

OPERATION AND MAINTENANCE

TOOLS:

The following tool requirements are listed in both Standard "Inch" sizes as well as "Metric" sizes.

PART	INCH	METRIC
Wrench Nut/Handwheel Retaining Bolts		
2 1/2" - 4" valves	1/2"	13mm
6" - 12" valves	11/16"	17mm
14" - 16" valves	3/4"	19mm
18" - 20" & 24" valves	3/8"	10mm
Gland Flange/ Post Indicator Retaining Bolts		
2 1/2" - 4" valves	15/16"	24mm
6" - 16" valves	1 1/4"	30mm
18" - 20" & 24" valves	11/16"	17mm
Gland Follower/Yoke Retaining Nuts		
2 1/2" - 4" valves	15/16"	24mm
6" - 12" valves	1 1/4"	30mm
Bonnet Bolts		
2 1/2" - 16"	3/8"	10mm
18" - 20" & 24" valves	N/A	14mm

OPERATION AND MAINTENANCE

OPERATION:

Each valve should be operated through a full cycle and returned to it's normal position on a time schedule designed to prevent a buildup of tuberculation or other deposits that could render the valve inoperable or prevent a tight shutoff. The interval of time between operations of valves in critical locations, or valves subjected to severe operating conditions, should be shorter than for less important installations, but can be whatever time period is found to be satisfactory based on local experience. The number of turns required to complete the operation cycle should be recorded and compared with permanent installation records to ensure full gate travel.

American AVK NRS (Non-Rising Stem) Valves - Turns to Open

Valve Size	Turns to Open
1"	7
1.25"	9
1.50"	11
2"	11- *13
2.5"	11- †12
3"	13- †15
4"	14- †17
6"	21- †23
8"	26- †27
10"	32- †33
12"	38- †40
14"	51
16"	51
18"	42
20"	42
24"	51

* 11 for FLxFL, 13 for IPSxIPS

† Due to a slightly oversize waterway, Series 65 valves have a slightly greater number of turns to open.

American AVK OS&Y (Outside Stem and Yoke) Valves - Turns to Open

Valve Size	Turns to Open
2.5"	17
3"	20
4"	21
6"	26
8"	35
10"	37
12"	44

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MAINTENANCE PROCEDURES:

INSPECTION:

Each valve should be operated through one complete cycle. If the stem action is tight as a result of “hard water” buildup on the stem threads, the operation should be repeated several times until the opening and closing actions are smooth and free. With the gate in the partially open position, a visual inspection should be performed, where practical, to check for leakage at all joints, connections, and areas of packing or seals. If leakage is observed, all defective O-rings, seals, gaskets, or end-connection sealing members should be replaced. If the leakage can not be corrected immediately, the nature of the leakage should be reported promptly to those who are responsible for repairs. If the valve is inoperable or irreparable, its location should be clearly established to save time for repair crews. The condition of the valve, and if possible, the gate position, should be reported to personnel responsible for repairs. In addition, fire departments and other municipal departments should be informed that the valve is out of service.

RECORD KEEPING:

In order to carry out a meaningful inspection and maintenance program, it is essential that the location, make, type, size, and date of installation of each valve be recorded. Depending on the type of record system used, other information may be entered in the permanent record. When a resilient-seated gate valve is inspected, an entry should be entered in the permanent record indicating the date of inspection and condition of the valve. If repair work is necessary, it should be indicated. On completion of the work, the nature of the repairs and date completed should be recorded.