



ISO Particle Counts Recommended Cleanliness Chart

Most Sensitive System Component	Low/Med. Pressure Under 2000 psi Moderate Conditions	High Pressure 2000-2999 psi (or low/medium pressure plus severe conditions)	Very High Pressure 3000 psi and above (or high pressure plus severe conditions)
	Recommended ISO Target Level		
Pumps			
Fixed Gear/Fixed Vane	20/18/15	19/17/14	18/16/13
Fixed Piston	19/17/14	18/16/13	17/15/12
Variable Vane	18/16/13	17/15/12	Not Applicable
Variable Piston	18/16/13	17/15/12	16/14/11
Valves			
Check Valve	20/18/15	20/18/15	19/17/14
Directional (solenoid)	20/18/15	19/17/14	18/16/13
Standard Flow Control	20/18/15	19/17/14	18/16/13
Cartridge Valve	19/17/14	18/16/13	17/15/12
Proportional Valve	17/15/12	17/15/12	16/14/11
Servo Valve	16/14/11	16/14/11	15/13/10
Actuators			
Cylinders, Vane Motors, Gear Motors	20/18/15	19/17/14	18/16/13
Piston Motors, Swash Plate Motors	19/17/14	18/16/13	17/15/12
Hydrostatic Drives	16/15/12	16/14/11	15/13/10
Bearings			
Journal Bearings	17/15/12	Not Applicable	Not Applicable
Roller Bearings	16/14/11	Not Applicable	Not Applicable
Ball Bearings	15/13/10	Not Applicable	Not Applicable

...because what happens on the inside really counts

If you have any questions about
this chart, please contact your
Regional Account Manager.

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