



## Flippen Float Valves

Agricultural & Irrigation

Commercial & Industrial

Air Conditioning & Refrigeration



watts.com

**WATTS**<sup>®</sup>

This Watts Flippen Float Valve brochure features high quality, reliable control assemblies and components that provide make up water for pressure washers, cooling towers, heat transfer units, cattle watering tanks, refrigeration units, and for many other applications where float valves are required. To make it easier for you to access and specify the best product for your particular applications, we have provided a complete, detailed description and listing of our float valve products noted in the table of contents below.

In keeping with the Watts tradition of quality, our float valves and related components are manufactured to deliver the highest levels of integrity, reliability, and price/performance. Our heavy duty service valves will provide you with float valve solutions that you can rely on for your particular needs.

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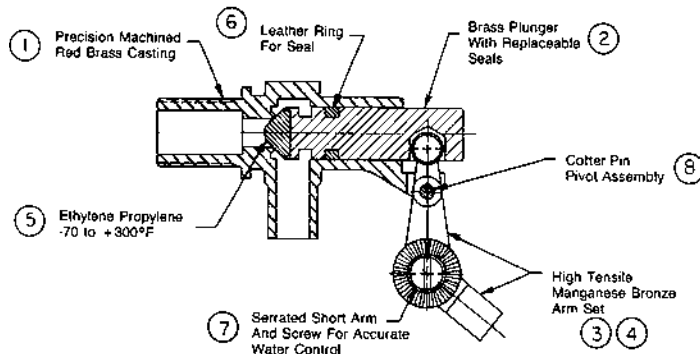
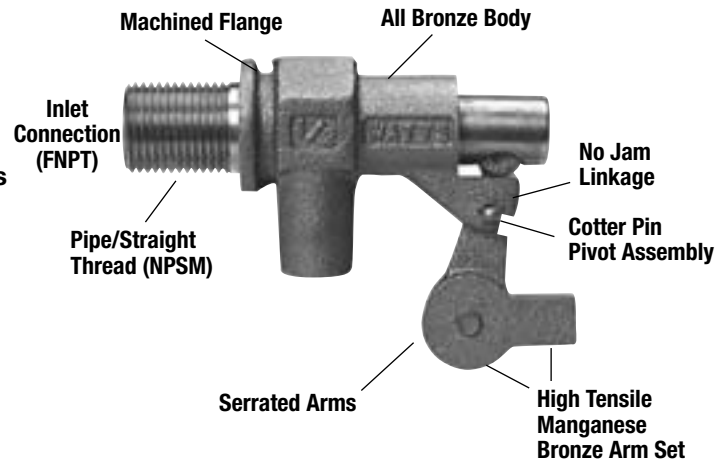
# Heavy Duty Float Valves

## Features

- Pipe-threaded for pipe connections and straight-pipe threaded for locknut
- Machined flange for support against tank wall
- All bronze bodies
- Serrated arms for quick easy adjustment of water level (all sizes)
- High tensile manganese bronze long and short arms
- No jam single lever action
- Replaceable seals

## Flow Specifications

Size	Pressure	Flow	Pressure	Flow
3/8"	50psi	14 gpm	100psi	21 gpm
1/2"	50psi	20 gpm	100psi	31 gpm
3/4"	50psi	40 gpm	100psi	60 gpm
1"	50psi	100 gpm	100psi	150 gpm
1 1/4" - 2"	50psi	250 gpm	100psi	348 gpm



Item	Qty.	Description	Material
1	1	Body	Bronze
2	1	Plunger	Brass
3	1	Long arm	Bronze
4	1	Short arm	Bronze
5	1	Plunger tip	Buna-N
6	1	Leather ring	-
7	1	Thumb screw	Brass
8	1	Cotter pin	Stainless Steel

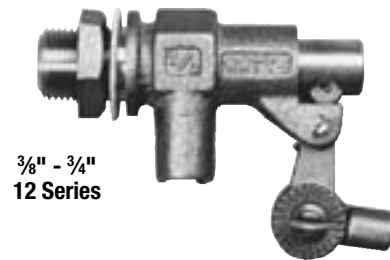
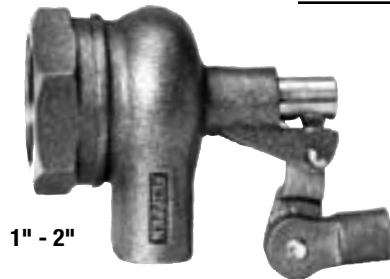
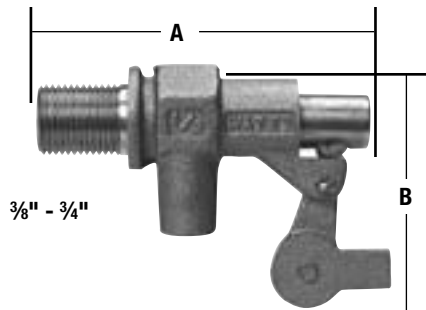
## Recommended Sizes

Valve Size (Inches)	Inlet Pressure (psi)							
	20	40	60	80	100	120	140	160
3/8"	4" Dia. Float and #11 Stem		4" x 5" Float and #11 Stem	5" Dia. Float and #11 Stem	6" Dia. Float and #11 Stem			
1/2"	4" Dia. Float and #11 Stem	4" x 5" Float and #11 Stem	5" Dia. Float and #11 Stem	6" Dia. Float and #11 Stem			8" Dia. Float and #11.5 Stem	
3/4"	4" Dia. Float and #11 Stem	4" x 5" Float and #11 Stem	5" Dia. Float and #11 Stem	6" Dia. Float and #11.5 Stem	7" Dia. Float and #11.5 Stem			
1"	7" Dia. Float and #11.5 Stem	8" Dia. Float and #12.5 Stem		10" Dia. Float and #12.5 Stem		12" Dia. Float and #12.5 Stem		
1 1/4" to 2"	8" Dia. Float and #13 Stem		10" Dia. Float and #13 Stem		12" Dia. Float and #13 Stem	P16 Float and #13 Stem		

This chart is used to select the proper float and stem for the selected valve size at a given inlet pressure. Do not exceed the maximum pressure of the selected valve. Example: Valve inlet - 3/4", inlet pressure - 85psi, use a 6" diameter float and a #11.5 stem.

# Heavy Duty Float Valves

## Non-Threaded Outlet



### Valve Assembly

A high capacity valve that can be tank wall-mounted. Inlet side has a machined flange 1"– 2" are also female NPT pipe threaded for inlet connection. All sizes have a male straight-pipe threaded for locknut. (See replacement parts for locknuts).

**Maximum Pressure - 165psi • Maximum Temperature - 180°F**

Pipe Size	Model	Stem Fitting	Dimensions		Inner Pack	Master Pack	Weight each (oz.)
			A	B			
3/8"	375	1/4-20	3"	1 1/4"	10	40	8.6
1/2"	500	1/4-20	3 1/2"	2"	10	40	11.3
3/4"	750	1/4-20	4"	2"	10	40	18.3

A high capacity valve that can be tank wall-mounted. Inlet side has a machined flange and is female NPT pipe threaded for inlet connection.

1"	1000	5/16-18	3"	4"	5	10	29.0
1"	1000-01	3/8-16	3"	4"	5	10	29.0
1 1/4"	1250	3/8-16	5 1/2"	4"	5	10	50.5
1 1/2"	1500	3/8-16	5 1/2"	4"	5	10	48.0
2"	2000	3/8-16	6"	4"	5	10	53.6

1000-1 same as 1000 except it has 3/8 - 16 threads in short arm.

### Valve Assembly with Locknut and Gasket

(For Bulkhead Mount)

A high capacity valve that can be tank wall-mounted. Inlet side has a machined flange and male straight-pipe threaded for locknut. (See replacement parts for locknuts).

**Maximum Pressure - 165psi • Maximum Temperature - 180°F**

Pipe Size	Model	Stem Fitting	Dimensions		Inner Pack	Master Pack	Weight each (oz.)
			A	B			
3/8"	375-12	1/4-20	3"	1 1/4"	10	40	9.3
1/2"	500-12	1/4-20	3 1/2"	2"	10	40	12.0
3/4"	750-12	1/4-20	4"	2"	10	40	18.9

## Threaded Outlet



### Valve Assembly

A high capacity valve with same inlet feature as standard valve, with MNPT thread on the outlet. Like the standard valves, this valve can be tank wall-mounted. (See replacement parts for locknuts.)

**Maximum Pressure - 165psi • Maximum Temperature - 180°F**

Pipe Size	Model	Stem Fitting	Dimensions		Inner Pack	Master Pack	Weight each (oz.)
			A	B			
1/2"	500T0	1/4-20	3 1/2"	2"	10	40	12.0
3/4"	750T0	1/4-20	4"	2"	10	40	17.3

### Valve Assembly with Locknut and Gasket

(For Bulkhead Mount)

1/2"	500T0-12	1/4-20	3 1/2"	2"	10	40	13.0
3/4"	750T0-12	1/4-20	4"	2"	10	40	18.6

# Heavy Duty Stems and Adaptors

## Stems



Brass with threads on both ends.  
(For other sizes consult factory.)

Model	End #1 Thread	Length	End #2 Thread	Rod Diam.	Weight each (oz.)	Inner Pack	Master
11	1/4-20	10"	1/4-20	1/4"	2.3	10	50
11.5	1/4-20	12"	5/16-18	5/16"	4.3	10	50
11-12	1/4-20	12"	1/4-20	1/4"	2.9	10	50
12	5/16-18	12"	5/16-18	5/16"	4.3	10	50
12.5	5/16-18	12"	3/8-16	3/8"	6.3	10	50
13	3/8-16	12"	3/8-16	3/8"	6.3	10	50

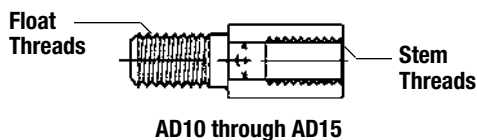
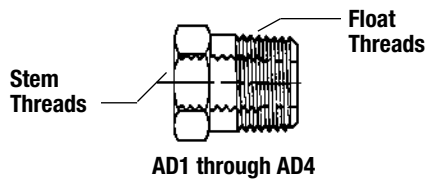
## Nuzzle Assembly



Allows ball to float free. Designed for use on exposed cattle watering systems. Cattle can nuzzle ball without harm to, or activation of, valve. Assembly consists of thumb screw, hooks, swivel joint, and stem, threaded at one end. All brass.

Model	Thread on Stem	Thread on Thumbscrew	Rod Length	Weight each (oz.)	Inner Pack	Master Pack
N1	1/4-20	1/4-20	10"	4	10	50
N1-7	1/4-20	5/16-18	10"	4	10	50
N5	5/16-18	5/16-18	12"	5	10	50
N5-1	5/16-18	1/4-20	12"	5	10	50
N5-3	5/16-18	3/8-16	12"	5	10	50
N8	3/8-16	3/8-16	12"	6	10	50
N8-7	3/8-16	5/16-18	12"	6	10	50

## Thread Adaptors For Floats



Model	Male Thread Float	Female Thread Stem	Inner Pack	Master Pack
AD1	3/8 NPT	5/16-18	5	100
AD2	3/8 NPT	3/8-16	5	100
AD3	1/2 NPT	3/8-16	5	50
AD4	3/4 NPT	3/8-16	5	50
AD10	1/4-20	5/16-18	5	50
AD11	1/4-20	3/8-16	5	50
AD12	5/16-18	1/4-20	5	50
AD13	3/8	5/16-18	5	50
AD14	3/8-16	1/4-20	5	50
AD15	5/16-18	3/8-16	5	50

# Heavy Duty Floats

## Copper Floats



High grade copper construction.  
Firmly bonded overlapping joints (leadfree solder).

**Maximum Temperature - 200°F**

Diameter Size	Model	Thread Connection	Inner Pack	Master Pack	Weight each (oz.)
4" x 5"	CX	¼-20	1	8	2.6
4"	C4	¼-20	1	8	4.3
5"	C5	¼-20	1	12	6.5
6"	C6	¼-20	1	8	8.3
6"	C6-7	5/16-18	1	8	8.3
6"	C6-3	3/8-16	1	24	8.3
7"	C7	5/16-18	1	12	15.3
8"	C8	3/8-16	1	8	20.0
10"	C10	3/8-16	1	4	44.0
12"	C12	3/8-16	1	4	67.0

## Plastic Floats



Non-electrolytic, highly corrosion resistant. Unaffected by salts and caustic fluids. All injection molded Polyethylene construction. Resistant to sunlight deterioration.

**Maximum Temperature - 140°F**

Diameter Size	Model	Inner Pack	Master Pack	Weight each (oz.)
4" x 5"	PX	1	10	2.3
6"	P6	1	10	7.3
6"	P6-7	1	10	7.3
8"	P8	1	10	12.6
8"	P8-7	1	10	12.6
8"	P8-1	1	10	12.6
2 pcs. 6"	P12	1	1	14.6
2 pcs. 8"	P16	1	1	25.1

\* Assembly of two P6's.

\*\* Assembly of two P8's.

# Heavy Duty Float Valve Replacement Parts



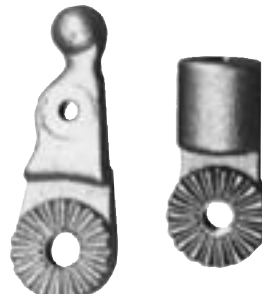
**1MN**  
(Long Arm)

**2MN**  
(Short Arm)

### Valve Arms (Bronze)

For valve sizes 3/8", 1/2" and 3/4"

Model	Thread Size	Inner Pack	Master Pack
1MN	N/A	10	100
2MN-1	¼-20	10	100
2MN-7	5/16-18	10	100
2MN-3	3/8-16	10	100
2MN-9	1/8	10	100



**1JB**  
(Long Arm)

**2JB**  
(Short Arm)

### Valve Arms (Bronze)

For valve sizes 1" through 2"

Model	Thread Size	Inner Pack	Master Pack
1JB	N/A	10	100
2JB-1	¼-20	10	100
2JB-7	5/16-18	10	100
2JB-3	3/8-16	10	100
2JB-9	1/8 NPSF	10	100
2JB-4	¼ NPSF	10	100

# Heavy Duty Float Valve Replacement Parts



## Valve Arm Sets (Bronze)

Model	Size (Inches)	Inner Pack	Master Pack
A1214	3/8, 1/2, 3/4	10	100
A1210	1" (larger)	10	100

Valve arm set includes long arm, short arm & thumb screw only.

## Leather Rings

Valve Size	Model	Inner Pack	Master Pack
3/8"	375-8	10	100
1/2"	500-8	10	100
3/4"	750-8	10	100
1"	500-8	10	100
1 1/4"	500-8	10	100
1 1/2"	500-8	10	100
2"	500-8	10	100



## Plunger Assembly (Brass)

Valve Size	Model	Inner Pack	Master Pack
3/8"	375-A785	10	100
1/2"	500-A785	10	100
3/4"	750-A785	10	100
1"	1000-A785	10	100
1 1/4"	J-A785	10	100
1 1/2"	J-A785	10	100
2"	J-A785	10	100

## Machine Screws (Brass)

(5/16-18 x 5/8")

Valve Size	Model	Inner Pack	Master Pack
1"	10	10	100
1 1/4"	10	10	100
1 1/2"	10	10	100
2"	10	10	100



## Bulkhead Gaskets (Fiber)

Valve Size	Model	Inner Pack	Master Pack
3/8"	700223	10	100
1/2"	700225	10	100
3/4"	700226	10	100



## Thumb Screws (Brass)

Valve Size	Model	Inner Pack	Master Pack
3/8"	15	10	100
1/2"	15	10	100
3/4"	15	10	100



## Bulkhead Locknuts (Brass)

Valve Size	Model	Inner Pack	Master Pack
3/8"	375-6	10	100
1/2"	500-6	10	100
3/4"	750-6	10	100



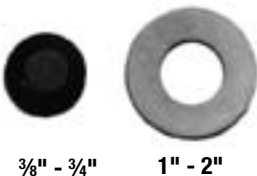
## Nut & Bolt Assembly (Stainless Steel)

Valve Size	Model	Inner Pack	Master Pack
3/8"	3B	10	100
1/2"	3B	10	100
3/4"	3B	10	100
1"	4B	10	100
1 1/4"	4B	10	100
1 1/2"	4B	10	100
2"	4B	10	100



## Plunger Disks (Rubber)

Valve Size	Model	Inner Pack	Master Pack
3/8"	375-5	10	100
1/2"	500-5	10	100
3/4"	750-5	10	100
1"	1000-5	10	100
1 1/4"	J-5	10	100
1 1/2"	J-5	10	100
2"	J-5	10	100



3/8" - 3/4"

1" - 2"

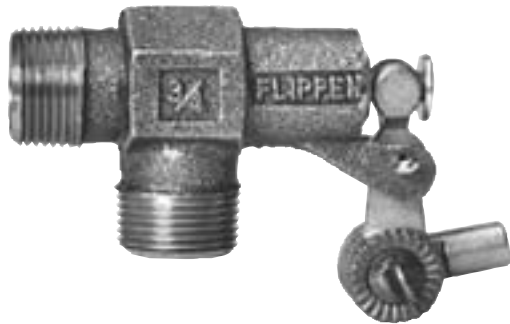
## Cotter Pins (Brass)

Valve Size	Model	Inner Pack	Master Pack
1/8" - 1"	3	10	100
3/16" - 1 1/2"	4	10	100

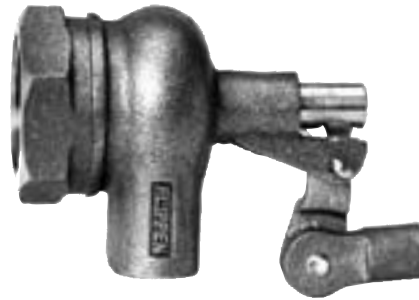


# Standard Duty Float Valves

## Standard Duty Valves



**3/8" - 1"  
Threaded Outlet**



**1 1/4" - 2"  
Non-Threaded Outlet**

### Standard Duty

3/8" through 1" Bronze body with MNPT threaded inlet and outlet,  
1 1/4" through 2" Bronze body with female NPT inlet-open outlet.  
Cotter pin pivot arm assembly. Replaceable plungers.

**Maximum Pressure - 125psi • Maximum Temperature 180°F**

Model	Pipe Size	Stem Fitting	Inner Pack	Master Pack	Weight each (oz.)
ST375	3/8"	1/4-20	10	40	9.8
ST500	1/2"	1/4-20	10	40	10.5
ST750	3/4"	1/4-20	10	40	13.2
ST1000	1"	1/4-20	5	10	17.5
ST1250	1 1/4"	3/8-16	5	10	50.5
ST1500	1 1/2"	3/8-16	5	10	50.2
ST2000	2"	3/8-16	5	10	50.8

NOTE: See pages 5 and 6 for stems, floats and adapters.

### Flow Specifications

Model	Size Inches	INLET PRESSURE -psi								
		5	15	25	35	55	65	85	105	125
		GPM								
ST375	3/8	5.7	11.5	14.2	16.0	19.0	20.5	23.0	25.0	27.0
ST500	1/2	7.0	12.5	15.5	17.2	21.0	22.5	24.7	27.0	29.0
ST750	3/4	12.0	21.0	27.5	30.5	37.7	41.0	46.5	48.0	53.0
ST1000	1	25.0	38.0	60.0	64.0	70.0	74.0	82.5	90.0	97.0
ST1250	1 1/4	64.0	90.0	110.0	129	158	170	192	214	233
ST1500	1 1/2	64.0	90.0	110.0	129	158	170	192	214	233
ST2000	2	64.0	90.0	110.0	129	158	170	192	214	233



# Standard Duty Float Valve Replacement Parts



(Long Arm)



(Short Arm)

## Valve Arms

For valve sizes  $\frac{3}{8}$ " - 1" (Bronze)

Model	Thread Size	Inner Pack	Master Pack
ST2-LA	N/A	10	100
ST2-1	$\frac{1}{4}$ " - 20"	10	100



(Long Arm)



(Short Arm)

## Valve Arms

For valve sizes  $1\frac{1}{4}$ " - 2" (Bronze)

Model	Thread Size	Inner Pack	Master Pack
ST3-LA	N/A	10	100
ST3-1	$\frac{3}{8}$ " - 16"	10	100



## Complete Plunger Assembly (with seals) (Brass)

Valve Size	Model	Inner Pack	Master Pack
$\frac{3}{8}$ "	ST375-PA	10	100
$\frac{1}{2}$ "	ST500-PA	10	100
$\frac{3}{4}$ "	ST750-PA	10	100
1"	ST1000-PA	10	100
$1\frac{1}{4}$ "	ST1250-PA	10	100
$1\frac{1}{2}$ "	ST1250-PA	10	100
2"	ST1250-PA	10	100

Parts not sold separately.



## Fasteners (Brass)

Valve Size	Model	Type	Inner Pack	Master Pack
$\frac{3}{8}$ " - 1"	15	Thumb Screw	10	100
$\frac{1}{8}$ " - 1"	3	Cotter Pin	10	100
$1\frac{1}{4}$ " - 2"	10	Machine Screw	10	100
$1\frac{1}{4}$ " - 2"	4	Cotter Pin	10	100

# Evaporative Cooler Valve Assemblies

## Heavy Duty Cooler Valves



### Bronze Body

Machined in-seat. Buna N seals. Adjustable brass arms. Polyethylene float. 3/8" MIP OD x 1/8" FIP ID pipe connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
N/A	STD-CA	3 GPM	8 x 3/4	2"	6



### Bronze Body

Machined in-seat. Buna N seals. Adjustable brass arms. Polyethylene float. 3/8" copper tube compression inlet connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
3/8" copper	C3/8TF	3 GPM	12 x 3/4	5 3/4"	6



### Bronze Body

Machined in-seat. Buna N seals. Adjustable brass arms. Polyethylene float. 1/4" copper tube compression inlet connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
1/4" copper	C1/4TF-1	3 GPM	12 x 3/4	5 3/4"	6



### Bronze Body

Machined in-seat. Buna N seals. Adjustable brass arms. Polyethylene float. 1/4" copper tube compression inlet connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
1/4" copper	C1/4TFAEA	3 GPM	11 x 3/4	5 3/4"	3

## Tube Fitting Mini Cooler Valves



### Brass Body

Machined in-seat. Buna N seals. Adjustable brass arms. Polyethylene float. 1/4" copper tube compression inlet connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
1/4" copper	M1/4TF	3 GPM	11 x 1	5 1/2"	3



### Brass Body

Alloy 304 stainless steel seat. Buna N seals. Adjustable brass arms. Polyethylene float. 1/4" copper tube compression inlet connection.

**Maximum Pressure - 100psi • Maximum Temperature - 140°F**

Tube Material	Model	100psi Capacity	Size (Inches)	Stem Length	Weight (oz.)
1/4" copper	M1/4TFSS	3 GPM	11 x 1	5 1/2"	3

# Automatic Livestock Watering Kits



**Model RL600  
Automatic Livestock  
Watering Kit**

**\* HIGH CAPACITY -**

Free flow fill rate 6.5 gpm at 50psi.  
Maximum inlet pressure 75psi. Will fill a 100 gallon tank in less than 15 minutes.  
Maximum Temperature - 140°F

**\* EASY INSTALLATION -**

Rubbermaid®: Remove bulkhead fitting from tank. Reverse and install so drain plug is inside the tank. Remove drain plug and install valve assembly.  
Other Livestock Tanks:  
Use UA600 (Universal Adaptor), Install through drain port. Secure with locknut and gaskets. Install valve assembly.

**\* ANIMAL PROOF -**

Free floating ball and chain assembly designed to stop damage by livestock.

**\* RESISTS FREEZING -**

Valve operates completely submerged in water at tank bottom.

**\* DURABLE -**

Manufactured using rugged, high quality engineered plastic with solid brass connections and polyethylene float.

Model RL600 1¼" MNPT threaded with ½" FNPT threaded inlet. Consists of RL600V, RL600SC and P6 float. For use on RUBBERMAID® brand livestock tanks. Model RL600 plus universal tank adaptor (Model UA600) for use in all livestock tanks.

Model	Description	Master Pack	Weight each (lbs.)
RL600	Automatic Watering Kit	12	1.4
<b>Parts and Accessories</b>			
UA600	Universal Tank Adaptor	12	1.4
RL600A	Arm and Seat	N/A	.1
RL600V	Nozzle and Arm Assembly	10	.2
AP-112	Garden Hose Adaptor	N/A	.1
RL600-SC	Stem & Chain Assembly	50	.2
P6	Float	5	7.3 oz.



**RL600-SC  
Stem and Chain  
Assembly**



**AP-112  
Garden Hose Adaptor**



**RL600V  
Nozzle and Arm  
Assembly**



**RL600A  
Arm and Seat**



**UA600  
Universal Tank Adaptor**

For additional information, visit our web site at: [www.watts.com](http://www.watts.com)



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