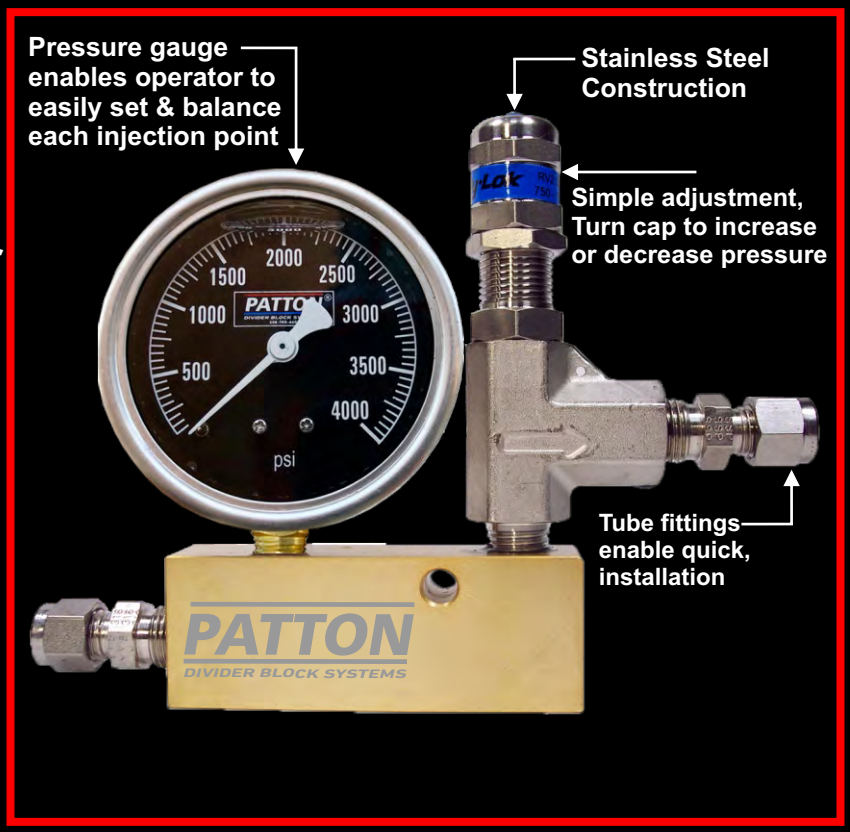
PRESSURE BALANCING VALVE
FOR HIGH PRESSURE DIVIDER BLOCK SYSTEMS

PATTON®
DIVIDER BLOCK SYSTEMS

STOP PREMATURE WEAR & FAILURE OF HIGH PRESSURE DIVIDER BLOCK SYSTEMS

- **Eliminate Spring Breakage in No-Flow Shutdown Devices & Proximity Switches:**
- **Eliminate Premature Wear of Divider Blocks In High Pressure Applications:**
- **Eliminate Blown Rupture Disc Issues With Divider Blocks Systems In High Pressure Applications:**
- **Eliminate Piston By-Passing In High Pressure Divider Block Systems:**



WHY USE BALANCING VALVES ON DIVIDER BLOCK SYSTEMS OPERATING IN HIGH PRESSURE SERVICE?

The divider block lubrication system operates at optimum efficiency, when pressure differentials between all injection points do not exceed 1000 PSI!

PATTON DIVIDER BLOCK SYSTEMS

Pro-Tecting "Your" Compressor

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BALANCING THE DIVIDER BLOCK SYSTEM

The divider block lubrication system only operates efficiently, when pressure differentials between injection points in the system do not exceed 800 PSI. Differential pressure is the difference between the lowest and highest line pressures that are injecting oil into the compressor cylinders and/or rod packing. If the system is not balanced properly, the excessive pressure differential will cause the piston to slap back to the opposite side of the piston bore causing the pistons in the block assembly to bounce out of sync and lock up the divider block, which will cause nuisance phantom shutdowns. The slap action of the piston will cause the piston to contact the end plug in the divider block and will cause wear prematurely and allow oil to flow around the worn piston to the injection point with lower pressure, causing serious damage or premature

APPLICATION

Figure 1: Illustrates a divider block system with excessive differential pressures. Notice the system is out of balance because there is more than 1500 psi differential pressure between the lubrication points.

Figure 2: Illustrates the same divider block system with balancing valves installed to correct the excessive differential pressure between lubrication points.

Figure 1
Unbalanced Lubrication System

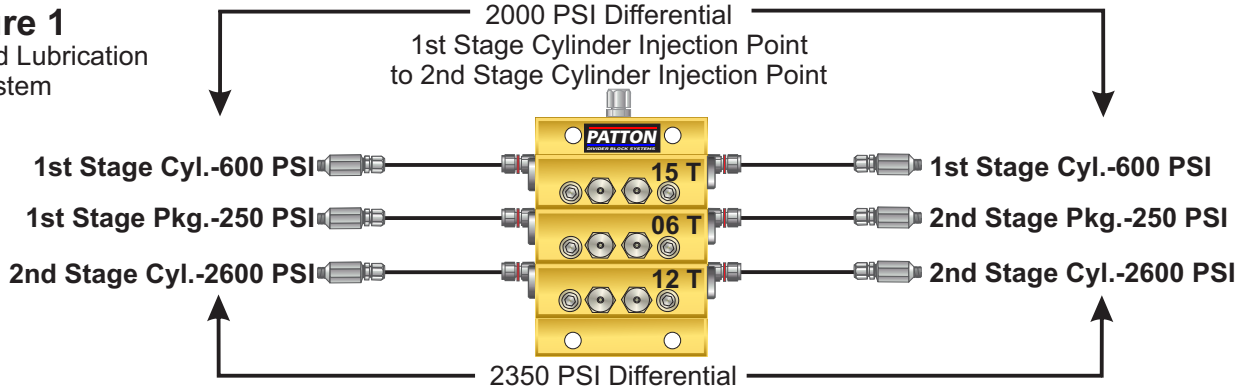
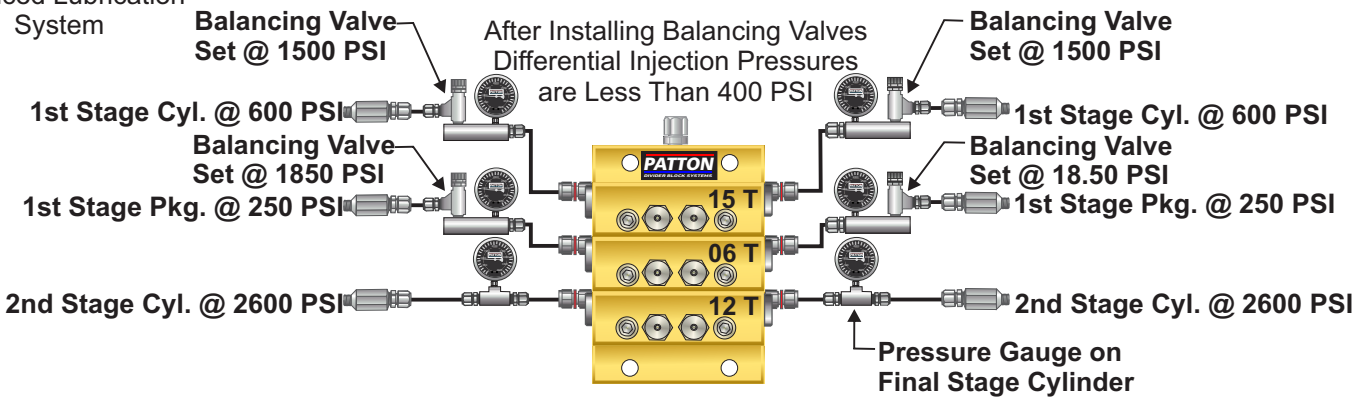


Figure 2
Balanced Lubrication System



CAUTION: DO NOT preset the balancing valves in the shop!!!! The divider block system must be balanced with the compressor operating fully loaded with max discharge pressures.

How to Adjust Balancing Valves After Installation: With the compressor operating at max RPM, temperature and discharge pressure, note the maximum pressure reading on the pressure gauge installed on the discharge of the lubricator pump. Adjust all balancing valves to hold the pressure within 500 PSI of the gauge at the lubricator pump. Check the pressure gauge on the discharge of the lubricator pump & verify there is fluid movement. If the pressure gauge rises and falls with a wide range of erratic movement re-adjust the balancing valve. When the system is balanced correctly the pressure gauge will hold steady pressure and fluid movement without erratic movement of the pointer.

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