

Easytork's patented actuator design improves on the reliability of vane actuators and simplifies the vane concept so that it's more compact, efficient, and economical than a rack & pinion.

Simplistic Design

Eliminate Springs – Using Air Reservoir as Spring Replacement

Air reservoirs are commonly used to fail-safe large mission critical valves that would otherwise be too big with springs. Springs are wearable parts; on the other hand, air reservoir avoids spring issues developed over time including: spring fatigue, spring drift, and/or one or more unnoticed broken springs in a spring nest.

The Economics of Spring “less”

Since EVAs do not push against springs, users can use a smaller actuator body to achieve the same fail-safe end of stroke torque requirement.

Environmental Air Never Enters

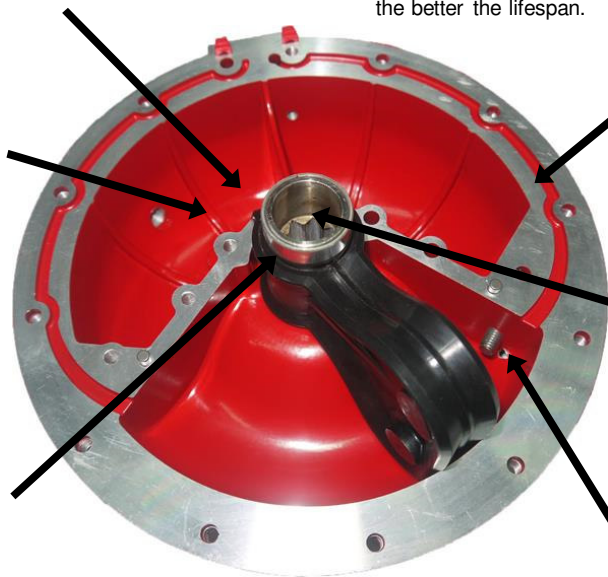
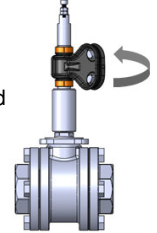
In fail-safe, solenoid still operates on double-acting principle. No environment air ever enters actuator through vacuum associated with springs.

Pressure Free Symmetrical Shaft and Bushings

No downward “pistoning” force and accompanying friction as commonly seen with other designs.

Only One Moving Piece – Pure Rotary-to-Rotary Movement

EVAs have one moving part that creates pure rotary-to-rotary movement. Rack & pinions convert linear-to-rotary movement. The fewer moving parts there are, the fewer potential sources of failure, and the better the lifespan.



Internal Air Path

All air path is internal, no external piping necessary in double-acting or fail-safe.

Prolongs Valve Life

The EVA valve stem engagement is 100% concentric and prevents valve stem leakage to prolong the cycle life of the valve.

Easy Travel Limit Change

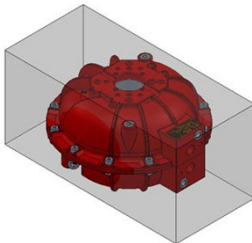
The standard travel stop adjustment is +/- 5° per stopper bolt, for a total of +/- 10°.

<0.5x The Weight and Smaller Than Any Other Actuator

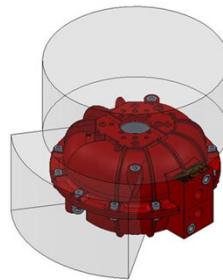
For fail-safe requirement, users often have to size up rack & pinion as the spring return actuator only retains 30%+ of its original double-acting configuration. EVA fail-safe configuration retains 60%+ of its double-acting configuration. This allows users to lower not only the initial cost of ownership but also the total cost of ownership over the lifespan of the actuator, as the physical size and air consumption are significantly less than those of a comparable single acting rack & pinion.

Fail-Safe Size Comparison:

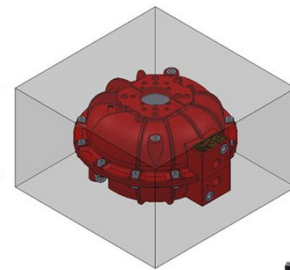
Rack & Pinion
(2 Piston)



Vane



Rack & Pinion
(4 Piston)



Simplify Inventory Variety by +10x

While other actuator packages require different packages for different functions, Easytork's design simplifies inventory consideration by layering multiple easy to change functions into the Easytork actuator unit.



Multiple Functions in One Unit:

- On/off or modulation
- Double-acting
- Fail-safe
- Fail-close
- Fail-open
- Manual override all situations (replaces gear box)

Multiple Adaptations in One Unit:

- Adaptable shaft
- Adaptable drive inserts
- Lockout & PST kit
- Triple ISO
- 180° Operation



Easiest Actuator to Direct Mount

Actuator Size	8 bar (120 psi)		Flange Type								Drive Insert (mm) ⁽¹⁾							Mounting		VDI/VE 3845	NAMUR		
	DA	FS	F03	F04	F05	F07	F10	F12	F14	F16	9	11	14	17	22	27	36	46	Other			Direct	Direct
EVA-0309	32.0 (293)	20.8 (190)	■	■	■						■	■							■	■	■	■	■
EVA-0411	63.0 (577)	41.0 (375)	■	■	■						■	■	■						■	■	■	■	■
EVA-0514	125.0 (1,144)	81.3 (744)		■	■	■						■	■	■					■	■	■	■	■
EVA-0717	250.0 (2,289)	162.5 (1,488)			■	■	■						■	■	■				■	■	■	■	■
EVA-1022	500.0 (4,577)	325.0 (2,975)				■	■	■							■	■	■				■	■	
EVA-1227	1,000.0 (9,154)	650.0 (5,950)					■	■	■						■	■	■				■	■	
EVA-1436	2,000.0 (18,308)	1,300.0 (11,900)						■	■	■						■	■	■	■	■	■	■	■

Note (1): For drive insert, darker colors represent standard issuance

With multiple built in mounting flexibility, **Easytork actuators are easier to direct mount than valve manufacturer's own actuators.**

Torque Chart

Double- Acting (In-Lb)										
Model / PSI	30	40	50	60	70	80	90	100	110	120
EVA-0309	73	98	122	146	171	195	220	244	269	293
EVA-0411	144	192	240	288	336	384	433	481	529	577
EVA-0514	286	381	477	572	667	763	858	954	1049	1144
EVA-0717	572	763	954	1144	1335	1526	1716	1907	2098	2289
EVA-1022	1144	1526	1907	2289	2670	3051	3433	3814	4196	4577
EVA-1227	2289	3051	3814	4577	5340	6103	6866	7628	8391	9154
EVA-1436	4577	6103	7628	9154	10680	12205	13731	15257	16782	18308

Minimum Fail-Safe (In-Lb)										
Model / PSI	30	40	50	60	70	80	90	100	110	120
EVA-0309	48	63	79	95	111	127	143	159	175	190
EVA-0411	94	125	156	187	219	250	281	312	344	375
EVA-0514	186	248	310	372	434	496	558	620	682	744
EVA-0717	372	496	620	744	868	992	1116	1240	1364	1488
EVA-1022	744	992	1240	1488	1735	1983	2231	2479	2727	2975
EVA-1227	1488	1983	2479	2975	3471	3967	4463	4958	5454	5950
EVA-1436	2975	3967	4958	5950	6942	7933	8925	9917	10909	11900

Patent Information

Easytork has multiple patents (approved and pending) covering the interaction between, and specific items, for the following: the actuator, integral air reservoir, ERPP, and ESV. Patent protection extends to vane, rack & pinion and scotch yoke principles.