

Axial Flow Control Valves

Performance Tested at FCRI



Traditionally, Butterfly Valves & Sluice / Gate Valves which are primarily the isolation valves, have been used for flow regulation duties also. These workhorses do the job satisfactorily for moderate duties & where compromise on performance & longevity can be tolerated to an extent. However, when the pressure drops to be sustained across the valve are very high with high velocities, the conventional valves as mentioned above are found wanting & one needs to resort to use of valves which are designed for the rigours of tough flow / pressure regulation applications.

In R&D Multiple's Axial Flow Control Valves, the combination of precision & symmetry ensures linear & flawless regulation duties over the full range of operation from crack open to almost full open. The precise & fine finished guided surfaces ensure smooth movement & low torque operation.



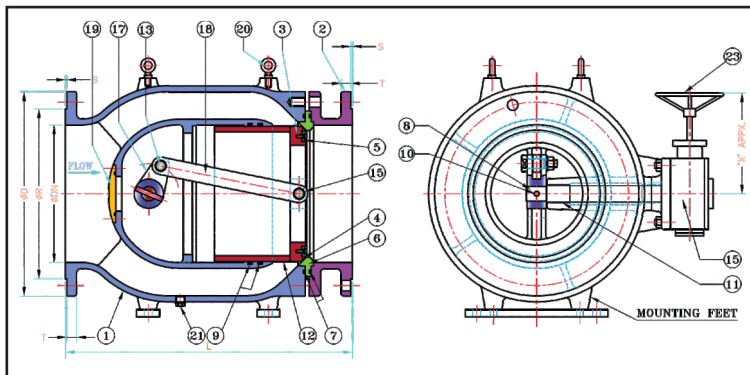
SPECIAL FEATURES:

1. Smooth machined, bronze lined multiple guideways for the piston all through its travel.
2. Precisely machined end of travel stopper for the piston in the full open position.
3. Options of diffuser rings to suit the duties.
4. Sturdy & long double bearings for drive shaft.
5. All the connecting & shear pins with double locks to preclude loosening.
6. Replaceable rear seals & also the piston seal.
7. Fusion bonded / sprayed epoxy paint with min. 300 micron thickness, inside & outside of the valve body. apart from corrosion resistance, this also reduces the loss of energy of flowing water due to the friction with the rough casting surfaces.
8. Linear flow control characteristic all over the range of operation.

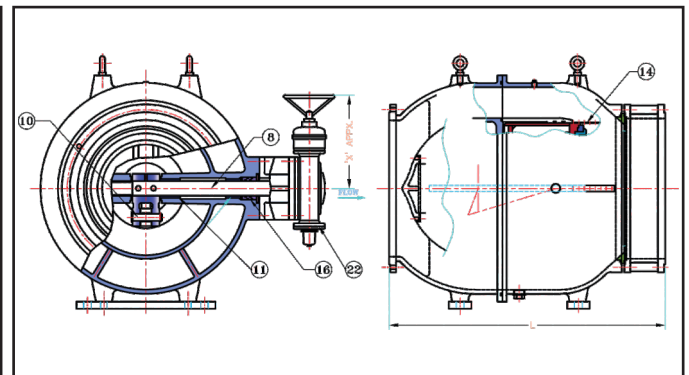


"Our AFCV undergoing Flow & Torque testing at FCRI"

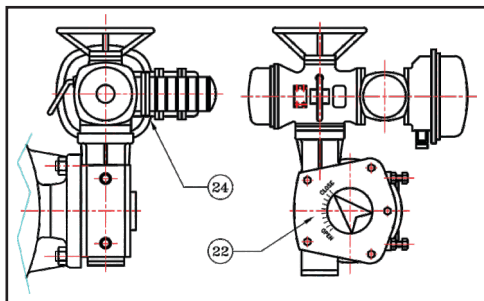
D/F AXIAL FLOW CONTROL VALVE WITH MANUAL GEARBOX
VALVE SIZE ~ 80mm to 600mm



D/F AXIAL FLOW CONTROL VALVE WITH MANUAL GEARBOX
VALVE SIZE > 700mm



MULTI-TURN ELECTRIC ACTUATOR WITH REVERSIBLE, SELF LOCKING GEARBOX OPERATOR



NO.	PART NAME	MATERIAL
1.	VALVE BODY	S.G. IRON IS 1865 GR. 500/7
2.	OUTLET ADAPTOR	S.G. IRON IS 1865 GR. 500/7
3.	PISTON	SS AISI 304/ASTM A351 Gr. CF8
4.	PRIMARY RESILIENT SEAL	NITRILE / EPDM RUBBER
5.	CLAMPING RING	STAINLESS STEEL AISI 304
6.	BODY SEAT RING	BRONZE IS318-LTB2 / ST. STEEL AISI304/316
7.	SEALS	NITRILE RUBBER
8.	DRIVE SHAFT	STAINLESS STEEL AISI 431
9.	PISTON REAR SEALS	NITRILE / EPDM RUBBER
10.	SHEAR PIN	STAINLESS STEEL AISI 431
11.	BEARING BUSH	STEEL BACKED PTFE
12.	PISTON GUIDES	BRONZE OVERLAY
13.	CRANK PIN	STAINLESS STEEL AISI 431
14.	FLOW DIFFUSER	STAINLESS STEEL AISI 410/304
15.	BUSHES FOR PINS	BRONZE IS 318 GR. LTB 2
16.	GLAND BUSH	BRONZE IS 318 GR. LTB 2
17.	CRANK	S.S. WITH 13% CR.
18.	LEVER	S.S. WITH 13% CR.
19.	FRONT CAP	S.S. WITH 13% CR.
20.	LIFTING EYE-BOLT	FORGED STEEL
21.	DRAIN PLUG	STAINLESS STEEL
22.	GEARBOX	REVERSIBLE SELF-LOCKING QTWGB.
23.	HANDWHEEL	MILD STEEL FAB. / D.I.
24.	ELECTRICAL ACTUATOR	ROTARY - MULTI - TURN TYPE.

VALVE *DN: (SIZE)	'L'	'T'	'S'	'D'	'R'	'X' appx.
80 mm	325	16	3	200	132	180
100 mm	325	16	3	220	156	180
125 mm	350	16	3	250	184	180
150 mm	350	16	3	285	211	260
200 mm	500	17	3	340	266	260
250 mm	510	19	3	395	319	260
300 mm	610	20.5	4	445	370	260
350 mm	705	20.5	4	505	429	275
400 mm	800	20.5	4	565	480	340
450 mm	900	21	4	615	530	340
500 mm	1000	22.5	4	670	582	340
600 mm	1100	25	5	680	682	375
700 mm	1300	27.5	5	895	794	375
750 mm	1400	29	5	960	857	375
800 mm	1500	30	5	1015	901	375
900 mm	1700	32.5	5	1115	1001	565
1000 mm	1900	35	5	1230	1112	565
1100 mm	2000	38	5	1340	1231	565
1200 mm	2100	40	5	1455	1328	565

NOTES :

- 1) For larger size upto 1800mm, & pressure rating beyond 16 bar pl. refer to marketing dept.
- 2) Flanges shown are as per IS 9523 PN 10. Flanges as per other standards: AWWA C207, BS-EN1092 etc. are possible. Flange standard will be suitable for the valve rated pressure.
- 3) Type of diffuser will depend on the duties: Perforated cylinder, slotted cylinder, vaned ring, sharp edge & sudden-enlarger, short diffuser etc.
- 4) For optimum performance, provide min. (4xDN) upstream & (8xDN) downstream straight pipeline length from the valve.

SALIENT FEATURES :

- Sturdy, circularly balanced construction.
- Large, hydro-dynamic flow passages.
- Mounting feet to ensure perfect alignment & to secure the valve for silent & smooth operation over very long life-span.
- Lifting lugs.
- Options of resilient & metal to metal seats with corrosion resistant body seat ring & metal / resilient piston / plunger seal.
- All working child parts in stainless steel.
- Double 'O' ring type shaft seals.
- All pin-bearing contacts with anticorrosion bearing bushes.
- Circularly balanced valve.
- Manual (through quarter-turn gearbox), electrical (through multi-turn actuator), pneumatic actuation options available.
- **Can be installed in a SCADA based water grid management system. Regulating type intelligent valve actuators can be looped into SCADA / PLC systems to auto-regulate the flow/ pressure in the grid using multiple numbers of valves of different sizes.**



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