

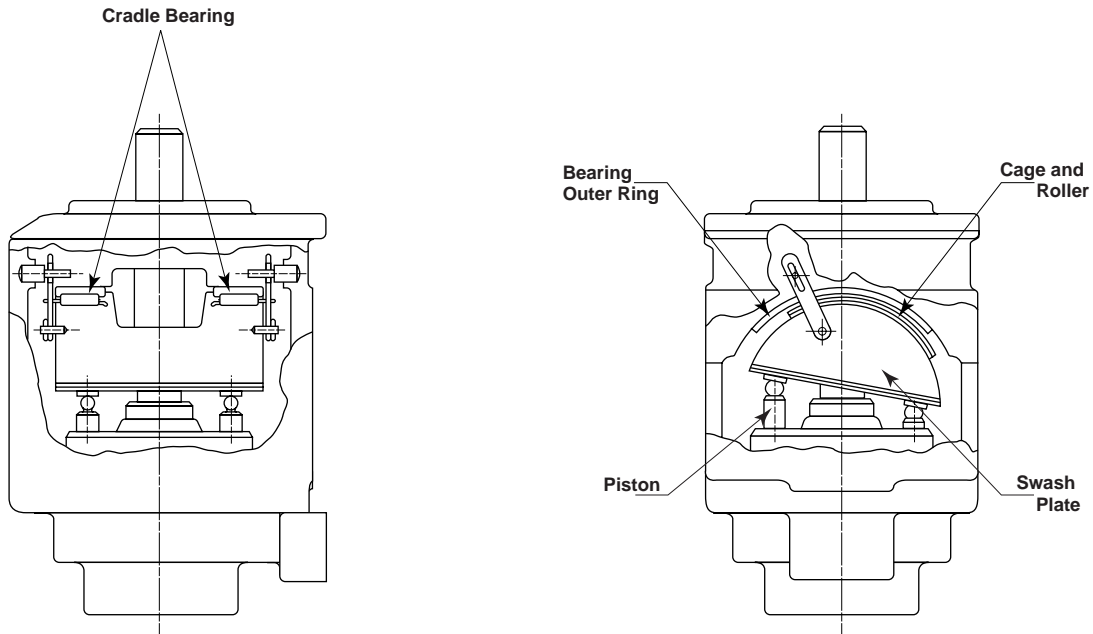
## Cradle/Swashplate Bearing Intro

### Cradle Bearings

Axial flow or variable displacement piston pumps are prevalent in the industry. These pumps contain a shaft, a rotating cylinder block, five to nine pistons, a swash plate, and cradle bearings. As the shaft and cylinder block rotate, the pistons sequentially discharge producing fairly continuous flow from the pump. The cycling of the pistons causes the swash plate to oscillate back and forth through a controlled angle. The swash plate is supported by two swash plate or cradle bearings.

The cradle bearing is comprised of a double flanged outer ring section spanning an arc that is typically 150 degrees. Nestled inside the flanged outer ring is a nylon cage with needle roller assembly. The bearing outer ring section is typically fixed in the housing, with cage and roller assembly affixed to the swash plate. The smooth oscillation of the swash plate is facilitated by the near friction free cradle bearing.

NTN-BCA® makes several sizes of cradle bearings. Because these bearings are typically designed to meet specific application requirements, no two designs are identical. Please consult your NTN Sales Representative or Applications Engineer for further details.



Variable Displacement Pump

### Current Available Part Numbers:

SWP394EN  
 SWP425EN  
 SWP475EN  
 SWP523EN  
 SWP540EN  
 SWP587EN

Contact your NTN Sales Representative or Applications Engineer for more information.