

MANIFLOW SELECTOR VALVE (MSV) MODEL 48SZ



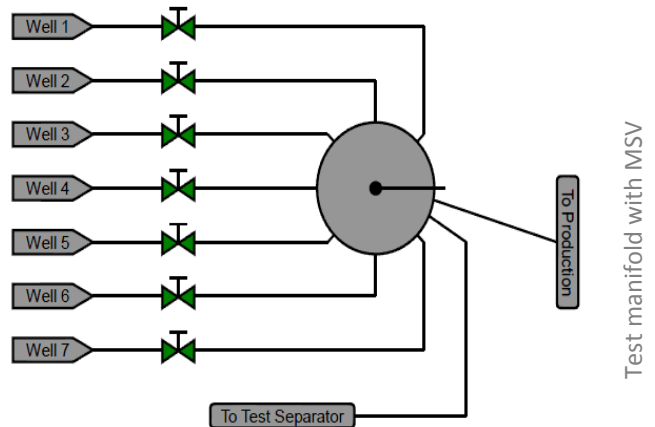
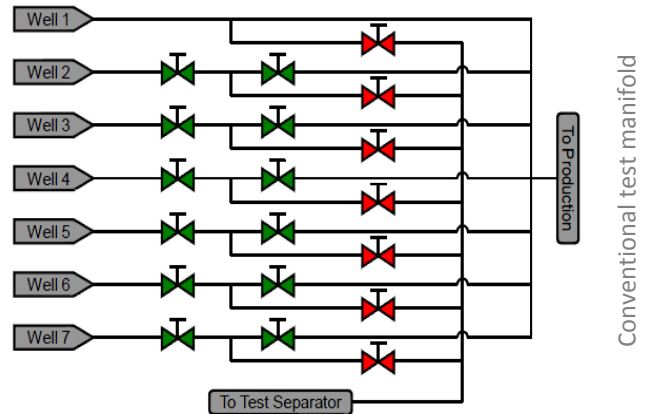
TYPE 48SZ

Applications

- MSV is a multiport switching valve developed for oil and gas industries
- Well test and monitoring manifold
- Alternative to conventional test manifolds that requires over 20 manual valve and associated

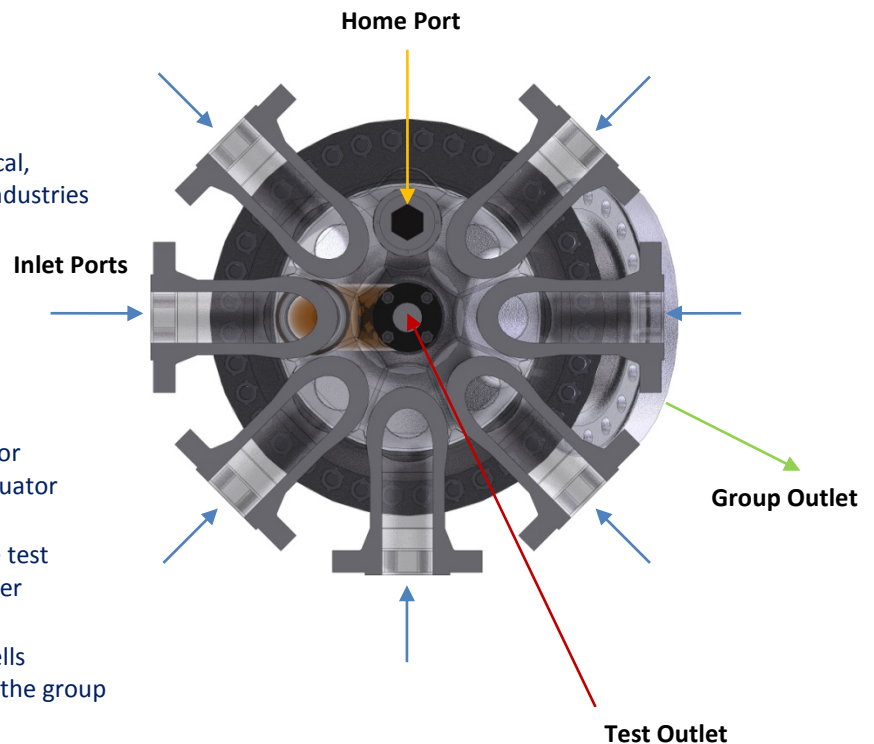
Problems with existing MSV

- Incorrect indexing of the actuator
- Slippage between valve stem and actuator
- Sticking of the stem
- Misalignment of the plug
- Seal wear
- Erosion of the body
- No independent position feedback to indicate a problem
- Inadequate operator training and poor technical back-up



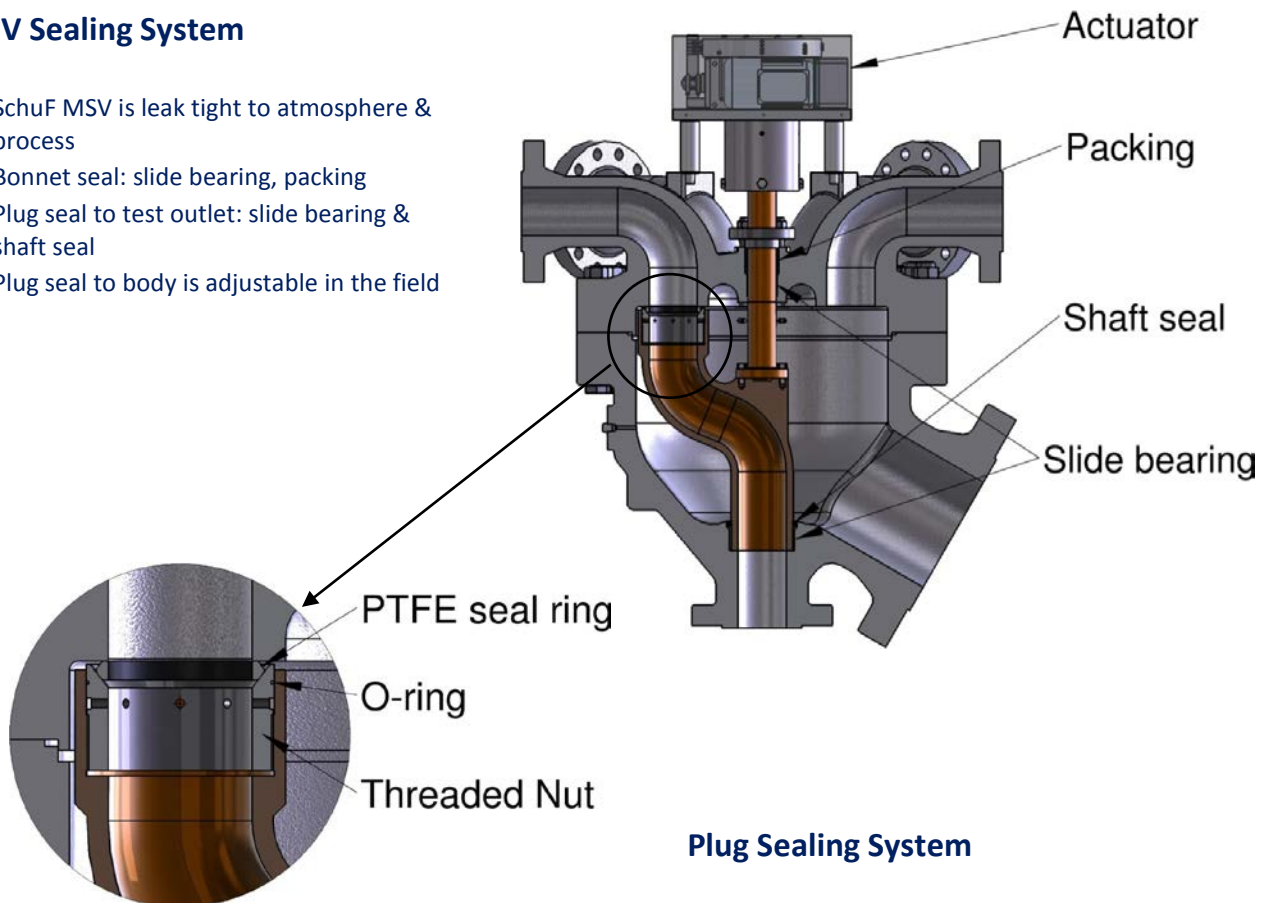
SchuF MSV solution

- SchuF design provides solutions to these issues as a result of over 40 years of multiport diverter valve design for chemical, polymer, petrochemical and oil and gas industries
- Up to 8 inlets, with 1 test outlet and a group outlet
- Max. 7 inlets are connected to the wells. One inlet, called home port, is kept free for calibration and maintenance. A single actuator rotates the plug to the selected well inlet
- Flow from selected well is diverted to the test outlet and on to the Multiphase Flowmeter (MPFM)
- The flow from all the other connected wells converges in the valve body and exits via the group outlet



MSV Sealing System

- SchuF MSV is leak tight to atmosphere & process
- Bonnet seal: slide bearing, packing
- Plug seal to test outlet: slide bearing & shaft seal
- Plug seal to body is adjustable in the field



Plug Sealing System

- PTFE seal ring in constant contact with valve body
- External cup springs apply load to the seal ring
- Threaded nut can be adjusted in the field, to re-tighten the seal
- O-Ring material is PTFE

Precision Plug Positioning

- Multi-turn electric actuator coupled to special SchuF Positioning system
- Electro-mechanical positioning device, utilizing cam roller technology
- Position tolerance <math>< 0.5^\circ</math>
- Position detection via incremental rotary encoders
- Repeatability and accuracy of the plug position is guaranteed
- Speed of rotation is reduced as plug reaches the selected port
- Precision indexing of plug prevents erosion of the plug seal

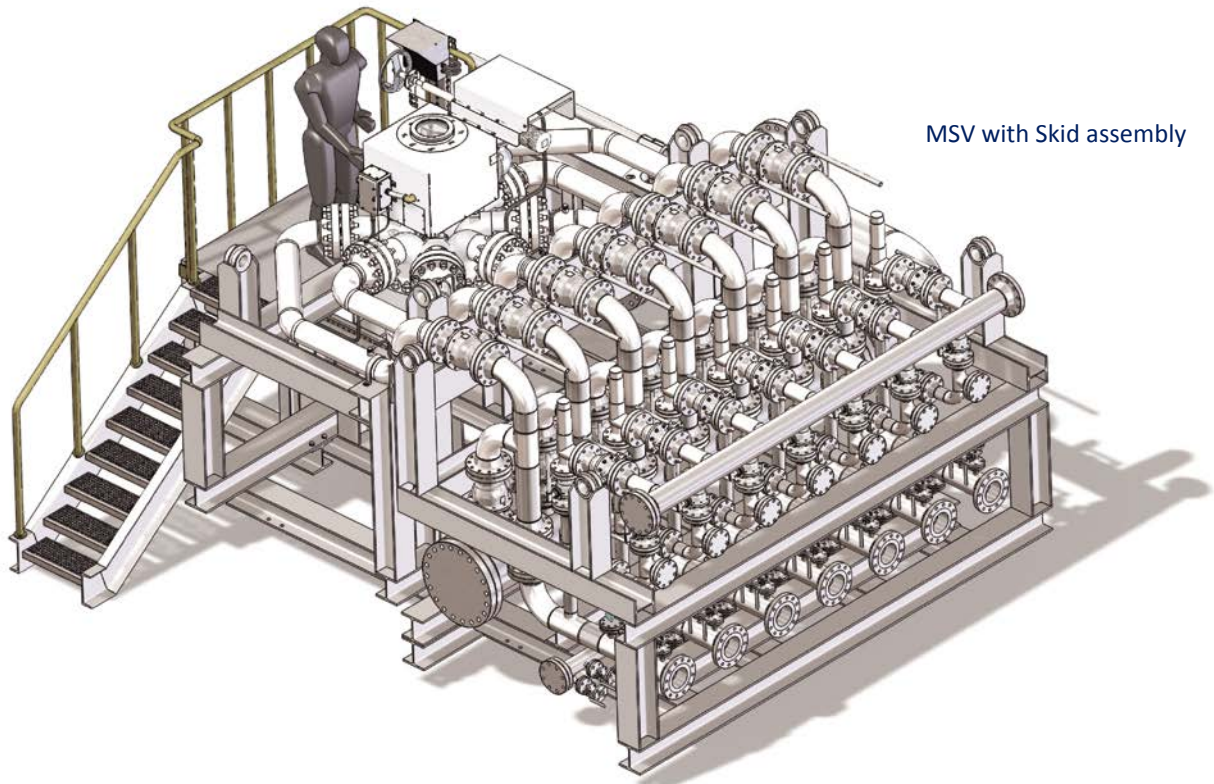
MSV Actuator

- Multi-turn electric actuator
- Hazardous area protection
- Single phase, 3-Phase VAC or 24VDC
- Single or bi-directional operation
- Continuous 360° drive capability
- Display with operator-friendly controls
- Programmable positioning/sequencing
- Remote & local operation modes
- Network control via Modbus RTU Protocol

Benefits

- Reduction in space, weight & cost vs. conventional manifold thanks to a modular and compact design
- SchuF design is reliable, robust and leak tight
- Ensures repeatability and accuracy of the plug position, no slippage
- Position tolerance < 0.5°
- Position accuracy reduces wear on the adjustable, spring-loaded plug seal
- Body geometry optimised to prevent effects of erosion
- Part of the proven SchuF range of diverter and switching valves
- Independent position feedback

ITEM	STANDARD	OPTIONAL
Valve type	Multiport selector manifold	Multiport flow selector
SchuF valve name	Maniflow Selector Valve	MSV
Model number	48SZ	48XX
Number inlets	8 (7 inlets, 1 home port)	more on request
Inlet size	1" to 12"	larger on request
Test outlet	1" to 12"	larger on request
Main outlet	2" to 24"	larger on request
Material	Carbon St. or St.St. Body with Duplex plug	special materials on request
		special cladding for severe conditions (i.e. Incoloy cladding or Incoloy body and trim for soir service)
Sealing	Radial seal ring (PTFE)	Metal to Metal seal
Temperature	minus 29°C to 230°C	Higher or lower on request
Pressure range	All up to ASME 2500	Higher on request
Actuators	Electric motor with Positioning	Manual
Add ons	Flushing/Draining ports	Sampling valve, lock, skid assembly, protective bellow



MSV with Skid assembly