	1	1440	140	105.6	233	99.8	220							
	UIII-60.n	0.4		1.2					280						
	UIII-60.n	0.6		1.4					425						
	UIII-60.n	0.8		1.6					565						
	UIII-60.v	1		2.6					705						
	UIII-60.v	1.2		2.8					845						
	UIII-60.v	1.4		3					990						
	UV-60.n	0.2		1					1440	280	105.6	233	99.8	220	
	UV-60.n	0.4		1.2						565					
	UV-60.n	0.6		1.4						845					
UV-60.n	0.8	1.6	1130												
UV-60.n	1	1.8	1410												
UV-60.v	1.2	2.45	1690												
UV-60.v	1.4	2.65	1975												
UV-60.v	1.6	2.85	2255												
UV-60.v	1.75	3	2465												
UV-60.v	2.4	4.5	2800												
UV-60.v	2.9	4.55	3000												
UV-100.n	0.2	1	1440	280	105.6	233	99.8	220							
	UV-100.n	0.4		1.2					565						
	UV-100.n	0.6		1.4					845						
	UV-100.v	0.8		2.8					1130						
	UV-100.v	1		3					1410						
	For 10", 12" and 14"														
	UV-120.n	0.2		1					1440	280	105.6	233	99.8	220	
		UV-120.n		0.4						1.2					570
		UV-120.n		0.6						1.4					845
		UV-120.v		0.8						2.8					1130
UV-120.v		1	3	1410											
For 16"															
UV-120.n	0.2	1.2	1440	250	105.6	233	99.8	220							
	UV-120.n	0.4		1.5					650						
	UV-120.v	0.6		3					840						

Note: Side mounted handwheel available on request

Actuator weight remains same irrespective of spring range and actuator action  
Above spring ranges are applicable for parabolic trims. For perforated, pressure balanced and three way trims spring ranges will be selected on a case to case basis