



## **SERIES RCV ROTARY CONE VALVES 6"-60"**





### DOUBLE METAL SEAT

The Series RCV features a double metal seat design for long service life and exclusion of solids entry into the body cavity

### LIFT TURN LOWER GEARBOX

The lift turn lower type gearbox ensures the metal seat is not scratched, jammed, or rubbed when opening and closing the valve.

### FULL ROUND PORT

The 100% full round port ensures excellent flow characteristics with very low head-loss equal to an equivalent length of pipe.

### FLEXIBLE USAGE

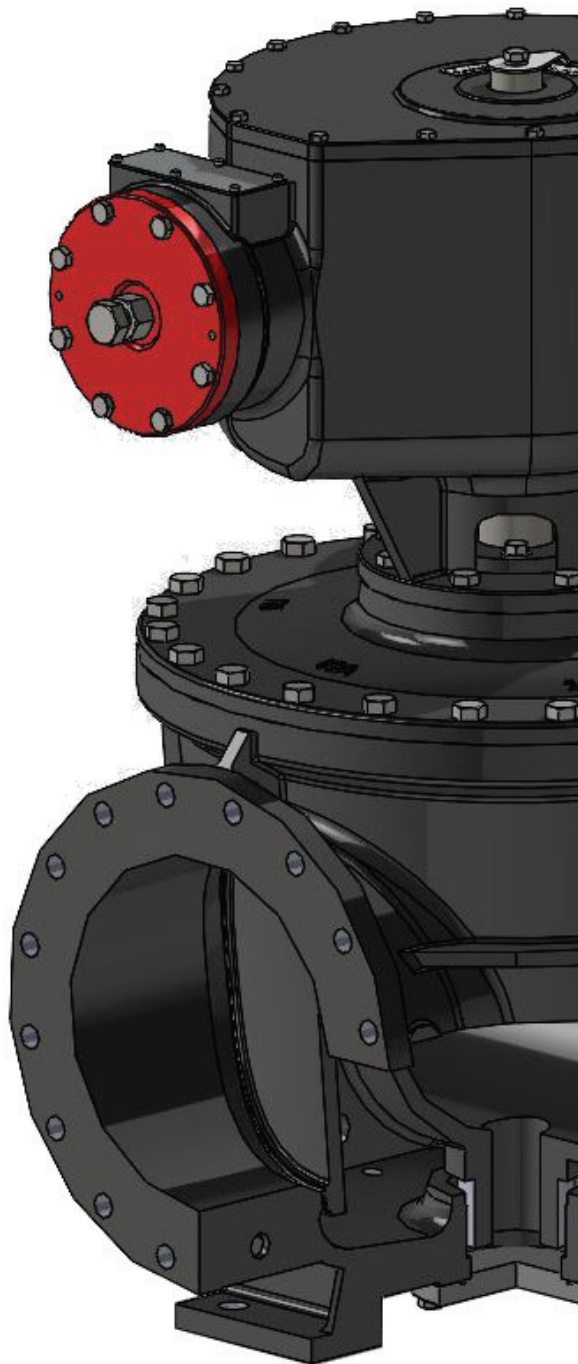
Suitable for use in sewage treatment plants, water pump stations, hydro power plants, reservoirs and any other application with fluid ranging from clean potable water to raw sewage.

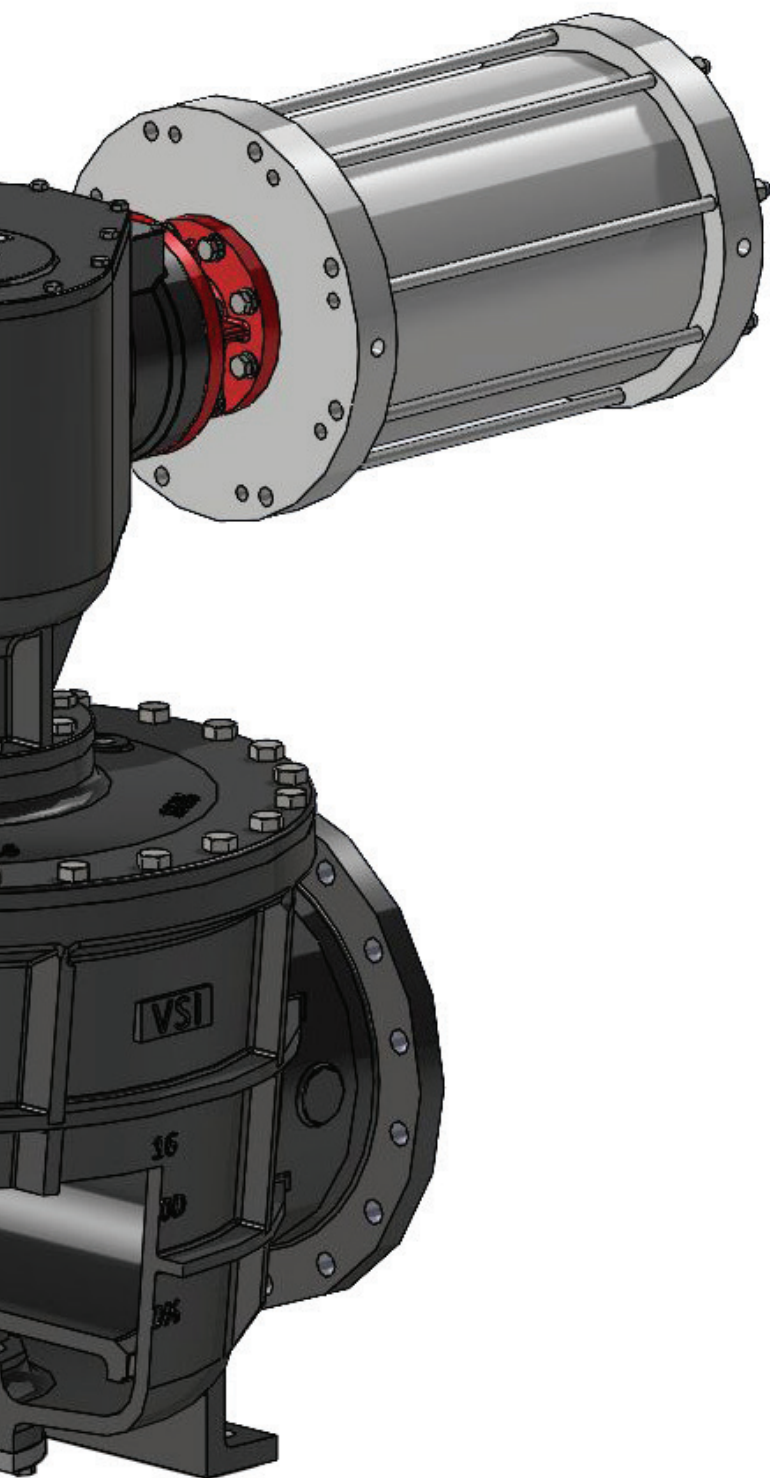
### CAVITATION RESISTANT

Both high and low velocity flow rates can easily be handled without any cavitation.

### TRUNNION DESIGN

The full trunnion design ensures the plug stays centered in the valve for leak free service and also ensures long life span even during infrequent operation.





### HEAVY DUTY BODY

The body is designed with thick walls, reinforced with ribs, and manufactured with high strength Ductile Iron for a lifetime of reliable service.

### SELF FLUSHING

Self flushing design ensures no accumulation of debris, perfect for raw water or sewage.

### TRIPLE DUTY

With the appropriate operators and controls, the Series RCV is capable of functioning as a flow control valve, check valve, and isolation valve all with one unit on pumping applications.

### COST EFFECTIVE

The high flow efficiency of the Series RCV means a much smaller valve can be used compared to line sized butterfly or plug valves. The smaller cone valve using a smaller electric, hydraulic, or pneumatic operator leads to further savings.

### FLEXIBLE OPERATOR OPTIONS

The Series RCV is available in any operator option, including electric, pneumatic, or hydraulic, with options including failsafe configurations, network controls, and many more



## DESIGN STANDARDS

Size Range	6"-60" Flanged End
Construction	AWWA
Coatings	AWWA C550* ANSI/NSF 61 Compliant*
Connections	ANSI B16.1 Class 125/ANSI B16.5 Class 150* ANSI B16.1 Class 250/ANSI B16.5 Class 300
Pressure	250 PSIG Up to 720 PSIG on request
Lay Length	Per VSI
Bonnet	ISO 5211* MSS SP-101

\*Standard Option



**American Water Works  
Association**

## RESISTANCE GUIDE

Designation	Common Names	Composition	Min/Max Temperature Range	General Properties	Resistant to:	Attacked by:
NBR	NBR, Buna-N	Nitrile-butadiene	-30F/225F	Excellent resistance to petroleum-based fluids. Good physical properties	Many hydrocarbons, fats, oils, greases, hydraulic fluids, chemicals	Ozone, ketones, esters, aldehydes, chlorinated and nitro hydrocarbons
FPM	FPM, Viton®	Hexafluoropropylene-vinylidene fluoride	-10F/400F	Excellent oil and air resistances both at low and high temperatures. Very good chemical resistance	All aliphatic, aromatic, and halogenated hydrocarbons, acids, animal and vegetable oils	Ketones, low molecular weight esters and nitro containing compounds
PTFE	PTFE, Teflon®	Polytetrafluoro-ethylene	-100F/450F	Excellent abrasion resistance and chemically inert	Acids, harsh inorganic and organic chemicals, oils, oxidizing agents, and solvents	Molten alkali metals and fluorine at high temperatures
EPDM	EPDM, EPM	Ethylene-propylene-diene Monomer	-40F/250F	Excellent ozone, chemical, and aging resistance. Poor resistance to petroleum-based fluids	Animal and vegetable oils, ozone, strong and oxidizing chemicals.	Mineral oils and solvents, aromatic hydrocarbons



## STANDARD MATERIALS OF CONSTRUCTION

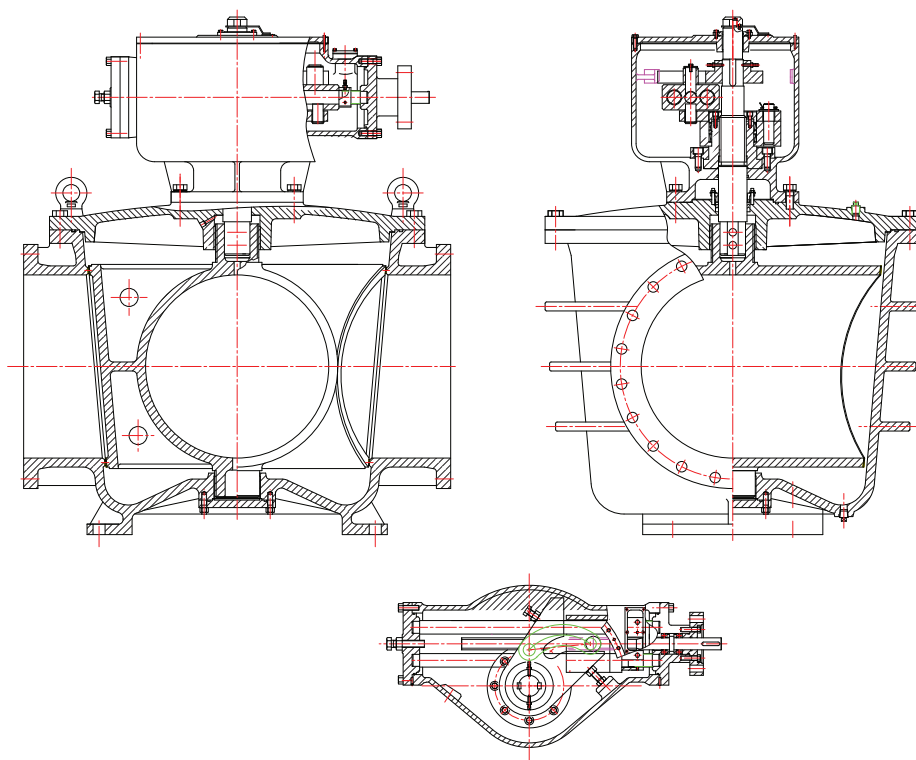
### CONE VALVE

Description	Material
Packing Gland	Carbon Steel
V-Ring Packing	NBR
Operator Shaft	Steel
Dowel	Steel
Journal	Bronze
Bushing	Bronze
Cap Screw	Steel
Cover	Ductile Iron
Plug	Ductile Iron
Body	Ductile Iron
Mounting Base	Cast Iron

Materials listed are standard materials of construction. Optional materials available on request. Refer to project drawings for special materials of construction.

### GEAR UNIT

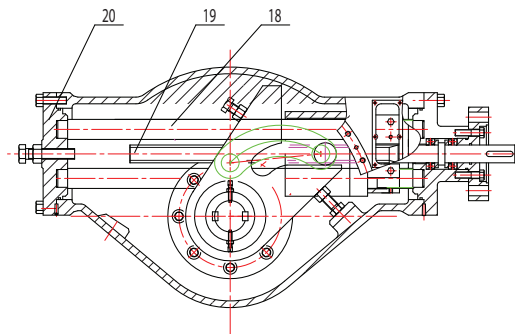
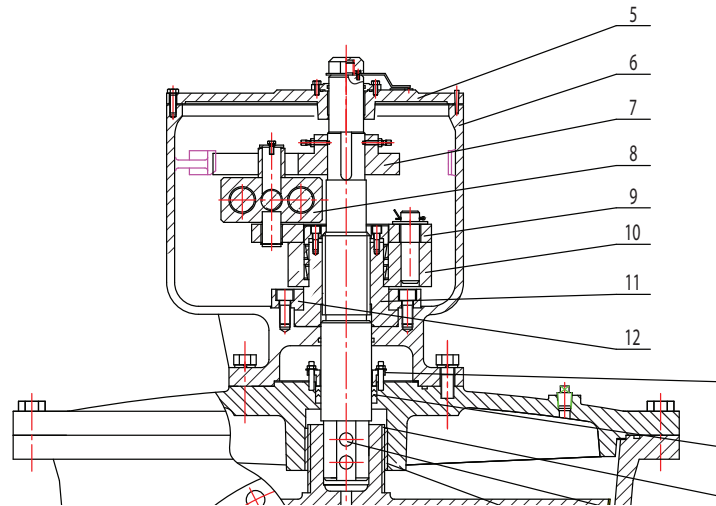
Description	Material
Position Indicator	Cast Steel
Shaft	Carbon Steel
Crosshead Roller	Carbon Steel
Cosshead	Cast Bronze
Link	Cast Steel
Bushing	Bronze
Lever	Cast Steel
Lift Nut	Bronze
Rotator	Cast Steel
Cover	Ductile Iron
Housing	Ductile Iron
Housing End	Ductile Iron
Adapter	Cast Iron
Leadscrew	Stainless Steel
Guide Rod	Alloy Steel
Thrust Washer	Bronze
Lock Nut	Steel
Spacer	Steel







## LIFT TURN LOWER GEARBOX



To ensure leak free seating all Series RCV rotary cone valves are equipped with a lift turn lower type gearbox. The gearbox is designed to lift the valve out of the seat before rotating open and to lower the plug into the seat as it is closing. This prevents rubbing of the metal seats extending their life, providing a leak free seal, and reducing operating torque.

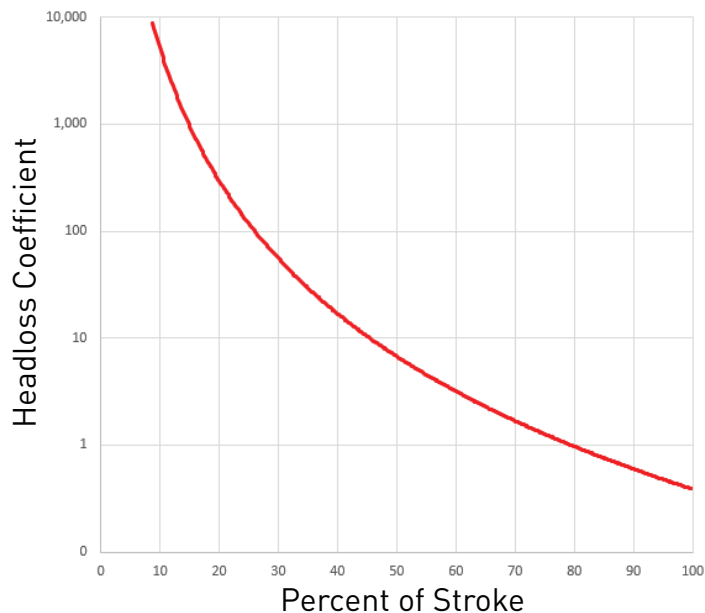
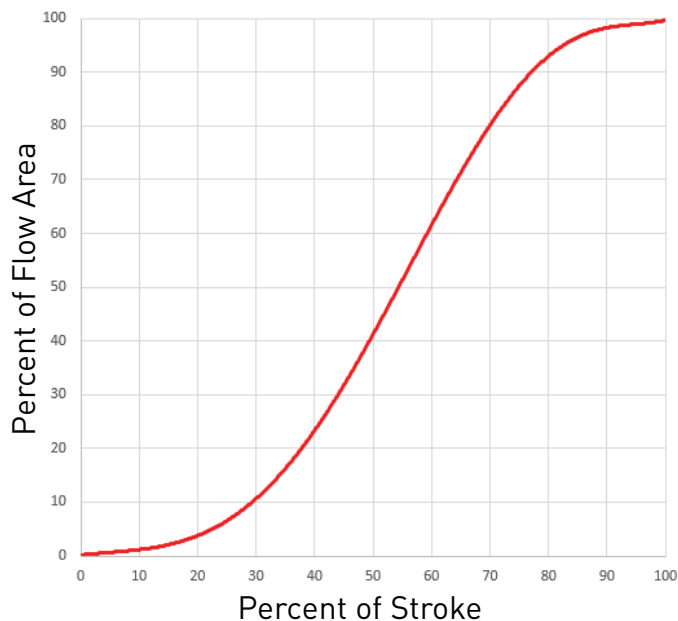


## FLOW DATA

SIZE	10°	20°	30°	40°	50°	60°	80°	90°*	FULL OPEN*
6"	32	106	176	205	366	678	2352	3755	4250
8"	50	168	277	323	578	1069	3708	5920	6700
10"	82	275	455	531	948	1754	6088	9720	11000
12"	100	338	559	652	1164	2153	7472	11929	13500
14"	133	450	745	869	1552	2871	9962	15905	18000
16"	171	575	952	1110	1983	3668	12729	20323	23000
18"	241	813	1345	1569	2802	5183	17987	28718	32500
20"	289	975	1614	1883	3362	6220	21584	34461	39000
24"	430	1450	2400	2800	5000	9250	32100	51250	58000

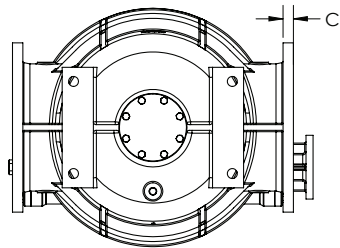
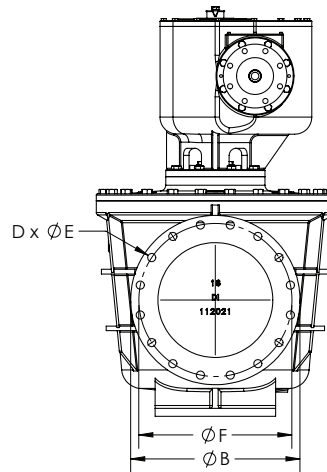
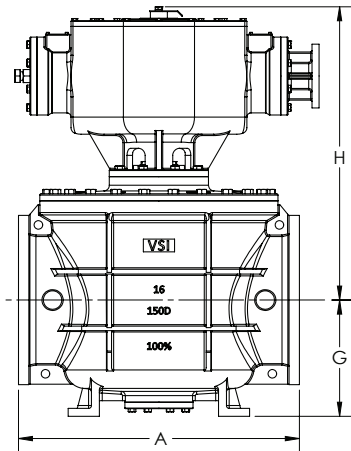
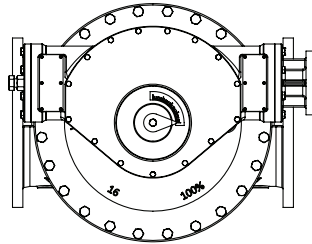
This flow coefficient Cv table shows flow in gallons per minute with 1.0 psig constant pressure drop at nominal 60 degrees ferenheight.

\*Flow coefficient Cv increases as valve is lowered into seat





## BASIC DIMENSIONS



SIZE	A	B	C	D	E	F	G	H
6"	16.5	11	1	8	0.88	9.5	9	28
8"	21.5	13.5	1.12	8	0.88	11.75	9.87	30.5
10"	26	16	1.19	12	0.98	14.25	12.36	38.7
12"	28	19	1.25	12	0.98	17.00	13.5	39
14"	33	21	1.38	12	1.13	18.75	15.5	39
16"	39	23.5	1.44	16	1.13	21.5	16.1	40.7
18"	41.75	25	1.56	16	1.18	22.75	17.5	42
20"	47	27.5	1.69	20	1.25	25	17.75	44
24"	56	32	1.87	20	1.38	29.5	22.0	45.8

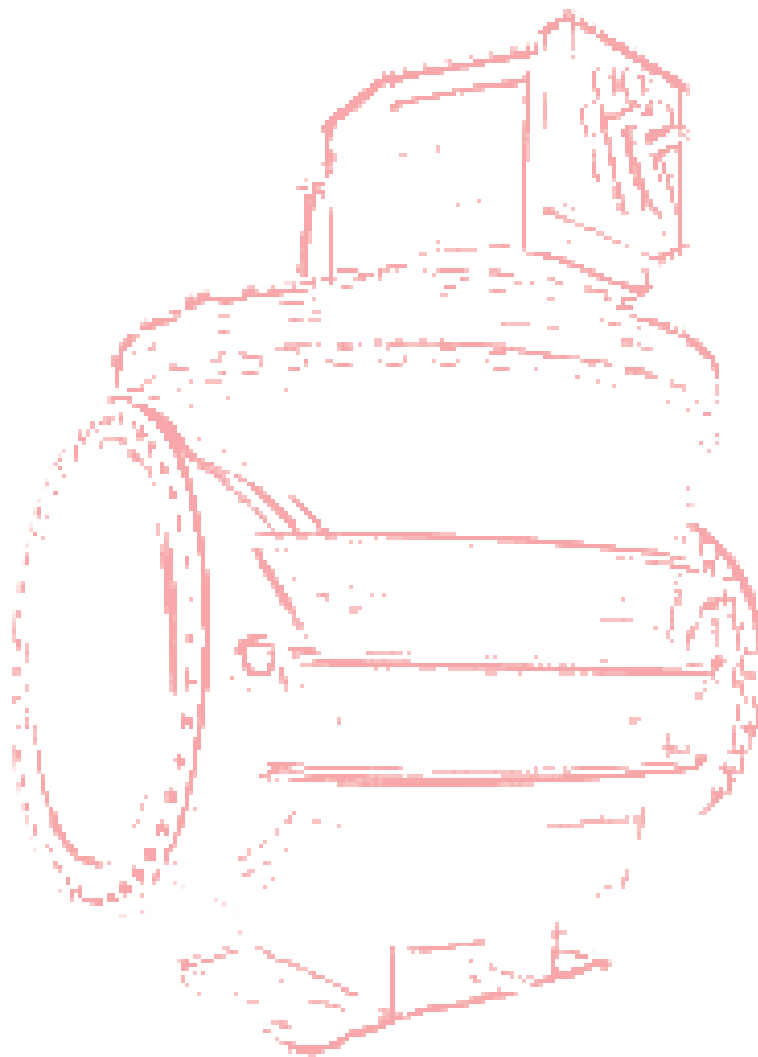




# Series RCV

## Rotary Cone Valves





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