YVB9K

Trapped Pressure Unloader



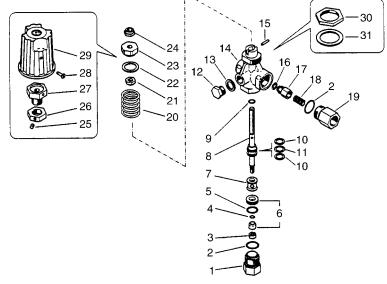
FEATURES

- Extremely durable construction in stainless steel and brass
- Easy Start-up due to low re-arm pressure (27% of operating pressure)
- Hexagonal discharge check valve to prevent binding

SPECIFICATIONS					
Part Number:			YVB9K		
Maximum Volume			8.0 GPM		
Maximum Discharge Pressure			3650 PSI		
Maximum Temperature		æ	195° F		
Port Sizes:	Inlet		3/8"-18 NPT- F		
	Outlet		3/8"-18 NPT- F		
	Bypass		3/8"-18 NPT- F		
Dimensions	;		5.8" x 3.3" x 2.3"		
Weight			1.6 lbs.		
Materials	Brass, Stainless Steel, Plastic, Buna-N				

PARTS LIST

1. Y60220431 Fitting, Bypass, 3/8"-18 NPT 1 2. Y10307002 O-Ring, 1.78 x 18.77 * 2 3. Y11454000 Nut, M6, SSt 1 4. Y10300101 O-Ring, 1 x 4mm * 1 5. Y10306601 O-Ring, 1.78 x 15.6 * 1 6. Y60222120 Seat and Retainer * 1 7. Y60221031 Spacer 1 8. Y60220251 Piston, VB9 1 9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 17. Y60005231 Check Valve 1 18. Y60020531 Spring, 4.2mm 1 19. Y6002931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring <th>Item</th> <th>Part Number</th> <th>Description</th> <th>Kit</th> <th>Qty</th>	Item	Part Number	Description	Kit	Qty
3. Y11454000 Nut, M6, SSt 1 4. Y10300101 O-Ring, 1 x 4mm * 1 5. Y10306601 O-Ring, 1.78 x 15.6 * 1 6. Y60222120 Seat and Retainer * 1 7. Y60221031 Spacer 1 8. Y60220251 Piston, VB9 1 9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60020531 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 <	1.	Y60220431	Fitting, Bypass, 3/8"-18 NPT		1
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6. Y60222120 Seat and Retainer * 1 7. Y60221031 Spacer 1 8. Y60220251 Piston, VB9 1 9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220361 Spring 1 24. Y11458910 Nut, Adjusting, Brass 1 25. Y16210500 Screw 1 26. Y60225331 Nipple, Adjusting 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	4.	Y10300101	O-Ring, 1 x 4mm	*	1
6. Y60221210 Seat and Retainer 1 7. Y60221031 Spacer 1 8. Y60220251 Piston, VB9 1 9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y6002531 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225331 R	5.	Y10306601	O-Ring, 1.78 x 15.6	*	1
8. Y60220251 Piston, VB9 1 9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y60025931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M	6.	Y60222120	Seat and Retainer	*	1
9. Y10402100 Antri-Extrusion Ring * 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 1 18. Y60005351 Spring, 4.2mm 1 1 19. Y6002531 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220361 Spring 1 21. Y60220361 Washer 1 22. Y6022084 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y1	7.	Y60221031	Spacer		1
9. Y10402100 Arltri-Extrusion Ring 2 10. Y10317500 O-Ring, 2.62 x 10.77 * 1 11. Y10317008 O-Ring, 2.62 x 7.6 * 1 12. Y28001331 Plug, 1/4"-18 NPT, Brass 1 13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	8.	Y60220251	Piston, VB9		1
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11. Y10317008	10.	Y10317500		*	1
13. Y14391100 Washer, Ø13 x 5 1 14. Y60220135 Body, VB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y6022084 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	11.	Y10317008	O-Ring, 2.62 x 7.6	*	1
14. Y60220135 Body, YB9 1 15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y6002531 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	12.	Y28001331	Plug, 1/4"-18 NPT, Brass		1
15. Y15102100 Pin, 3 x 14 mm, Steel 1 16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y6002531 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	13.	Y14391100	Washer, Ø13 x 5		1
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16. Y10321300 O-Ring, 3 x 6mm * 1 17. Y60005231 Check Valve 1 18. Y60005351 Spring, 4.2mm 1 19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	15.	Y15102100			1
18. Y60005351 Spring, 4.2mm 1 19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	16.	Y10321300		*	1
19. Y60005931 Fitting, Outlet, 3/8"-18 NPT, Brass 1 20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	17.	Y60005231	Check Valve		1
20. Y60220361 Spring 1 21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	18.	Y60005351	Spring, 4.2mm		1
21. Y60220731 Lock, Piston 1 22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	19.	Y60005931	Fitting, Outlet, 3/8"-18 NPT, Brass		1
22. Y60220884 Washer 1 23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	20.	Y60220361	Spring		1
23. Y60220931 Nut, Adjusting, Brass 1 24. Y11458910 Nut, Locking Ring 1 25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	21.	Y60220731	Lock, Piston		1
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25. Y16210500 Screw 1 26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	23.	Y60220931	Nut, Adjusting, Brass		1
26. Y60225231 Guide, Spring 1 27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	24.	Y11458910	Nut, Locking Ring		1
27. Y60225331 Nipple, Adjusting 1 28. Y16183800 Screw, M4 1 29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	25.	Y16210500	Screw		1
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29. Y60225184 Cap, Plastic 1 30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	27.	Y60225331			1
30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	28.	Y16183800	Screw, M4		1
30. Y60225431 Ring, Brass 1 31. Y14358200 Washer, Steel 1	29.	Y60225184	Cap, Plastic		1
31. Y14358200 Washer, Steel 1	30.	Y60225431			1
* YKITVB9 Repair Kit	31.	Y14358200			1
	*	YKITVB9	Repair Kit		







Trapped Pressure Unloader

APPLICATION

This product is to be used with clean, fresh water. For different or corrosive liquids, contact GP Companies Inc. technical support department. With not-clean liquids, appropriate filtration should be installed.

GENERAL PUMP

Select the valve based on the nominal operating rating: system rated pressure, max flow and max temperature.

Under no circumstances should the pressure of the system exceed the **maximum** rated pressure of any component.

When installed on hot water cleaners, this valve is to be installed before the boiler.

INSTALLATION I

On a system that produces hot water, consider installing safety devices which limit the accidental increase of the fluid temperature.

Always install a safety valve to protect the operator and system.

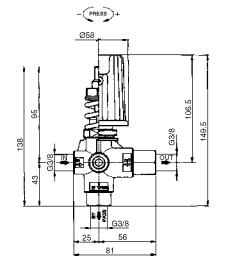
Choose a correct nozzle size, able to discharge regularly, on bypass, at least 5% of the total flow of the system, in order to achieve a constant pressure, and avoid troublesome pressure spikes.

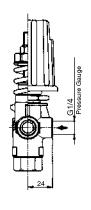
When the nozzle wears, the pressure drops. After installing a new nozzle, re-adjust the system to the original pressure setting.

PROBLEMS & SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Unloader cycles	Damaged seat or cone Fitting leaking Restricted bypass	. Check and renew
Unloader does not come up to pressure	Unloader not properly sized	. Clean the seat . Replace
Pressure peaks	Spring totally compressed. Excessive flow in bypass. There is not a min. 5% of total flow in bypass.	. Select another unloader
Unloader does not bypass at low pressure	. Check valve jammed	Replace

DIMENSIONAL DRAWING







GENERAL PUMP

1174 NORTHLAND DRIVE • MENDOTA HEIGHTS, MN 55120