

# Series W-100XF/G Brumby

## ACV: Fire System Tank Fill Valve

### Size: DN80-DN150

The Watts W-100XF/G (Brumby) Tank Fill Valve consists of the hydraulic control valve and adjustable floating ball valve. This hydraulically controlled, diaphragm actuated control valve regulates tank filling to maintain constant water level, for applications such as water tanks or reservoirs in industrial enterprises and residential buildings.

### Features

- Compact structure, reliable sealing
- Simple structure, convenient inline maintenance
- Controls the main valve opening and closing through floating ball valve, ensuring water level inside the water tank keeps given height
- The main valve opening or closing speed can be adjusted by the needle valve
- Provided with a 15mm brass float valve and a 100mm plastic ball float

### Pressure - Temperature

- Maximum Working Pressure: Flanged: PN14 (1400kPa)  
Grooved: PN16 (1600kPa)
- Max. inlet: 1700 kPa (250 psi)
- Working Temperature: 0°C~60°C

### Test Pressures

Pneumatic	Hydraulic
Seat: 700 kPa	Shell: 2400 kPa Seat: 1760 kPa

### Material

Component	Material
Body & Cover	Ductile iron, fused Red Epoxy inside and outside
Diaphragm	BUNA-N + Nylon+ Aluminium alloy
Spring	Stainless Steel
Y-Strainer	Stainless Steel
Pilot System Fittings	Stainless Steel
Control Tubing	Stainless Steel

### Models

Device:

Ordering No.	Description
ACV-080-TF-FIRE-FLG	80mm ACV Brumby Tank Fill Table E - Fire
ACV-080-TF-FIRE-RG	80mm ACV Brumby Tank Fill Grooved - Fire
ACV-100-TF-FIRE-FLG	100mm ACV Brumby Tank Fill Table E - Fire
ACV-100-TF-FIRE-RG	100mm ACV Brumby Tank Fill Grooved - Fire
ACV-150-TF-FIRE-FLG	150mm ACV Brumby Tank Fill Table E - Fire
ACV-150-TF-FIRE-RG	150mm ACV Brumby Tank Fill Grooved - Fire

Spare Parts:

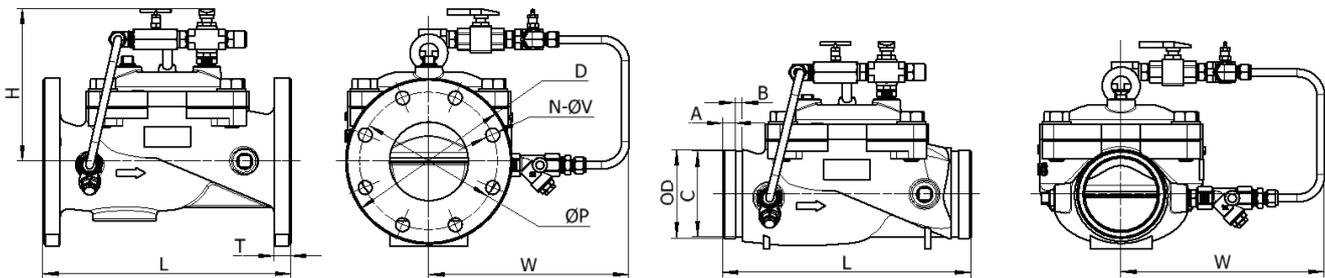
Ordering No.	Description
ACV-FLT-100	Plastic Float to Suit ACV-FV-15-250mm
ACV-FV-15-250	15mm Float Valve UltraPhil c/w 250 Lever Arm



### Specification

- Design Standard: AWWA C530
- Connection Type: Flanged & Grooved is available  
Flange to AS 2129 Table E  
Groove to AWWA C606-06 Table 4
- Test Standard: ISO/DIS 5208:2007
- Working Medium: Water

## Installation Dimensions



Size DN	Dimensions(mm)			Flange Dimensions(mm)				Flange Dimensions(mm)				Weight (Kg)
	L	H	W	P	N-ØV	D	T	OD	A	B	C	
80 Flange	257	200	260	146	4-Ø18	185	19	N/A	N/A	N/A	N/A	19
100 Flange	320	208	275	178	4-Ø18	215	19	N/A	N/A	N/A	N/A	28
150 Flange	415	275	250	235	8-Ø22	280	22	N/A	N/A	N/A	N/A	65
80 Groove	257	200	260	N/A	N/A	N/A	N/A	88.9	15.9	7.9	84.9	16
100 Groove	320	208	275	N/A	N/A	N/A	N/A	114.3	15.9	9.5	110.3	21
150 Groove	415	275	250	N/A	N/A	N/A	N/A	168.3	15.9	9.5	164.0	54

## Characteristic Curves

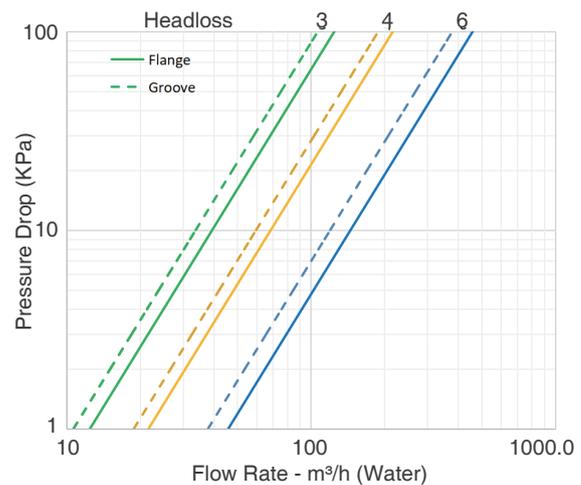
Size (DN)	80	100	150
Maximum Continuous (LPM)	1835	3030	7000
Maximum Intermittent (LPM)	2230	3785	8700
Minimum Continuous (LPM)	110	190	435
CV Factor LPM (Globe)	550	950	2000

\*NOTE: The above chart is a suggested guide. Inlet pressure, outlet pressure, minimum, normal and maximum flow rates should be considered for specific valve sizing. Contact Watts for details.

\*NOTE: The Cv Factor of a valve is the flow rate in US GPM at 60° F that will cause a 1 psi drop in pressure.

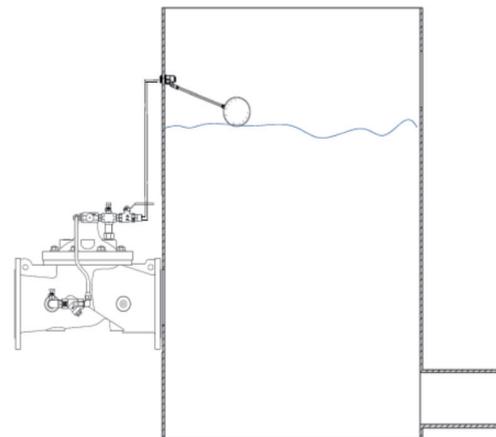
The factors stated are based upon a fully open valve.

Cv factor can be used in the following equations to determine Flow (Q) and Pressure Drop ( $\Delta P$ ):



## Installation Instructions

- (1) In the process of transportation and installation, valve must be packed and handled with care to avoid surface coatings and accessories damage.
- (2) Water supply pipeline should be washed before floating ball valve installation, eliminating sand, gravel and other debris in the pipe.
- (3) The flow direction from inlet to outlet should be paid attention to in installation, and maintenance space around the valve is convenient to assemble.
- (4) The inlet and outlet of main valve should be installed with gate valve or butterfly valve for easy maintenance.
- (5) Make sure the float ball is 1.5m away from outlet of main valve while installing, in order to prevent water wave from damaging float ball, however, float ball will be allowed to close if there is a shield protecting it.
- (6) The main valve can be installed horizontally or vertically, but horizontal installation is better.
- (7) Connect Modulating Float Control to main valve using 15mm diameter minimum copper tubing.
- (8) The height must be enough between limited liquid level and overflow, it takes some time from closing float ball valve to closing main valve, as to  $\leq$  DN100 valves, it only takes less time, as to  $\geq$  DN100 valves, maybe it takes over 10s.
- (9) Valve should be checked regularly, ensuring the debris in filter being cleaned.
- (10) Optional Heavy Duty Mechanical Float Valves:



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