Liquid Cylinder Troubleshooting Guide

Dura-Cyl® MCR

- Pressure Building Valve
- Combination Pressure Building Economizer Regulator (MCR)
- Vent Valve
- Safety Relief Valves, Burst Disc & Pressure Gauge
- Vent Line
- Gas Withdrawal Vaporizing Coil
- Outer Vacuum Jacket
- Float Rod Guide
- Inner Vessel
- Foot Ring
- Pressure Building Vaporizing Coil
- Liquid Level Gauge
- Handling Ring
- Liquid Fill and Withdrawal Valve
- Gas Use Valve
- Liquid Fill and Withdrawal Tube
- Float Rod

Pressure

Tank Pressure

Low

Is the cylinder empty?

PB isolation valve closed? Open the PB

Regulator out of adjustment? Remove & bench test

Regulator inlet plugged? Remove contaminants

Regulator defective? Rebuild or replace

Huge leak? Listen...Frost on lines? Leak check plumbing

High

Low usage? 100 SCF/Day Min

Application? Liquid only = no gas used

Regulator out of adjustment? Remove & bench test

Regulator seat obstructed? Remove, clean or replace

Regulator defective? Rebuild or replace

Bad vacuum? Pressure Rise & NER tests

Performance

Right cylinder for application:
LP = liquid withdrawal
HP = high withdrawal
Laser = high pressure, high withdrawal

Refer to manufacturer’s operating manual for proper pressure & delivery specifications

Provide larger capacity cylinder when needed

Provide additional vaporization capacity when needed

Frost

Problem tank? Pressure? Performance? Frost?

Frost on top of cylinder is normal after fill

Frost on side of cylinder is normal during or after use

Frost over entire cylinder is normal with high rates of gas withdrawal

Frost without use: Possible leak or defective cylinder

Frost on side of tank without use?

Leak in Gas Use Line

Frost near bottom of tank:
Leak in plumbing and cylinder is trying to build pressure

Are there defective or leaking valves or safety devices causing frost?

Frost over entire cylinder without use?
Likely a bad vacuum: Pressure Rise & NER tests