

# RVHD(xx)NL SERIES - NO LEAD HEAVY DUTY RELIEF VALVES

## APPLICATIONS:

- In installations where the pump is capable of more pressure than its related system components, use of a relief valve is important.
- It is the responsibility of the system designer or installer to select a proper relief valve with appropriate flow characteristics to maintain a system operating pressure below the maximum pressure tank rating.
- Cold water applications only.
- Field adjustment is not recommended. It is the sole responsibility of the qualified installer and end user to confirm with local codes and AHJ (Authority Having Jurisdiction) that the valves are suitable for the application.



## IMPORTANT:

- Pressure relief valves are recommended for all cold water system installations to protect against damage to piping and pressure tanks.
- Valves will be sold at factory pre-set PSI only. Accuracy +/- 15% of factory pre-set PSI.
- Field adjustments are not recommended the approximate operating range has been provided by the manufacturer. Any changes made to the pre-set pressure is entirely at the risk of the person/company who makes the adjustment. Any changes made should be thoroughly tested for accuracy at the time of installation. Neither the manufacturer or Boshart Industries will assume liability or responsibility caused as a result of adjusting the relief valve setting. If the pressure setting is adjusted, it will void any warranty or return of the product.
- Relief valves must be installed so that they drain to a floor drain, sump or other safe location with an air brake. If an outlet pipe is used then it must be at least the same diameter as the relief valve outlet.
- For cold water use only. These valves are not T & P valves that are required with water heaters.



## FEATURES:

- Heavy duty cast brass body
- Stainless steel spring and valve screw

## RATINGS:

- Max Operating Temperature: 180°F (82°C)

## SPECIFICATIONS:

- Threads conform to ANSI/ASME B1.20.1
- Components in contact with potable water conform to ASTM B584, UNS C89833 (NL Bronze)
- Components not in contact with potable water conform to ASTM B62 and ASTM B584, UNS C83600 (Bronze)

## CERTIFICATIONS:

- NSF/ANSI/CAN Standard 61 Certified (Drinking Water System Components - Health Effects)
- NSF/ANSI/CAN Standard 372 Certified (Drinking Water System Components - Lead Content)
- NL Brass - (NL test criteria <0.25% Pb by weighted average)



## DISCHARGE CAPACITY SPECIFICATIONS

Part No.	Description		Factory Pre-Set to open	Max Flow GPM* @ 120 PSIG	Pre-Sets Also available by special order	
	Inlet (I)	Outlet (O)	PSIG		Pre-Set to open (PSIG)	Max Flow GPM @120 PSIG
RVHD05NL	1/2" MPT	1/2" FPT	75	33	N/A	N/A
RVHD07NL	3/4" MPT	3/4" FPT	75	47	100	30
RVHD10NL	1" MPT	1" FPT	75	37	100	41
RVHD12NL	1-1/4" MPT	1-1/4" FPT	65	51	100	25
RVHD15NL	1-1/2" FPT	1-1/2" FPT	65	70	N/A	N/A
RVHD20NL	2" FPT	2" FPT	65	80	N/A	N/A

Flow rates do not include friction loss in piping.  
Field adjustment not recommended.

Flow rate information for all sizes is not available from A.Y. McDonald at this time.

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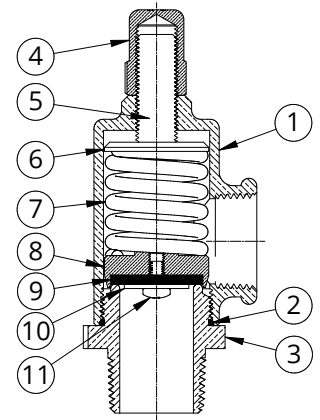
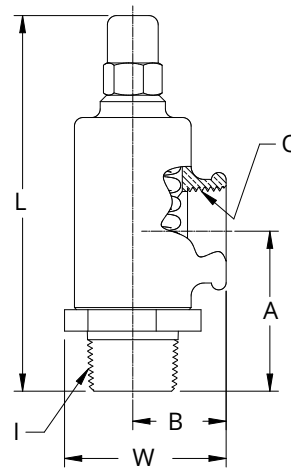
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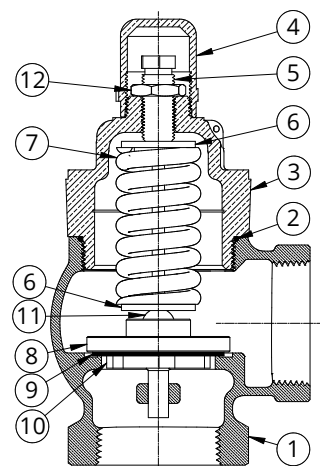
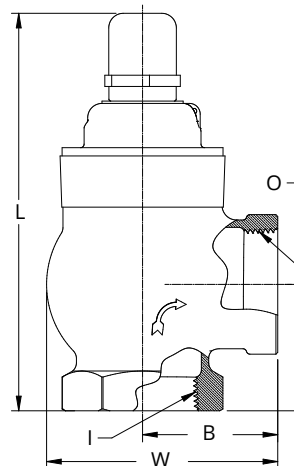
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1/2" TO 1-1/4" MATERIAL LIST		
No.	Part Name	Material
1	Valve Body	No Lead Bronze C89833
2	O-Ring	Ethylene Propylene Diene Terpolymer (EPDM)
3	Inlet Body	No Lead Bronze C89833
4	Adjusting Screw Cap	Leaded Bronze C83600
5	Adjusting Screw	Leaded Bronze C83600
6	Spring Retainer	Leaded Bronze C83600
7	Spring	302 Stainless Steel
8	Seat & Spring Retainer	No Lead Bronze C89833
9	Seat	Ethylene Propylene Diene Terpolymer (EPDM)
10	Retaining Washer	304 Stainless Steel
11	Retaining Screw	304 Stainless Steel



1/2" TO 1-1/4" MATERIAL LIST		
No.	Part Name	Material
1	Valve Body	No Lead Bronze C89833
2	O-Ring	Ethylene Propylene Diene Terpolymer (EPDM)
3	End Body Cap	Leaded Bronze C83600
4	Adjusting Screw Cap	Leaded Bronze C83600
5	Adjusting Screw	Leaded Bronze C83600
6	Spring Retainer	Leaded Bronze C83600
7	Spring	302 Stainless Steel
8	Seat & Spring Retainer	No Lead Bronze C89833
9	Seat	Ethylene Propylene Diene Terpolymer (EPDM)
10	Seat Retainer Nut	304 Stainless Steel
11	Spring Guide Rod	Leaded Bronze C83600
12	Lock Nut	Leaded Bronze C83600



DIMENSIONS										
Part No.	A		B		L		W		Weight	
	inches	mm	inches	mm	inches	mm	inches	mm	lb	grams
RVHD05NL	1.66	42.16	1.00	2.54	4.14	105.16	1.62	41.15	0.63	285.76
RVHD07NL	1.97	50.04	1.17	29.72	4.66	118.36	1.97	50.04	1.20	544.31
RVHD10NL	2.33	59.19	1.36	34.54	5.47	138.94	2.29	58.17	1.68	761.04
RVHD12NL	2.74	69.60	1.77	44.96	6.00	152.40	2.95	74.93	2.80	1270.06
RVHD15NL	2.16	54.86	2.31	58.67	6.79	172.47	3.94	100.08	5.03	2281.57
RVHD20NL	2.54	64.52	2.64	67.06	6.51	165.35	4.30	109.22	5.34	2422.18

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# HOW TO ADJUST A HEAVY DUTY RELIEF VALVE

## IMPORTANT:

It is the responsibility of the system designer or installer to properly select a pressure relief valve with adequate flow characteristics to maintain a maximum pressure considerably below the system's design pressure. Usually, this is determined by the maximum pressure rating of the pressure tank. Consult the tank manufacturer to determine the maximum pressure rating for your tank.

**We do not recommend that relief valves are adjusted. If the installer chooses to do so, the following instructions will apply.**



Failure to verify could cause serious damage, personal injury, or death. This test is accomplished by **SAFELY** bypassing the pressure switch while watching a calibrated pressure gauge in the system. The tester must be in a position to switch off the pump manually if the system pressure approaches the maximum rating of the pressure tank. If the output of the pump exceeds the capacity of the "re-set" pressure relief valve, a higher flow rate PRV must be selected.

**#1** - All adjusting screws are concealed with acorn nuts to prevent tampering. With the pump for compressor running, remove any tags and the acorn nut.



**#2** - Loosen the jam nut and reduce the spring tension by turning the adjustment screw counterclockwise until the pressure gauge is below the desired setting.



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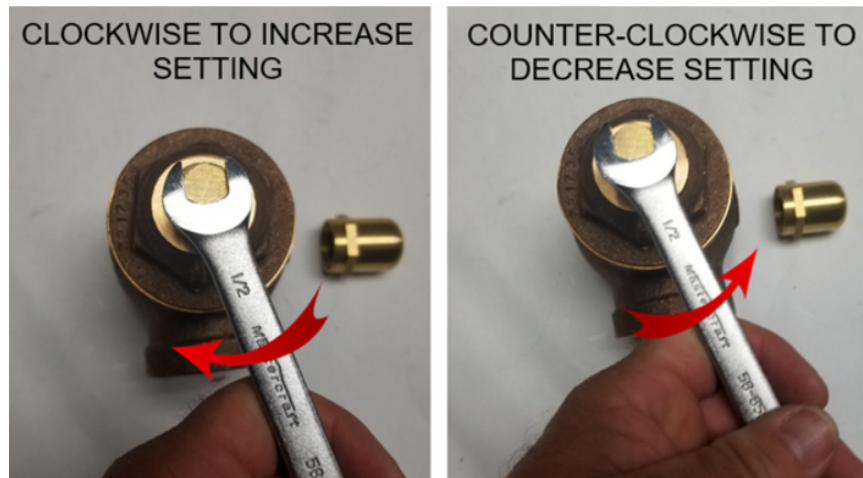
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**#3** - Then retighten the adjusting screw tension by turning the adjustment screw clockwise to the new desired setting.



**#4** - Test the setting, the gauge needle will drop abruptly at the relief setting. This test is accomplished by SAFELY bypassing the pressure switch while watching a calibrated pressure gauge in the system.

**CAUTION:** The tester must be in a position to switch off the pump manually if the system pressure approaches the maximum rating of the pressure tank. If the output of the pump exceeds the capacity of the "re-set" pressure relief valve, a higher flow rate PRV must be selected.

**NOTE:** Any system must be capable of producing a higher pressure than desired for accurate setting. Arbitrarily tightening the screw without a relief drop on the gauge is not recommended.



**#5** - Replace the acorn nut and recheck the relieving pressure setting.

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