KEPNER PRODUCTS COMPANY

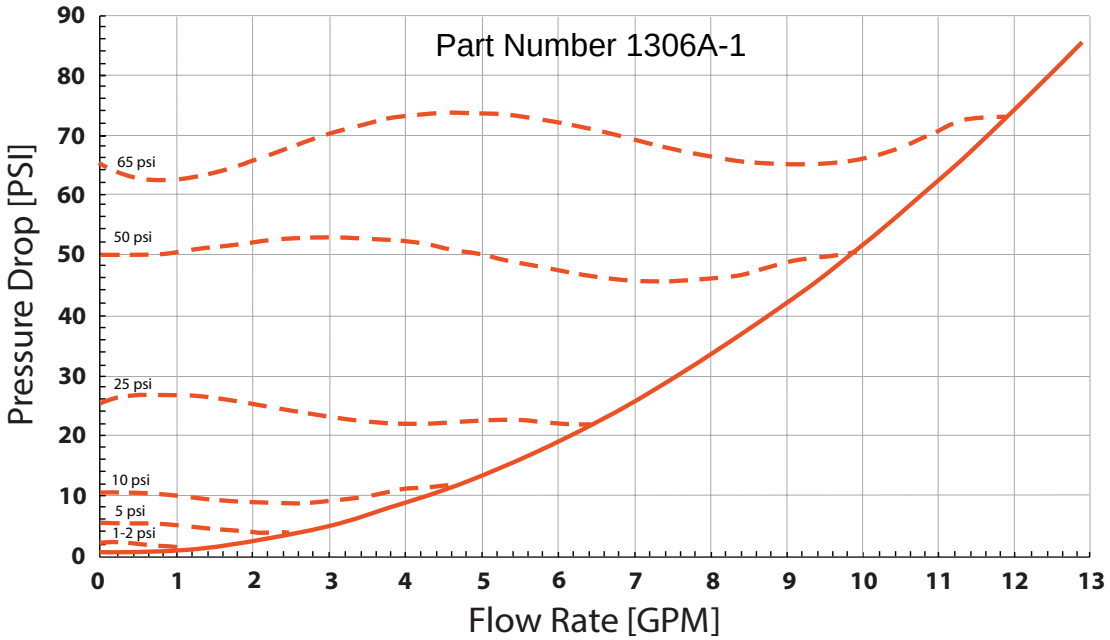
Relief Check Valves: Various Relief Settings

Kep-O-seal® In-line Relief Check valves and the Kepsēl® Cartridge Insert valves are, by definition, check valves with cracking pressure set higher than the standard 1 to 2 psi. This is accomplished by using stiffer springs. Our standard relief check springs are for cracking pressures of 5, 10, 25, 50 and 65 psi. Custom settings are available to 3,000 psi on special order.

Relief Check valves are used to develop pilot pressures for pilot operated devices; to maintain controlled back pressures in tanks and supply systems; and for low pressure, high volume, relief functions such as filter bypassing.

This graph shows the flow characteristics of the 1306A-1 check valve with various preset cracking pressures. The solid curve is for the valve with spring removed and shows the basic quadratic flow profile for this valve. The dashed lines represent each different relief pressure setting. The dashed lines move horizontally to the right until they intersect the solid line and then follow the solid line upward as the flow increases.

Notice that the dashed lines are very flat and the pressure drop increase required to reach the intersection point is less than 10% at the higher pressures. It is very desirable to maintain a relatively constant pressure drop with increasing flow and we accomplish this by means of the efficient internal design, generous flow path and the use of relatively low spring rates.



Tested Per SAE ARP 24E
Hydraulic Oil (MIL-PRF-5606)
Fluid Temp: 100 ˚F

Max Cv = 1.31
Tested With Standard
1-2, 5, 10, 25, 50, and 65 PSI Springs

This graph is typical of other valve sizes that will follow the same general trends as shown here.

Consult Factory or Distributor for more help. Customer/user is solely responsible to select products suitable for their specific application requirements and to ensure proper installation, operation and maintenance of these products. Improper selection or use of products can cause personal injury or property damage. All sales are subject to Kepner Products Company Standard Terms and Conditions of Sale. Designs are subject to change without notice.

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