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and then there are valves

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Also, our network of manufacturing and customer service facilities across North America ensures fast, reliable service and expert technical support.



Products are manufactured by IPEX Inc. and distributed in the United States by IPEX USA LLC.

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QUARTER TURN AUTOMATION

Quarter Turn Automation – Pneumatic / Electric

Automation is an ideal solution for precise control of many valves in a system, when valves are remotely located, or when the process requires constant monitoring and adjustment. Pneumatic and electric actuators can be easily fitted on our ball, multi-port, and butterfly valves. Some features and functions include normally closed, normally open, or double-acting operation; corrosion resistant aluminum bodies, pre-loaded springs, and adjustable cams. Many accessories such as visual position indicators, limit switches, 3 and 4-way solenoids, and positioners are also available. For further information, please refer to the IPEX *Industrial Technical Manual Volume IX* entitled, "Quarter Turn Automation".

PNEUMATIC ACTUATORS OVERVIEW

Pneumatic actuators are the most common choice for quarter turn plastic valves in process applications. Compressed air systems are readily available in any plant, and the cost of the actuator itself is generally lower than that of an electric unit with a comparable torque output. Typical quarter turn automation seldom requires positioning (something achieved more easily with an electric actuator), therefore the cycle life of a pneumatic unit will be substantially greater, and will be intrinsically safer than an electric actuator in volatile environments. While there are many different kinds of pneumatic actuators, a rack and pinion style is the preferred choice within the plastic piping industry. This type of actuator is quite tough and rugged, and has a high cycle life. They generally have a compact, simple construction, and certain models can be quite light in weight. The design also allows the same basic actuator to be used as a double acting or (with minor additions) a spring return unit.

DID YOU KNOW?

The three basic control functions available through quarter turn automation are:

- 1. Double Acting** – This requires external power for each stroke. For example, power to open the valve, then power to close the valve.
- 2. Normally Closed** – Also referred to as "fail safe closed", the default position is closed and the actuator requires power to open the valve.
- 3. Normally Open** – Also referred to as "fail safe open", the default position is open and the actuator requires power to close the valve.



ELECTRICAL ACTUATORS OVERVIEW

Although slightly more expensive than pneumatics, electric actuators have certain desirable benefits. They are the preferred choice when cycle time is an issue, as a quick closing pneumatically actuated valve could cause a damaging pressure surge condition (water hammer). The use of an electric actuator may also be preferred when the distance from the power source is considerable. The friction losses in long runs of compressed air line may result in reduced efficiency and/or additional compressor stations. In addition, electric actuators are the preferred (if not the only) choice when a quarterturn valve like a multi-port is used. In this case, it is possible that the travel required is not just 0° to 90° but 0° to 90° to 180° . A rack and pinion actuator would need four separate pistons and a multiplicity of related air chambers, whereas this is easily accomplished with an electric unit. Most electric actuators have a cam/limit switch arrangement which allows the unit to be set up for a variety of rotations. The two standard limit switches can be used to provide a remote location with an open or closed signal. A multitude of voltages both for AC and DC current are also typically available.



FK SERIES BUTTERFLY VALVE PNEUMATIC

Size inches	Significant Number	EPDM Product Code	Significant Number	FPM Product Code
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Pneumatic - SPRING RETURN, NORMALLY OPEN

PP Disc, Wafer Style

1-1/2	FKOM107-NO	253608	FKOM207-NO	253618
2	FKOM108-NO	253609	FKOM208-NO	253619
2-1/2	FKOM109-NO	253610	FKOM209-NO	253620
3	FKOM110-NO	253611	FKOM210-NO	253621
4	FKOM111-NO	253612	FKOM211-NO	253622
5	FKOM112-NO	253613	FKOM212-NO	253623
6	FKOM113-NO	253614	FKOM213-NO	253624
8	FKOM114-NO	253615	FKOM214-NO	253625
10	FKOM115-NO	253616	FKOM215-NO	253626
12	FKOM116-NO	253617	FKOM216-NO	253627

PP Disc, SS Lugs

2-1/2	FKLM109-NO	253628	FKLM209-NO	253636
3	FKLM110-NO	253629	FKLM210-NO	253637
4	FKLM111-NO	253630	FKLM211-NO	253638
5	FKLM112-NO	253631	FKLM212-NO	253639
6	FKLM113-NO	253632	FKLM213-NO	253640
8	FKLM114-NO	253633	FKLM214-NO	253641
10	FKLM115-NO	253634	FKLM215-NO	253642
12	FKLM116-NO	253635	FKLM216-NO	253643



FK SERIES BUTTERFLY VALVE, ELECTRIC – 100-240 VAC

Size inches	Significant Number	EPDM Product Code	Significant Number	FPM Product Code
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Electric- DOUBLE ACTING

PP Disc, Wafer Style

1-1/2	FKOM107-EL	253644	FKOM207-EL	253654
2	FKOM108-EL	253645	FKOM208-EL	253655
2-1/2	FKOM109-EL	253646	FKOM209-EL	253656
3	FKOM110-EL	253647	FKOM210-EL	253657
4	FKOM111-EL	253648	FKOM211-EL	253658
5	FKOM112-EL	253649	FKOM212-EL	253659
6	FKOM113-EL	253650	FKOM213-EL	253660
8	FKOM114-EL	253651	FKOM214-EL	253661

PP Disc, SS Lugs

2-1/2	FKLM109-EL	253664	FKLM209-EL	253672
3	FKLM110-EL	253665	FKLM210-EL	253673
4	FKLM111-EL	253666	FKLM211-EL	253674
5	FKLM112-EL	253667	FKLM212-EL	253675
6	FKLM113-EL	253668	FKLM213-EL	253676
8	FKLM114-EL	253669	FKLM214-EL	253677

Note: PVC, CPVC, ABS, and PVDF discs are available on request
10" and 12" electrically actuated butterfly valves are available on request.

