

ROSS Controls Fluid Power Systems



Eric Cummings - Ross Controls
Safety Business Development Manager - Americas
eric.cummings@rosscontrols.com
803-622-1161



The Global Leader in Pneumatic Safety Solutions

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Pneumatic Lockout

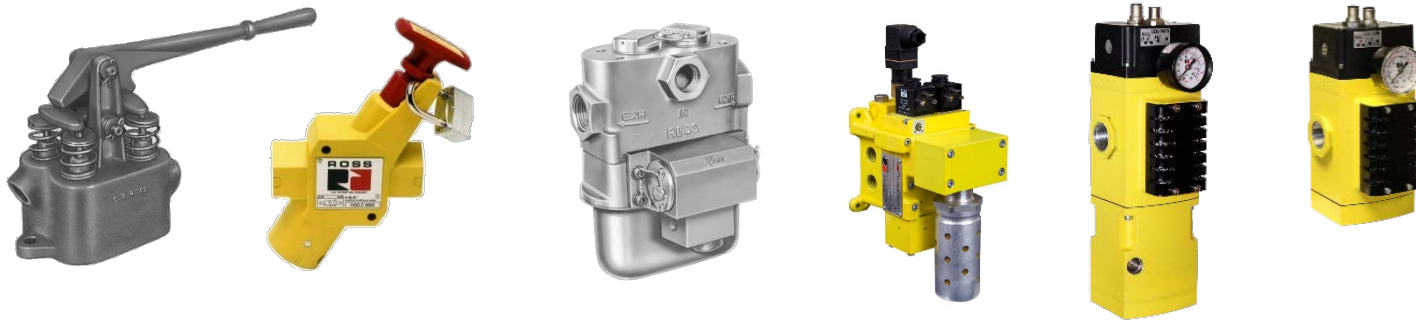


- Requirements (OSHA)
 - A manually operated valve
 - Not be used for any other function
 - Located outside of hazardous areas
 - Easily identified and operated
 - Tamper resistant
- Best Practice (ANSI B11.0)
 - Full diameter exhaust (rapid release of stored energy)
 - Should only be able to be locked off
 - “Positive action” which would indicate only two positions (ON and OFF)
 - A method for the employee to verify that the energy has dissipated after initiating lock out



The ROSS story

- Founded in 1921 by Charlie Ross
- Design, manufacture and sale of pneumatic valves and systems for industrial equipment
- 1954 – First double valve ever developed by ROSS
- 1962 – Developed first pneumatic energy isolation device
- 2005 – DM²™
- **2017 – Externally Monitored Safety Valves**



Safety Valve Systems

Manual Lockout Valves



Safety Exhaust Valves



Safe Cylinder Return Valves



Load Holding Safety Valves



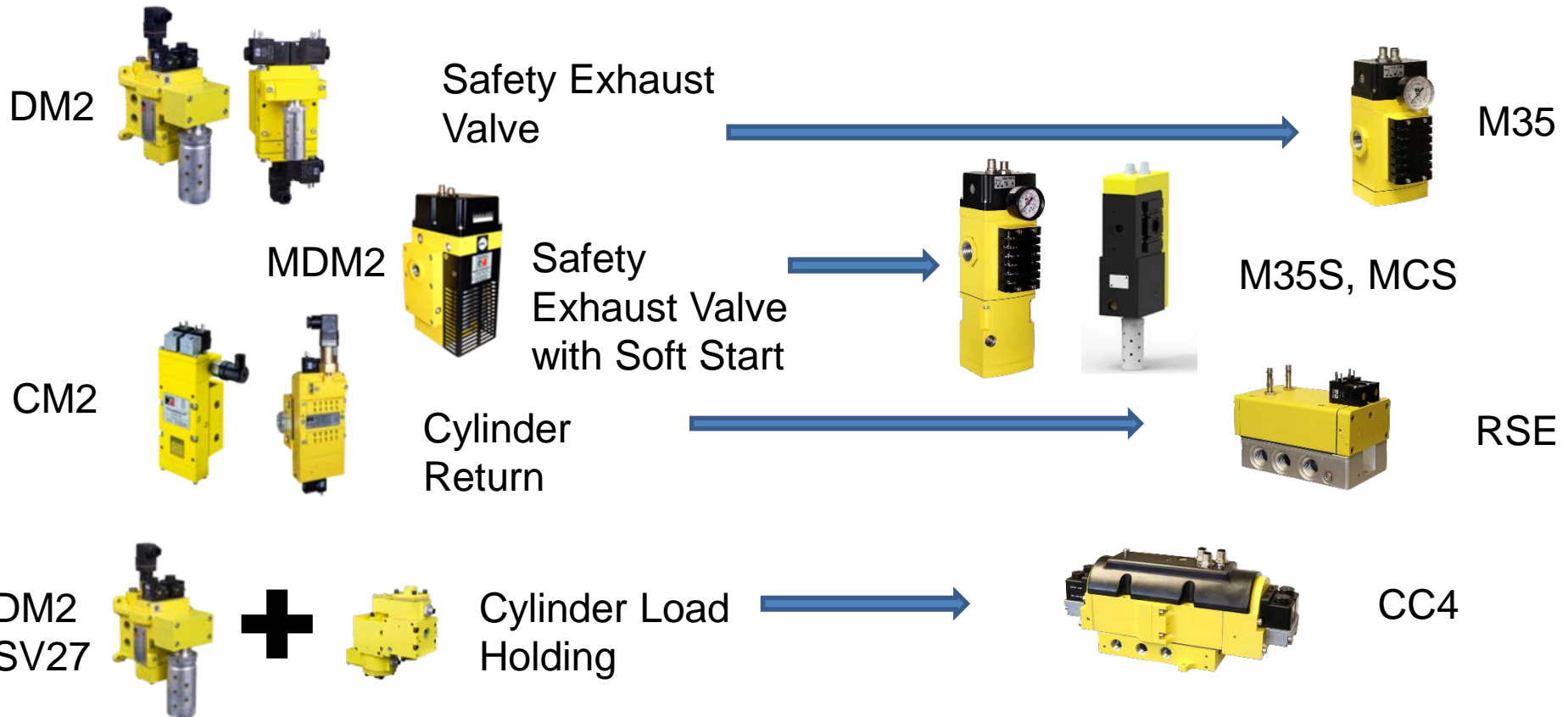
Safety Expertise and Global Support

Safety valve evolution



Where we were
(Internal monitoring)

Where we are
(External Monitoring)



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M35 – Safe Exhaust



- **M**odular **3573** – Safe Exhaust
 - Block and Bleed (dump) functions
 - Optional soft-start
 - Part of Safety air entry system



*Model without
EEZ-ON® (Soft Start)*

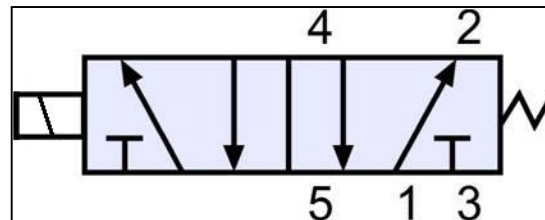
*Model with
EEZ-ON® (Soft Start)*



RSE – Safe Cylinder Return

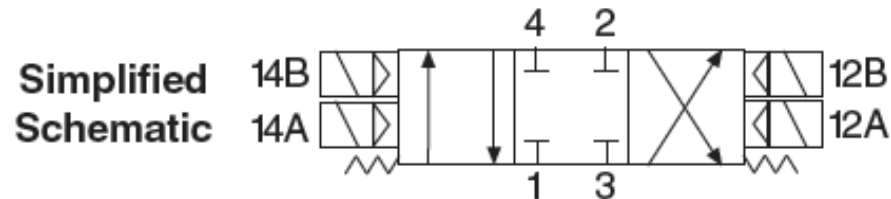


- RSe –
 - 4/2 Spring Return Valve
 - Cylinder moves to safe position
 - Two hand operations
 - Gate/door operations
 - Cutting/slicing



CC4 – Safe Cylinder Stop

- CC4 – CROSSCHECK
 - 4/3 Closed Center Valve
 - All ports blocked
 - Jog and load holding function



Hydraulic Safety Valve Images



M12 Solid State Position Sensors



Standard DIN style solenoid connectors



Notice the change from global pneumatics to global fluid power



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Safety Valve Systems

Manual Lockout Valves



Safety Exhaust Valves



Safe Cylinder Return Valves



Load Holding Safety Valves



Safety Expertise and Global Support

Superior Value in Pneumatic Safety

- Broadest safety valve portfolio
- Superior pneumatic safety technology
- Pneumatic safety education and support
- ROSS safety valves can reduce costs over the full lifecycle of your equipment