



PRESSURE RELIEF VALVES

A common design methodology for fluid filled gas blanketed distribution transformers usually requires a space for the volume change of the fluid and gas due to equipment operation and ambient temperature. An increase in volume will cause a corresponding increase in pressure. ANSI requires a transformer pressure relief valve (PRV) to be located in the gas space to relieve the excess pressure. The PRV must open when the pressure reaches a nominal 10psi and close at a nominal 8psi with a flow rate of 35scfm @ 15psi. The Heartland HPV-1000 Series PRV models meet the ANSI as well as REA and industry standards.



In addition to the HPV-1000 Series with 35scfm flow rate, Heartland also offers three additional PRV Series with higher flow rates; the HPV-1200 Series with 50scfm, the HPV-1300 Series with 60scfm and the HPV-1400 Series with 50scfm. In addition to higher flow rates these PRV Series offer more features like indicators, blow-off caps, cap colors, pull ring/non-pull ring and corrosion resistant Stainless Steel for customers desiring optional features.



While Mineral Oil has been the traditional transformer fluid, Natural Ester-Based fluid (NEB) is rapidly becoming the fluid of choice because of inherent efficiency and bio-degradability. One of the most commonly used NEB fluids is Cooper Power Systems Envirotemp® FR3™. According to Cooper Power Systems, the conventional Mineral Oil transformer PRV may not be suitable for long-term exposure to FR3 fluid unless properly treated, distinguished from the conventional Mineral Oil transformer PRV and have a minimum flow rate of 50scfm.

In order to meet the PRV requirements of NEB fluid compatibility and distinguish the NEB fluid PRV from the Mineral Oil only PRV, Heartland offers the **NEW GreenCap™** Series transformer PRV. Heartland is the first to offer a complete line of transformer PRV models suitable for NEB fluid applications. Now there is no need to compromise your NEB fluid PRV requirements, because the Heartland **GreenCap™** Series PRV models are available for all the same pressures, flow rates and features as our conventional Mineral Oil PRV models. The trade marked **GreenCap™** Series now makes it easy to distinguish the NEB fluid filled transformer from the Mineral Oil filled transformer and ensures the correct PRV for the application. **GreenCap™** Series models are conveniently shown in green in the **MODEL SELECTION CHART**.



Heartland offers a wide selection of valves and accessories that meet or exceed ANSI and industry standards. Please refer to the **MODEL SELECTION CHART** to select the Heartland model number that meets your requirements or contact Heartland Customer Service for assistance.

PRESSURE RELIEF VALVE MODEL SELECTION CHART

Model No	Thread	Flow Rate	Pressure	Comments
HPV-1000	1/4 - 18 NPT	35 SCFM	10 PSI	ANSI Standard
HPV-1001	1/4 - 18 NPT	35 SCFM	10 PSI	ANSI Standard, No Tape
HPV-1100	1/2 - 13 NC	35 SCFM	10 PSI	Optional Thread
HPV-1005	1/4 - 18 NPT	35 SCFM	5 PSI	Low Pressure
HPV-1006	1/4 - 18 NPT	35 SCFM	5 PSI	Low Pressure, No Tape
HPV-1200	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow
HPV-1201	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, Grey Cap
HPV-1205	1/4 - 18 NPT	50 SCFM	5 PSI	High Flow
HPV-1212	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, White Cap
HPV-1213	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator White Cap, No Ring
HPV-1214	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, Red Cap
HPV-1215	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, Red Cap, No Ring
HPV-1230	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, GreenCap
HPV-1231	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, GreenCap
HPV-1235	1/4 - 18 NPT	50 SCFM	5 PSI	High Flow, GreenCap
HPV-1242	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, White/GreenCap
HPV-1243	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, White/GreenCap, No Ring
HPV-1244	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, Red/GreenCap
HPV-1245	1/4 - 18 NPT	50 SCFM	10 PSI	High Flow, Indicator, Red/GreenCap, No Ring
HPV-1255	1/4 - 18 NPT	50 SCFM	5 PSI	High Flow, Indicator, GreenCap
HPV-1250	1/2 -14 NPT	50 SCFM	10 PSI	High Flow, Optional Thread
HPV-1280	1/2 -14 NPT	50 SCFM	10 PSI	High Flow, GreenCap, Optional Thread
HPV-1400	1/2 -14 NPT	50 SCFM	10 PSI	High Flow, Stainless Steel, Optional Thread
HPV-1310	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow
HPV-1311	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, Grey Cap
HPV-1312	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, White Cap
HPV-1313	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, White Cap, No Ring
HPV-1314	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, Red Cap
HPV-1315	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, Red Cap, No Ring
HPV-1340	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow , GreenCap
HPV-1341	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, GreenCap
HPV-1342	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, White/GreenCap
HPV-1343	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, White/GreenCap, No Ring
HPV-1344	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, Red/GreenCap
HPV-1345	1/4 - 18 NPT	60 SCFM	10 PSI	Higher Flow, Indicator, Red/GreenCap, No Ring
Model No	Thread	Material	Insert	Comments
HFN-1000	1/4 - 18 NPT	Steel	Teflon	Seal Nut