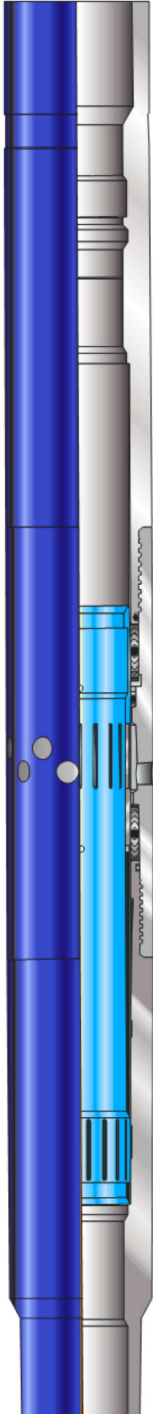


PetroQuip PQR Circulating Sleeve



The **PetroQuip PQR Circulating Sleeve** is a down hole flow control device installed in the production string to provide communication between the tubing and casing annulus. There are two versions: the PQRXO and the PQRXA.

The PQRXO is opened by shifting the inner sleeve down and closed by shifting the inner sleeve up using standard wireline methods. The PQRXA is opened by shifting the inner sleeve up and closed by shifting it down. The PQRXA and PQRXO circulating sleeves have a nipple profile on the upper sub for installation of flow control locks.

Features & Benefits

- Multiple sleeves may be run in tandem for multiple zonal isolation and production
- Integral flow control nipple for well control
- Simple positive control of tubing and annulus communication
- Versatile design adaptable to many completion configurations
- Inexpensive way to achieve zonal control

Applications

- Displacing fluid in tubing and annulus
- Multiple zone production through a single string
- Gas lifting
- Circulation of inhibitors for corrosion control
- Selective testing of individual zones

PetroQuip PQX Circulating Sleeve



Size	2-3/8	2-7/8	3-1/2
Std. Seal bores (in)	1.812, 1.875	2.188, 2.312	2.562, 2.750, 2.812
Burst and Collaspe pressure rating	8,500 psi <i>58.6 mPa</i>	8,000 psi <i>55.1 mPa</i>	7,000 psi <i>48.9 mPa</i>
Maximum temperature rating	325°F 163°C		
Tensile rating	90,000 lbs <i>42,184 kg</i>	104,600 lbs <i>47,445 kg</i>	191,300 lbs <i>86,772 kg</i>
Maximum OD	3.078 in. <i>78.2 mm</i>	3.683 in. <i>93.5 mm</i>	4.500 in. <i>114.3 mm</i>
Seal Material	Peek™, Teflon™, nitrile		

All premium threads and nipple profile are available upon request.