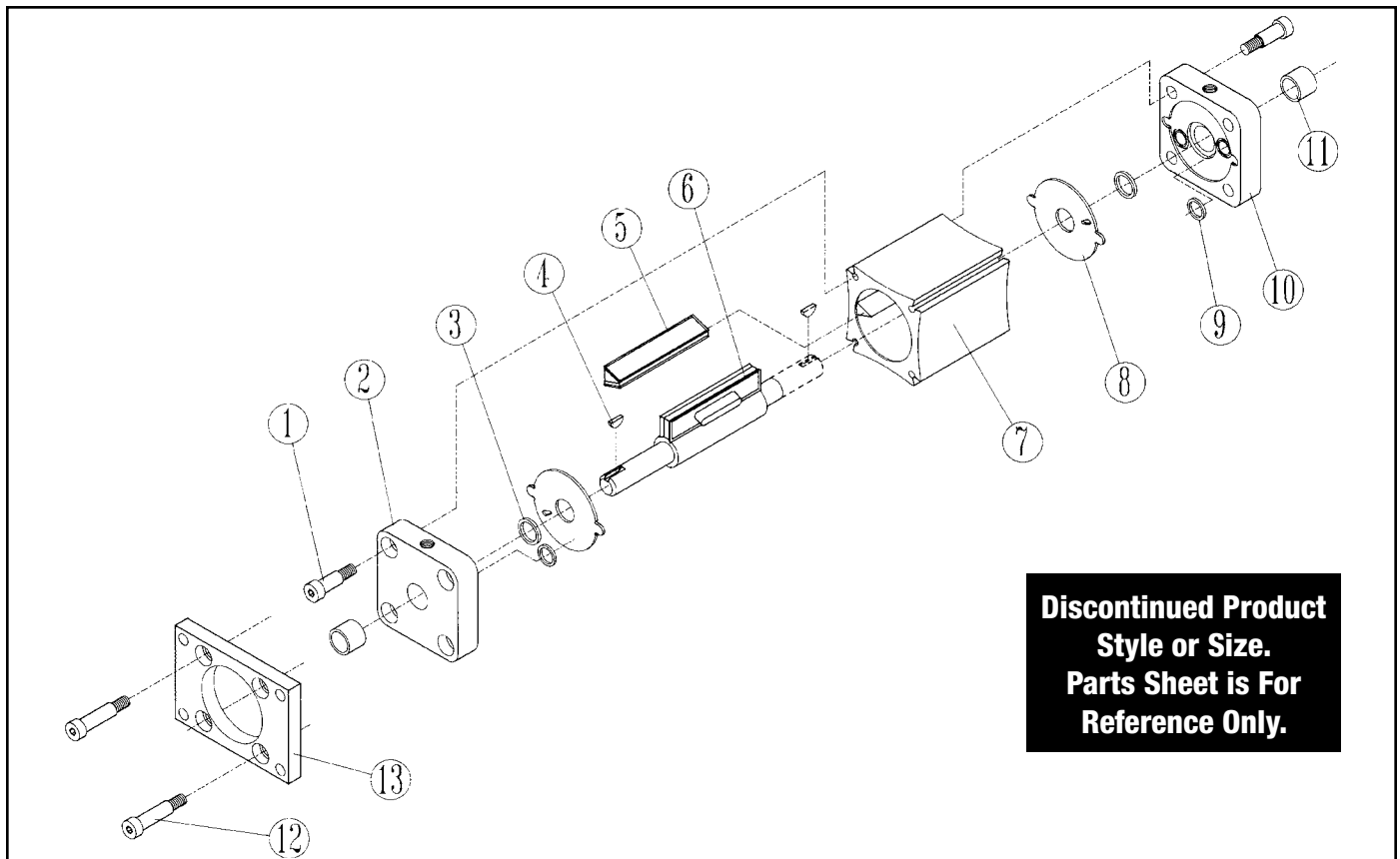


1" Pneumatic Vane Rotary Actuator

1810 Series
280° Rotation

Models: **1810-0201** Single Shaft, Aluminum End Plates
1810-0203 Double Shaft, Aluminum End Plates
1810-0701 Single Shaft, Aluminum End Plates, Front Flange Mount
1810-0703 Double Shaft, Aluminum End Plates, Front Flange Mount



Parts List

Item	Part No.	Description	1810-0201	1810-0203	1810-0701	1810-0703
1.	0910-1038	Shoulder Screw, #8-32 SPL	8	8	4	4
2.	1810-1054	LH Aluminum End Plate	1	1	1	1
3.	0720-1003	O-Ring, Buna-N	2	2	2	2
4.	1810-1039	Woodruff Key, #203	1	2	1	2
5.	1810-1029	Stator Seal	1	1	1	1
6.	1810-9009	Rotor Assembly	1		1	
	1810-9013	Rotor Assembly		1		1

Item	Part No.	Description	1810-0201	1810-0203	1810-0701	1810-0703
7.	1810-1062	Machined Housing	1	1	1	1
8.	1810-1058	Insert Plate	2	2	2	2
9.	1810-1056	O-Ring, Buna-N	2	2	2	2
10.	1810-1053	RH Aluminum End Plate	1	1	1	1
11.	1810-1055	Bronze Bushing 1/4 x 3/8	2	2	2	2
12.	1810-1041	Shoulder Screw #8-32 SPL			4	4
13.	1810-1040	Flange Mount Plate			1	1

INSTALLATION INSTRUCTIONS:

When installing the 1810 Series 1-inch bore rotary actuator, **DO NOT USE more than 5 inch pounds** (0.56 Newton-meters) of torque in tightening the 10/32 NPT port fittings or the 10-32 mounting screws into the end plates to avoid stripping threads. When installing the air fittings, wrap the threads with a TEFLON®-based thread seal tape such as Jet-Lube Petro-Tape®.

Pneumatic Service: The 1810 Series 1-inch bore actuator should be operated with 100 PSI maximum pneumatic service lubricated with a non-detergent SAE 30 weight oil.

Axial Loading: Heavy end thrust loading of the actuator shaft is not recommended. Use an isolating coupling which takes the load and does not distribute it to the actuator shaft.

Internal Stops: Do not use internal stops to stop rotation except with light loads whose combined weight and speed do not generate more than **1.5 inch-pounds** (0.17 Newton-meters) of kinetic energy. Backlash (lost motion) between the shaft and load should be avoided.

External Stops: External stops are recommended for higher inertia loads to avoid vane and stator damage. Stops should be securely mounted to machine framework.

CUSTOMER REPAIR PROCEDURE:

The vane seals on the 1810 1-inch bore actuator should not require replacement for the life of the unit.

In the event that End Plate Assembly replacement is desired, the following procedure must be followed.

Remove the old End Plate Assembly, saving the four (4) shoulder screws. **DO NOT DISASSEMBLE THE BALANCE OF THE UNIT.**

To install the new End Plate Assembly, align the mounting holes and ports with those on the opposite End Cap Assembly. Insert the four shoulder screws evenly, torquing no more than 10 inch-pounds (1.13 Newton-meters).

NOTE: REMOVE AND REPLACE ONLY ONE END PLATE ASSEMBLY AT A TIME.

ASSEMBLY INSTRUCTIONS:

1. Take the two End Plates (#2, #10) and insert the Bronze Bushing (#11) into the central shaft hole in each plate.
2. Lubricate the two (2) smaller O-Rings (#9) with a TEFLON®-additive grease and place one over each of the outer bosses on the back of each insert (#8).
3. Lubricate the two larger O-Rings (#3) and place one around the central boss on the back of each Insert (#8).
4. Press one Insert (#8) into each End Plate so that the tear-drop shaped Internal Air Ports are aligned over the Air Inlet Ports in the End Plate.
5. Lubricate the internal bore of the Housing (#7) with a TEFLON®-additive grease.
6. Insert the two Stator seals (#5) over the extruded Stators on the internal bore of the Housing (#7) and then lubricate the lips of the Stator Seals.
7. Thoroughly lubricate the lips of the Rotor Assembly (#6) (Standard or Double-ended Shaft), and insert it in line with the Stator so the Stator Seal holds the Rotor Assembly tightly in place.
8. Mount the Housing and Rotor Assembly onto one End Plate Assembly so the tear-drop shaped, Internal Air Ports are directly next to the Stator and the Stator is located at a 3 o'clock or 9 o'clock position in relation to the External Air Fitting on the End Plate Assembly.

Also make certain that the Rotor Assembly shaft's keyway(s) is (are) on the opposite side of the unit from the Stator.
9. Place the other End Plate Assembly on the open end of the Housing, making sure to align the two External Air Fittings.
10. Insert the four (4) Shoulder Screws (#1) into each End Plate Assembly. Tighten them down **CAREFULLY AND IN A UNIFORM MANNER**, not exceeding 10 inch-pounds (1.13 Newton-meters) of torque.
11. If the Front Mounting Flange (#13) is being used, four (4) 0801-1252 Shoulder Screws (#12) will be used instead of the 1817-1017 Shoulder Screws (#1).

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