CHECK VALVES ARE DESIGNED TO BE A RELIABLE AND STEADY VALVE PRODUCT

However, end users & processors report the same issues with disc check valves in their plants. What causes a check valve to fail? Here are the 3 most common reasons for failure.

#1

WATER HAMMERING
SURGES IN PRESSURE OR WHEN USED IN A MODULATING SYSTEM.
When pressure changes in the system occur often or suddenly, it can send shock waves through the pipeline. Seals can rupture, become misaligned with the disc and damage or flatten the springs. Water hammering can completely destroy even upsized springs. This is especially true when a check valve is placed in line very close to a pump.

#2

OVER OR UNDER SIZING
THE CHECK VALVE IS AS GOOD AS ITS SELECTION FOR APPLICATION.
Check Valves are very often improperly sized for their application. Most often the valve is selected purely by line size rather than to the application or the duty it is supposed to perform. Too much chatter in the valve could mean it's oversized. Constant fluctuations in pressure do not allow the valve to operate in an aligned, stable manner in an open or closed position which can cause uneven wear of seals, dislodging or misalignment of the disc.

#3

REVERSE FLOW & PUMP DAMAGE
WHEN A CHECK VALVE IS PLACED CLOSE TO A PUMP.
A fast closing, properly sized and aligned check valve that provides a tight shut off is necessary. This is especially true when the check valve is near the discharge of a pump. This can cause costly damages to the pump causing it to spin backwards. A correctly sized spring to assist the check valve also helps in eliminating reverse flow.

KNOWING YOUR APPLICATION, FLOW MATERIAL, AND SIZE NEEDS IN RELATION TO THE CHECK VALVE WILL DECREASE VALVE FAILURE. THIS IS TRUE FOR SEAL MATERIAL ALSO.

TO HELP REDUCE FAILURE, USE A CHECK VALVE THAT IS SUPPLIED WITH DISC GUIDES OR LEADS. THIS WILL PREVENT CHATTER, MISALIGNEMENT, FLUTTERING AND HAMMERING (ESPECIALLY OF THE SPRING)