GENUINE MEGA.

MEGA SPRAY HEAD VALVES

Originally patented in 1976, the MEGA Corp. Spray Head Valve is a combination water control valve and fully adjustable fan spray nozzle that produces a flat, dense variable spray pattern. The corrosion resistant, anti-clog, cast aluminum housing permits variable flow rates up to 700 gpm per spray head. Spray fan direction, volume, and width are easily adjustable by hand. Mega spray head valves are available in both pneumatic and hydraulic models to accommodate any heavy equipment application.

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GENUINE MEGA.

MEGA SPRAY HEAD VALVES

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MEGA SPRAY HEAD VALVES

Mega developed and patented its spray heads in 1976 and has continually improved them since. Each Genuine Mega spray head is fully adjustable for fan volume, width, and direction. Precision water application is a simple matter of proper selection of spray head settings and the number of spray heads activated.

Standard Mega spray head valves are constructed of a high-quality aluminum alloy metal. We offer optional stainless steel models to better resist corrosion and abrasion by the harsh waters often found in mining environments. Our spray head valves are available in both pneumatic and hydraulic actuated models. Hydraulic Mega spray heads are available in both aluminum and stainless steel models.

MEGA RECOMMENDS THE USE OF

Stainless Steel

SPRAY HEADS FOR USE IN CORROSIVE APPLICATIONS

Mega Hydraulic Spray Heads

The Mega hydraulic spray head valve utilizes a custom-made, high quality, heavy-duty, double-acting hydraulic cylinder to open and close the valve portion of the spray head. This spray head is suitable for any heavy equipment prime mover, and requires a hydraulic solenoid spray control system.

Mega Pneumatic Spray Heads

Air pressure produced by the prime mover's pneumatic system opens and closes the pneumatic spray head valves. Air pressure forced into the valve closes the spray head. Release of air pressure from the top spray head cavity allows a spring to open the valve. This spray head is suitable for any heavy equipment prime mover with a pneumatic system, and requires a pneumatic spray control system.

Full Coverage.

Advantages and Benefits of Mega Spray Heads

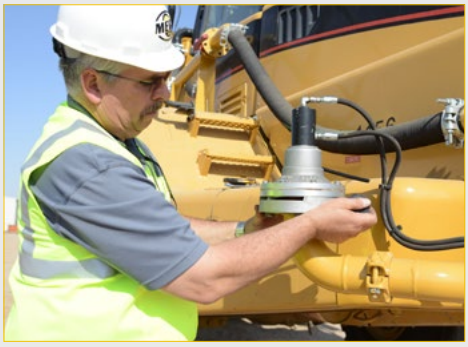


Mega Spray Heads Are FULLY Adjustable!

All Mega spray heads are adjustable and can be fine-tuned to provide the optimal water distribution for a specific application. This allows for high efficiency, reduced water consumption, and prevention of roadway over-watering.

Adjustable Base Plate

Mega spray heads can be rotated 360° on their base plate mounts to adjust the horizontal direction of the discharge spray for each individual spray head.



Adjusting Ring

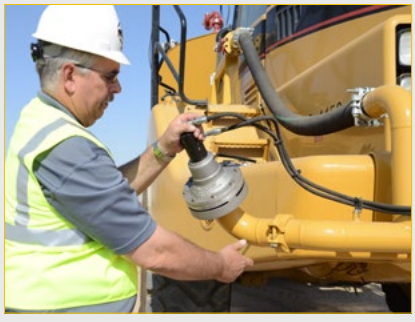
An adjusting ring allows for simple and easy control over the discharge spray flow and fan width.

Vertical Orientation

With the spray head set level with the ground, water exits at a 10° upward angle above horizontal, creating a uniform, fully atomized fan of water. In hot and very arid climates, water can be quickly lost to evaporation as it settles onto the hot ground. Optional swivels on spray heads allow them to be tilted downward to concentrate the spray fan onto the ground. This is also useful for flushing and sweeping operations.

Additionally, Mega offers a Vertical Side Spray (VSS) option for both hydraulic and pneumatic spray heads. With this option, a Mega spray head is mounted vertically on each side of the water tank. The resulting vertical fans of water are ideal for spraying hillsides, piles, berms, and for reinforcing fire-fighting black lines.





Vertical Side Spray Heads.

Overwatering Hazards

Recently, overwatering of mine haul roads has been the subject of increased study by mine planning and safety. Many mines have improved their efficiency, lowered resource and equipment maintenance costs, and improved the safety of their working conditions by employing water conservation practices.

Safety

Safety is the most important factor to consider. Overwatering of roadways decreases tire traction (skid resistance), increases brake time, destabilizes fill slopes, and hastens erosion, all of which place the haulage truck operators at a much higher risk for potentially fatal or traumatic haulage accidents. In wet road conditions, haulage trucks cannot stop as quickly as on dry roads, and forceful application of brakes can easily result in the truck skidding out of control and colliding with safety berms. Additionally, standing water can soften road bases, potentially leading to washouts and collapsing of fill sections and slopes.

Water Waste

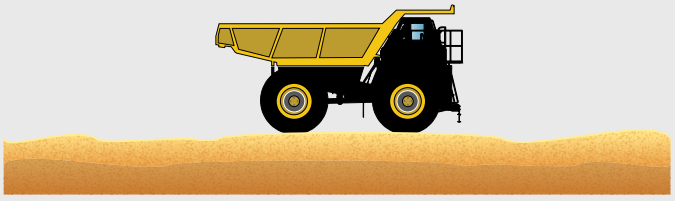
Water conservation is extremely important, particularly in drier climates where water is already a scarce and precious resource. Many governments have implemented strict regulations concerning water usage, and require mines to develop and adhere to a water conservation plan. These areas include (but are not limited to) South Africa (through the Department of Water Affairs), California (through the California Department of Conservation), Texas (through the Texas Administrative Code Title 30, Chapter 288), and most regions and cities in Australia.

Labor and Resources

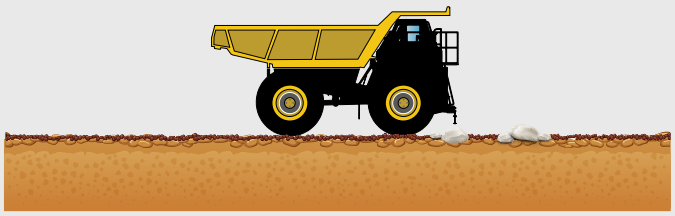
It has already been mentioned that overwatering degrades road quality. In order to maintain overwatered, eroding haul roads, the roads must be serviced and repaired more frequently, at the cost of resources and man-hours. The heavier a water truck's spray is, the quicker its tank is emptied. This is perhaps the most obvious consequence of overwatering. When using too much water, water trucks are required to return to water fill stations more often, wasting both fuel and man-hours as well as subjecting the over-watered roads to heavier traffic.

Tire Wear

A haul road in good, safe condition will have a compacted top layer of fine, cushioning particles protecting tires from the larger, coarse, sharp rocks below. Overwatering erodes away this protective top layer, subjecting tires to severe wear by the exposed coarse rocks. Not only is this costly in terms of tire replacement, but also in terms of production rates and man-hours—a grader must resurface the road in order to repair it, and the road cannot be used by haul trucks during this time.

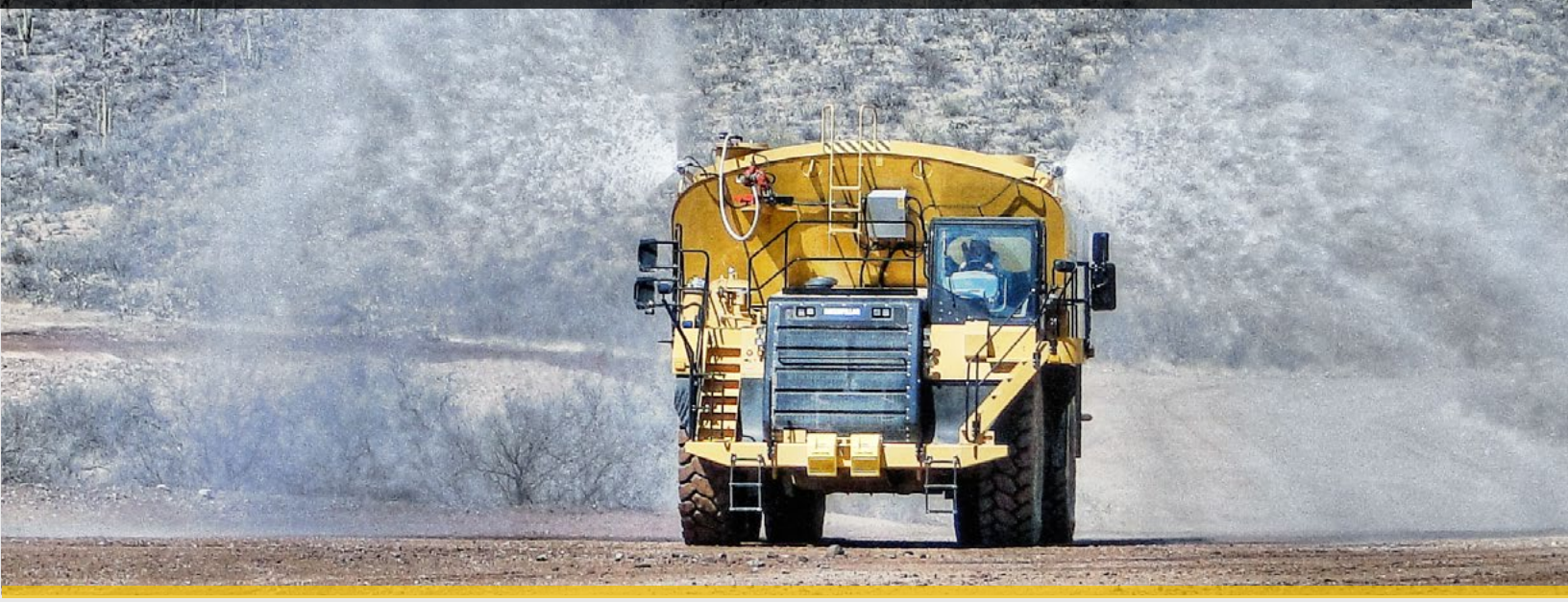


Normal haul road with compacted top layer.



Overwatered road washes away protective top layer exposing rocks below.

HOW MEGA CAN HELP YOU OPTIMIZE YOUR WATER APPLICATIONS



At Mega we know that every mine and construction site faces its own unique set of challenges, and that no single spray system configuration will work for all applications. To tackle this challenge, Mega spray heads are designed to be adjustable enough to meet any spray application requirement.

In order to optimize water distribution efficiency, many environmental factors must be considered. The composition of the road, the grade of the slope, the temperature and humidity of the air, and the desired water coverage must all be taken into account. If your spray heads cannot be adjusted for these conditions, it will be nearly impossible to avoid either over-watering or under-watering, thereby wasting time and resources in the process.

No other tank company has the depth of experience and staff expertise available to serve our customers that Mega offers. Contact our Product Support Department to see how we can help you improve your water spray applications.

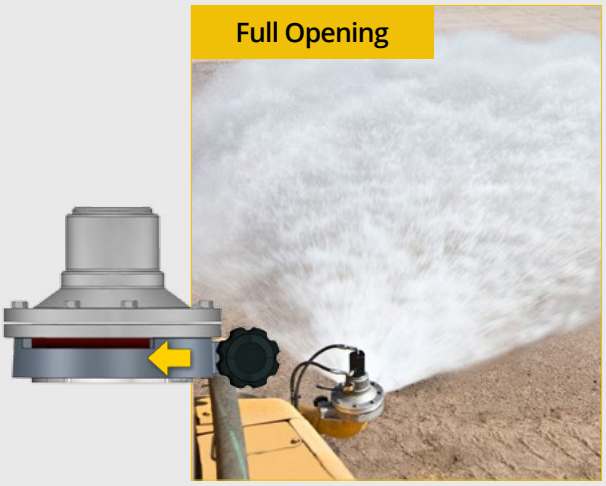
At Mega we understand that our most precious natural resources are limited. Water conservation is essential for reducing waste and for safe road conditions, which is why we emphasize efficient water usage methods and equipment.

Spray Pattern Customization

Mega spray heads can be adjusted to create a wide variety of spray patterns through horizontal rotation of the spray head and adjustment of the flow rate and fan width of each individual spray head. This ability to orient and adjust the flow of water from each spray head allows the operator to create the ideal spray pattern for nearly any application.

Horizontal Orientation and Fan Width

Mega spray heads can be rotated on their base plate mounts to adjust the horizontal direction of the discharge spray for each individual spray head, allowing the spray heads to be 'aimed' for optimal spray coverage. An adjusting ring allows for further customization by providing control over the width of the spray fan. The adjusting ring can be rotated to widen or narrow the spray between a 90° and a 10° fan opening.



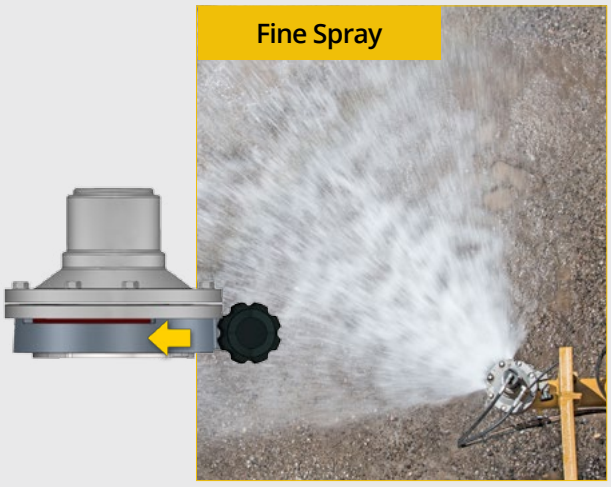
A Mega spray head in the default full (90°) opening setting emits a wide, even fan of fine spray.

A Mega spray head adjusted to a narrower opening width sprays a more focused stream of water that travels further.

Spray Intensity

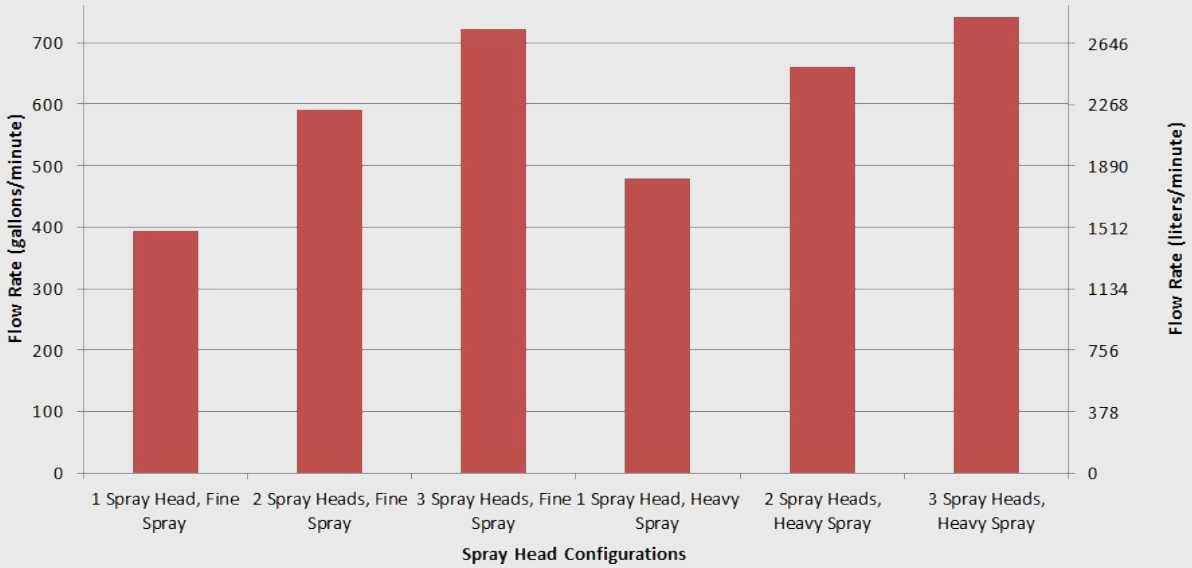
An adjusting ring allows for simple and easy control over the spray intensity. A ⅜ inch tall opening ("heavy spray" setting) will provide heavy, short-range spray appropriate for ground material that is very sandy or porous, or for extremely hot and dry environments where a heavy lay-down of water is necessary to saturate the ground. The 1/4 inch opening provides a finer, longer-reaching spray ideal for precision watering and water conservation.

The "heavy" spray head opening is ⅜ inch tall. This setting provides a very heavy spray of water with reduced width and reach.



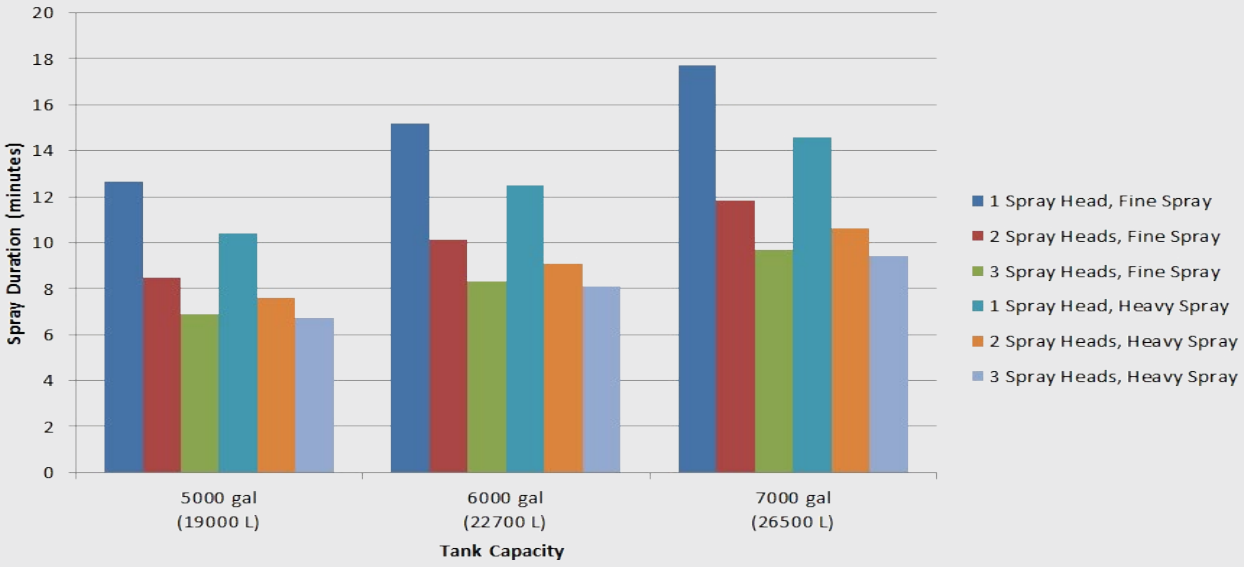
The "fine" spray head opening is ¼ inch tall. This setting results in a finer spray of water with maximum reach and width at high pump speeds. This is the recommended setting for most water distribution applications.

Spray Head Configuration Flow Rates (Mega M-3 Water Pump)



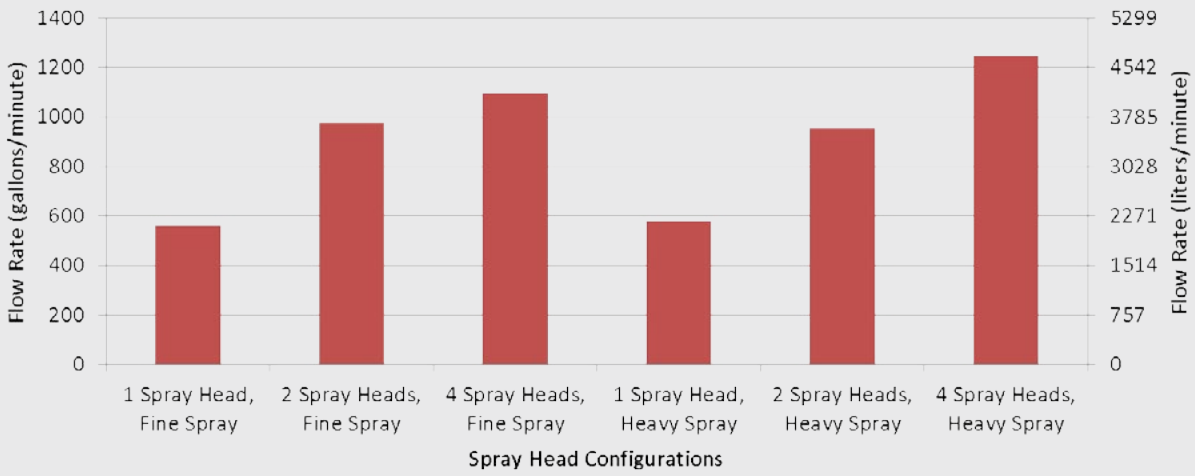
Total flow rates of different spray head configurations. The approximate total flow rates in gallons/minute (left vertical axis) and liters/minute (right vertical axis) of three possible spray head configurations. The "fine spray" opening is ¼ inches in height, and the "heavy spray opening" setting is ⅜ inches in height. These flow rates were recorded on an MAC6 CAT730 with an M-3 Mega water pump.

Approximate Spray Duration (Mega M-3 Water Pump)



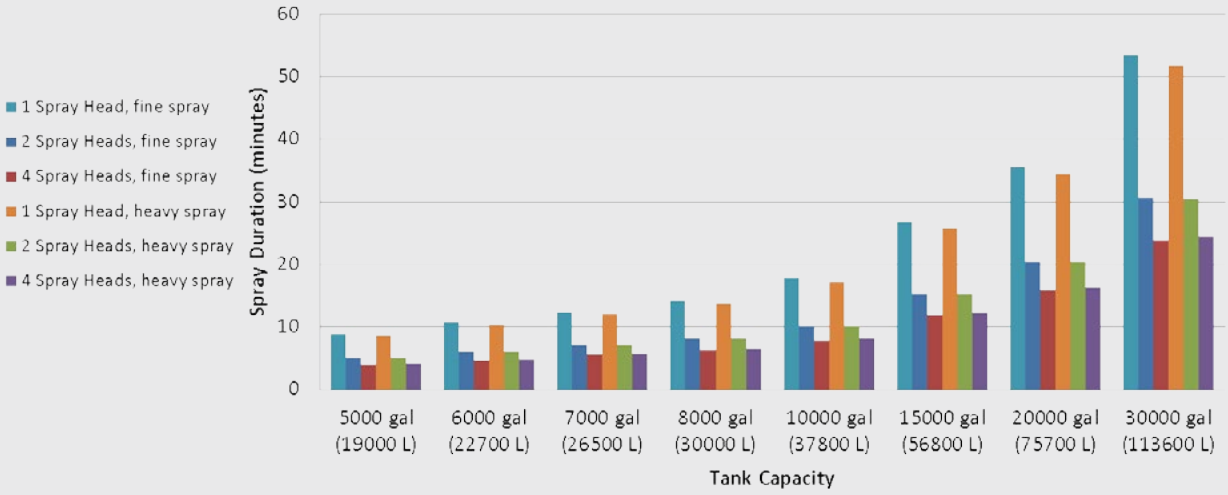
Total flow rates of different spray head configurations. The approximate total flow rates in gallons/minute (left vertical axis) and liters/minute (right vertical axis) of three possible spray head configurations. The "fine spray" opening is ¼ inches in height, and the "heavy spray opening" setting is ⅜ inches in height. These flow rates were recorded on an MAC6 CAT730 with an M-3 Mega water pump.

Spray Head Configuration Flow Rates (Mega M-4B Water Pump)



Total flow rates of different spray head configurations. The approximate total flow rates in gallons/minute (left vertical axis) and liters/minute (right vertical axis) of four possible spray head configurations. The "fine spray" opening is ¼ inches in height, and the "heavy spray opening" setting is ⅜ inches in height. These flow rates were recorded on an MST8 CAT621K with an M-4B Mega water pump.

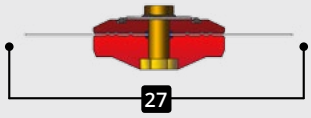
Approximate Spray Duration (Mega M-4B Water Pump)



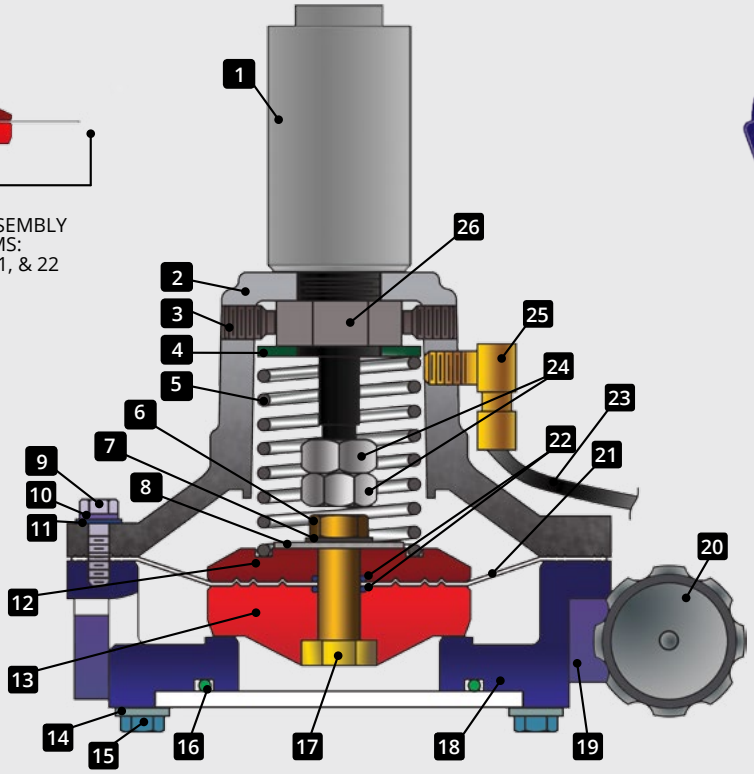
Estimated spray duration for various capacity tanks with four different spray head configurations. Spray duration in minutes is shown on the vertical axis. The "fine spray" opening is ¼ inches in height, and the "heavy spray opening" setting is ⅜ inches in height. These flow rates were recorded on an MST8 CAT621K with an M-4B Mega water pump.

Mega Spray Head, 3 inch, Hydraulic, Stainless Steel
Part No. 047062

The Mega stainless steel hydraulic spray head is optimized for use in the most severe environments. The stainless steel hydraulic spray head shares the same design as the Mega aluminum hydraulic spray head, with the exception that all metallic parts that come into contact with water during use are stainless steel. The Mega 3 inch hydraulic spray head valve is actuated by a long life double-acting hydraulic cylinder.



3 INCH DROP-IN ASSEMBLY
INCLUDES ITEMS:
6, 7, 8, 12, 13, 17, 21, & 22



ITEM	PART NO.	DESCRIPTION	QTY
	047062	Mega SHV*, 3 inch, Hydraulic, Stainless Steel	1
1	306808	Cylinder, Hydraulic	1
2	306395	Housing, Upper, Stainless Steel	1
3	354513	Set Screw, Cylinder	2
4	350011	Washer, 1.25 inches	1
5	305304	Spring	1
6	300211	**Bolt, Stem	1
7	300212	**Washer, Bell	1
8	354598	**Washer, Flat, 5/8	1
9	306148	Cap Screw, 5/16 X 1 1/4 inch Stainless Steel	8
10	355337	Washer, Lock, 5/16 Stainless Steel	8
11	355336	Washer, Flat 5/16 Stainless Steel	8
12	300210	**Guide Disk, Upper	1
13	300209	**Guide Disk, Lower	1

ITEM	PART NO.	DESCRIPTION	QTY
14	355295	Washer, Flat, Stainless Steel	4
15	355946	Cap Screw, 3/8 X 3/4 inch, Stainless Steel	4
16	354502	O-Ring, Base	1
17	300214	**Nut, Stem	1
18	045099	Housing, Base, Stainless Steel	1
19	045679	Adjusting Ring, Stainless Steel	1
20	302912	Knob, Adjusting Ring	1
21	300208	**Diaphragm	1
22	300215	**O-Ring, Stem	2
23	351141	Tubing, Nylon, 3/8 inch tube, 8 inch long tube	1
24	350044	Nut, Hex, 1/2 inch-20	2
25	351082	Elbow, 1/4 inch, NPT-3/8 inch Tube	1
26	305294	Nut, Cylinder Retaining	1
27	300409	Drop-In Assembly	1

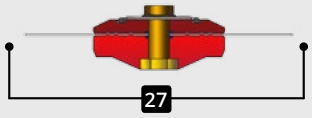
* SHV - Spray Head Valve

** These parts are included in the Drop-in Assembly.

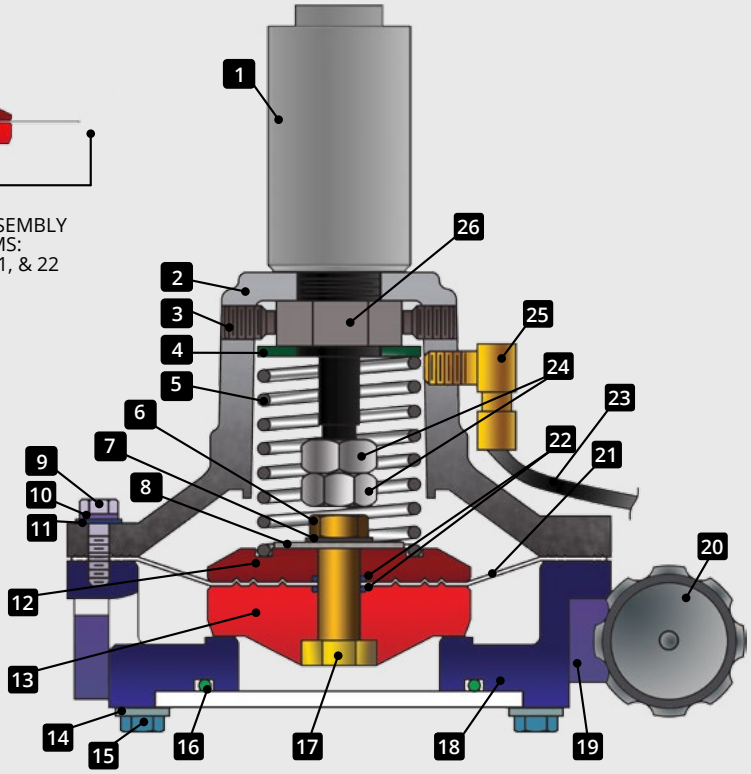
If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega Spray Head, 3 inch, Hydraulic, Aluminum
Part No. 025610

The Mega 3 inch hydraulic spray head valve is actuated by a long life double acting hydraulic cylinder. The Mega hydraulic spray head is designed for use in harsh conditions and/or where there is no air supply available.



3 INCH DROP-IN ASSEMBLY
INCLUDES ITEMS:
6, 7, 8, 12, 13, 17, 21, & 22



ITEM	PART NO.	DESCRIPTION	QTY
	025610	Mega SHV*, 3 inch, Hydraulic, Aluminum	1
1	306808	Cylinder, Hydraulic	1
2	025615	Housing, Upper	1
3	354513	Set Screw, Cylinder	2
4	350011	Washer, 1.25 inches	1
5	305304	Spring	1
6	300211	**Bolt, Stem	1
7	300212	**Washer, Bell	1
8	354598	**Washer, Flat, 5/8	1
9	355335	Cap Screw, 5/16 X 1 1/4 inch	8
10	355337	Washer, Lock, 5/16 Stainless Steel	8
11	355336	Washer, Flat 5/16 Stainless Steel	8
12	300210	**Guide Disk, Upper	1
13	300209	**Guide Disk, Lower	1

ITEM	PART NO.	DESCRIPTION	QTY
14	355295	Washer, Flat, Stainless Steel	4
15	355294	Cap Screw, 3/8 X 3/4 inch	4
16	354502	O-Ring, Base	1
17	300214	**Nut, Stem	1
18	300207	Housing, Base	1
19	300216	Adjusting Ring	1
20	302912	Knob, Adjusting Ring	1
21	300208	**Diaphragm	1
22	300215	**O-Ring, Stem	2
23	351141	Tubing, Nylon, 3/8 inch tube, 8 inch long tube	1
24	350044	Nut, Hex, 1/2 inch-20	2
25	351082	Elbow, 1/4 inch, NPT-3/8 inch Tube	1
26	305294	Nut, Cylinder Retaining	1
27	300409	Drop-In Stainless Steel Assembly	1

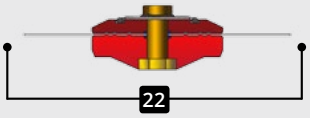
* SHV - Spray Head Valve

** These parts are included in the Drop-in Assembly.

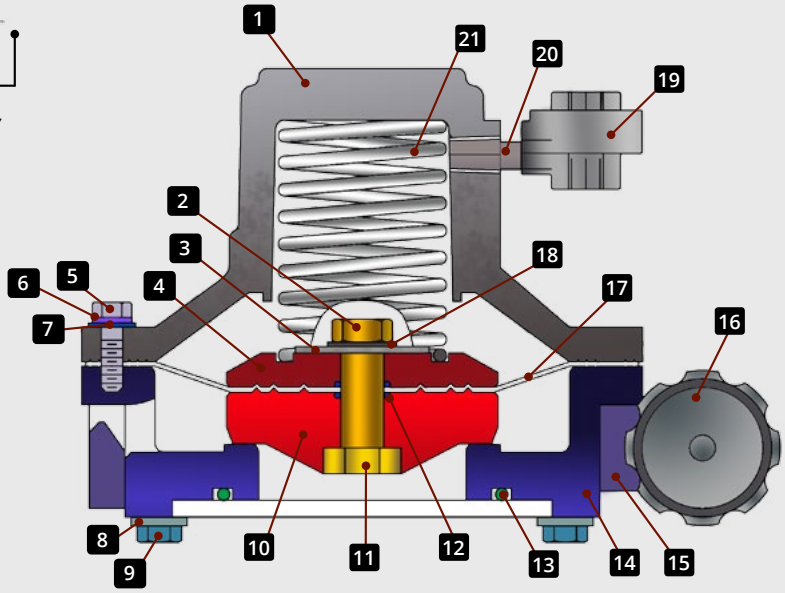
If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

Mega Spray Head, 3 inch, Pneumatic, Aluminum
Part No. 300198

The Mega pneumatic spray head is actuated by pressure regulated air supplied by the tractor. The anodized and hardened aluminum provides superior protection from corrosive water.



3 INCH DROP-IN ASSEMBLY
INCLUDES ITEMS:
2-4,10-12,17,18



ITEM	PART NO.	DESCRIPTION	QTY
	300198	Mega SHV* , 3 inch, Pneumatic, Aluminum	1
1	300206	Housing, Upper	1
2	300211	**Bolt, Stem	1
3	354598	**Washer, Flat, 5/8	1
4	300210	**Guide Disk, Upper	1
5	355335	Cap Screw, 5/16 X 1 1/4 inch, Stainless Steel	8
6	355337	Washer, Lock, 5/16, Stainless Steel	8
7	355336	Washer, Flat 5/16, Stainless Steel	8
8	355295	Washer, Flat, Stainless Steel	4
9	355294	Cap Screw, 3/8 X 3/4 inch, Stainless Steel	4
10	300209	**Guide Disk, Lower	1
11	300214	**Nut, Stem	1

ITEM	PART NO.	DESCRIPTION	QTY
12	300215	** O-Ring, Stem	2
13	354502	O-Ring, Base	1
14	300207	Housing, Base	1
15	300216	Adjusting Ring	1
16	302912	Knob, Adjusting Ring	1
17	300208	**Diaphragm	1
18	300212	**Washer, Bell	1
19	300468	Valve, Quick Discharge, Pneumatic	1
20	352467	Nipple, Quick Discharge Valve, Pneumatic	1
21	300213	Spring	1
22	300409	Drop-In Assembly	1

* SHV - Spray Head Valve

** These parts are included in the Drop-in Assembly.

If illustration does not match your configuration please call product support at 505-345-2661 or 1-800-345-8889.

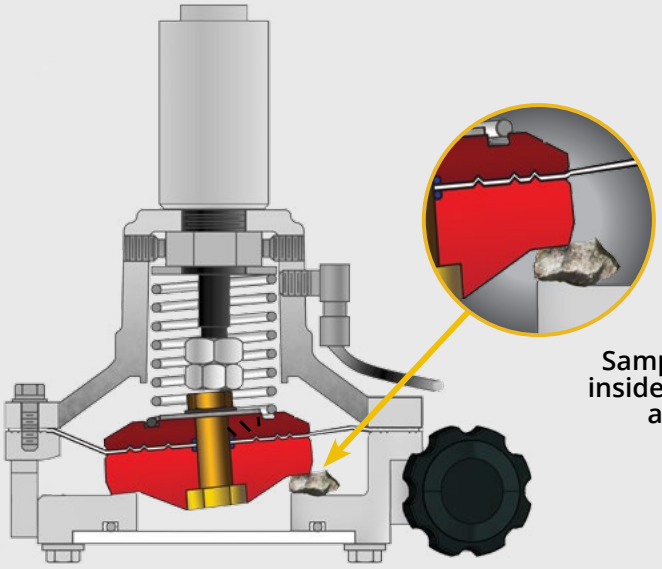
Mega Spray Head FAQ Section

What does SHV and VSS mean?

SHV stands for “Spray Head Valve” and VSS means "Vertical Side Spray".

My spray pattern has a blank dry spot in it. What should I do to correct this?

Mega spray heads have an adjustable ring that changes the flow rates and direction of the spray. Use this adjusting ring to control the intensity and geometry of your spray pattern. If that does not work, check the spray head assembly for debris and damage to the guide disc or lower housing. Contact Mega Product Support for assistance and more information.



Sample of debris caught inside & under the drop-in assembly of SHV.

Can I still order the Pneumatic 2 inch spray heads?

The Mega pneumatic 2 inch SHV's have been discontinued. Mega offers an aluminum pneumatic 3 inch SHV for pneumatic systems.

All of these customization options are kind of overwhelming. Does Mega offer training of any sort?

Yes! Mega offers on-site operator training. We can send a Product Support Representative to your site to teach and demonstrate the Mega spray system installation, adjustments, and best practices. If you are interested in our on-site training, contact the Mega Product Support Group for pricing information and schedule availability.

We purchased a water tank without vertical side spray heads, can they be added?

Yes, Current MEGA water tanks can be upgraded to control up to 8 spray heads and 3 butterfly valves (Non DiSCS® systems), the DiSCS® systems can control 6 spray heads and 3 butterfly valves. Contact the MEGA Product Support group at 505.345.2661 if you have any questions.

Please make sure to have your tank serial number to see if your control system is capable of supporting these additional features. Location of our Mega serial and model numbers can be found on our website at *http://www.megacorpinc.com/parts/serial.asp*


MEGA
ADAPTABILITY

Thank You

For Your Business

GENUINE MEGA.

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