

Dynamic performance

Empowering intelligent & adaptable platforms



Eaton CMA advanced mobile valve



Powering Business Worldwide



> **P-Q**, or feed force control, can help this mobile drilling rig improve bit life by more than 25% and feed rate by 50%, increasing productivity and lowering costs.



> **Swing control** reduces jerk and settling time in high-inertia services, such as the slew function on this forestry forwarder.



> **Boom stability control** can reduce boom oscillation by up to 75% and settling time by up to 90%, increasing safety and productivity for this concrete pump truck.



> **Ride control** smooths roading disturbances to reduce bucket or boom shake on this wheel loader, which enables increased driving speeds and higher productivity.

The market's most advanced mobile valve

Delivering new levels of control and precision

The Eaton CMA advanced mobile valve is a CAN-enabled electrohydraulic mobile valve that enables manufacturers to deliver a whole new level of machine performance and operator productivity. Featuring onboard electronics and sophisticated software algorithms, the CMA valve provides more flexible configuration, more immediate communication and more precise control than ever before.

The CMA advanced mobile valve features a sectional configuration. CMA valve banks can be configured with CMA sections and CMT sections, enabling you to create the perfect control solution for your application.

CMA

Superior control and precision

CMA sections feature independent metering, which uses two spools to control the supply and return flow for a single bi-directional actuator. The CMA section is capable of controlling both flow and pressure simultaneously on a service. Electronic independent metering of port flow provides infinite control flexibility.



CMA mobile valve with inlet section and two CMA sections

CMT

Tailored technology

CMT sections contain two spools that are each capable of controlling the supply flow for an actuator. A single CMT section is capable of controlling two bi-directional actuators, which can be a cost-effective way to control services that do not require the flexibility and precision of independent metering.



CMA mobile valve with inlet section and two CMT sections

CMA sections are ideal for services such as:

- > Boom control
- > Drilling/feed control
- > Grade control/level
- > Swing
- > Winching
- > Auxiliary functions



CMT sections are ideal for services such as:

- > Bucket
- > Clamping
- > Extension
- > Outriggers
- > Auxiliary functions



Flexible and configurable

Designed to intelligently improve machine performance

Conditioning valve:

Contains embedded electronics, sensors and the inlet pilot spool for controlling the pump

Valve system module (VSM):

Powers the valve and connects the vehicle's CAN network to the valve's internal CAN network

Pressure-reducing valve:

Provides pilot pressure to valve sections

Inlet section: Provides pump and tank connections and regulates load sense pressure

Pilot valve: Contains the embedded electronics, sensors and pilot spools

Auxiliary valves: Optional work ports and/or anti-cavitation valves

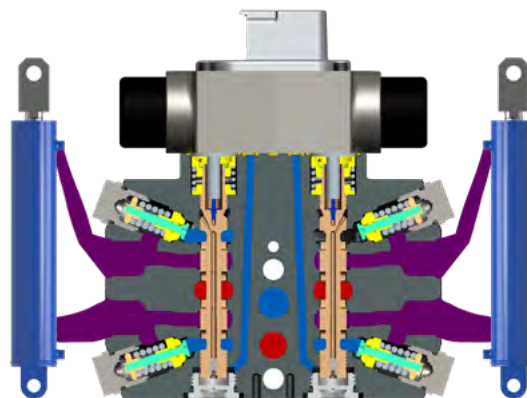
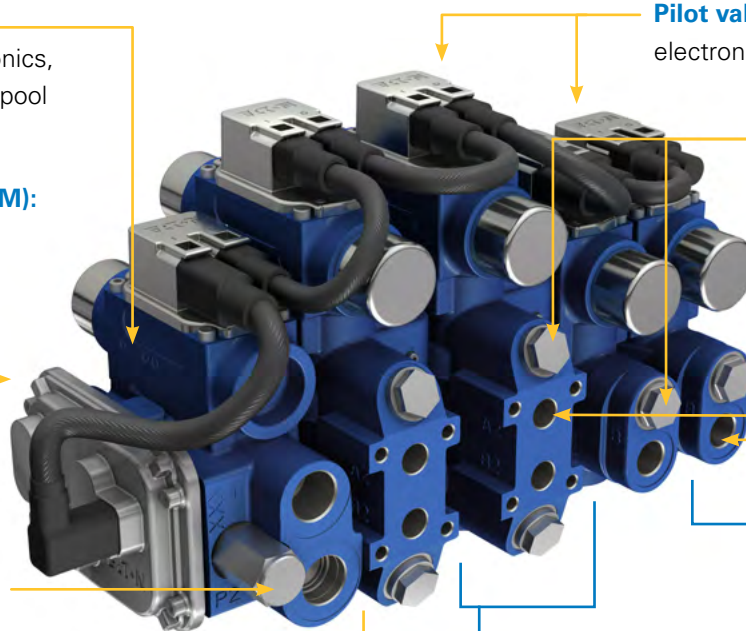
Work ports: Connects valve to work function

CMT work section: Controls the flow for two bi-directional actuators

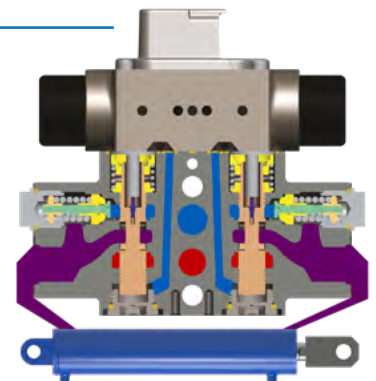
CMA work section:

Uses independent metering to control flow and pressure in a bi-directional actuator

The CMA valve enables a novice operator to control a machine like an expert.



CMT cross section



CMA cross section



Solutions for every control challenge

Adaptive and responsive to your specific application

The Eaton CMA valve features a host of integrated control applications to improve machine performance and productivity.

These software-enabled functions can:

- > Increase productivity, safety and efficiency
- > Enable IoT and diagnostics
- > Reduce overall system costs

| FORCE | CMA | CMT | FLOW | CMA | CMT |
|-------------------------|-----|-----|---|-----|-----|
| Pressure | ✓ | | Intelligent flow control | ✓ | |
| Torque | ✓ | | Swing control | ✓ | |
| P-Q | ✓ | | Spool position | ✓ | ✓ |
| Electronic relief | ✓ | | Pressure-compensated meter-in flow control | ✓ | ✓ |
| Electronic feed reducer | ✓ | ✓ | Pressure-compensated meter-out flow control | ✓ | |
| SYSTEM | | | DIAGNOSTICS | | |
| Flow share | ✓ | ✓ | Smart data | ✓ | ✓ |
| Intellifloat | ✓ | | Hose burst detection | ✓ | |
| Float | | ✓ | Data security | ✓ | ✓ |
| Boom stability control | ✓ | | Limp mode | ✓ | ✓ |
| Auto-shake | ✓ | ✓ | Pro-FX Configure valve configuration software | ✓ | ✓ |
| Electronic load sense | ✓ | ✓ | | | |
| Ride control | ✓ | | | | |

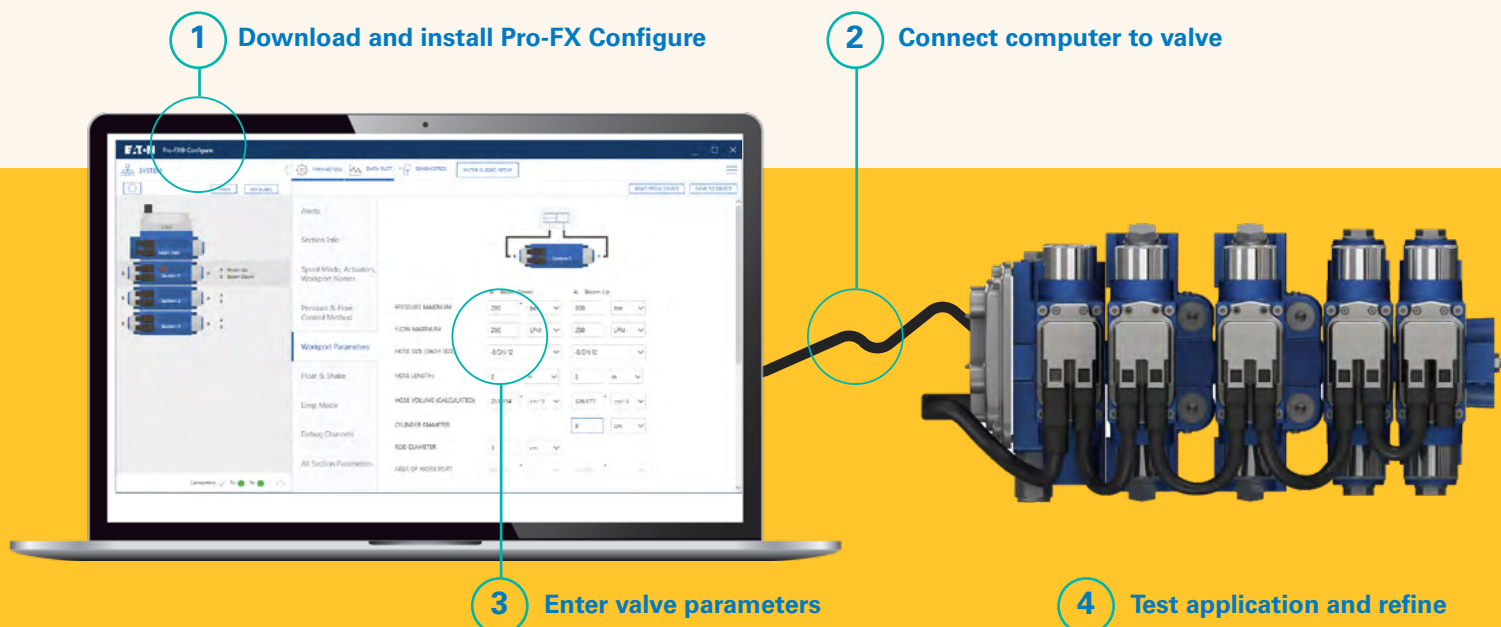
Simple setup and optimization

Eliminate weeks of development time

The CMA valve's software-driven configuration and calibration process streamlines design and reduces setup time from weeks to hours, helping you speed time to market.

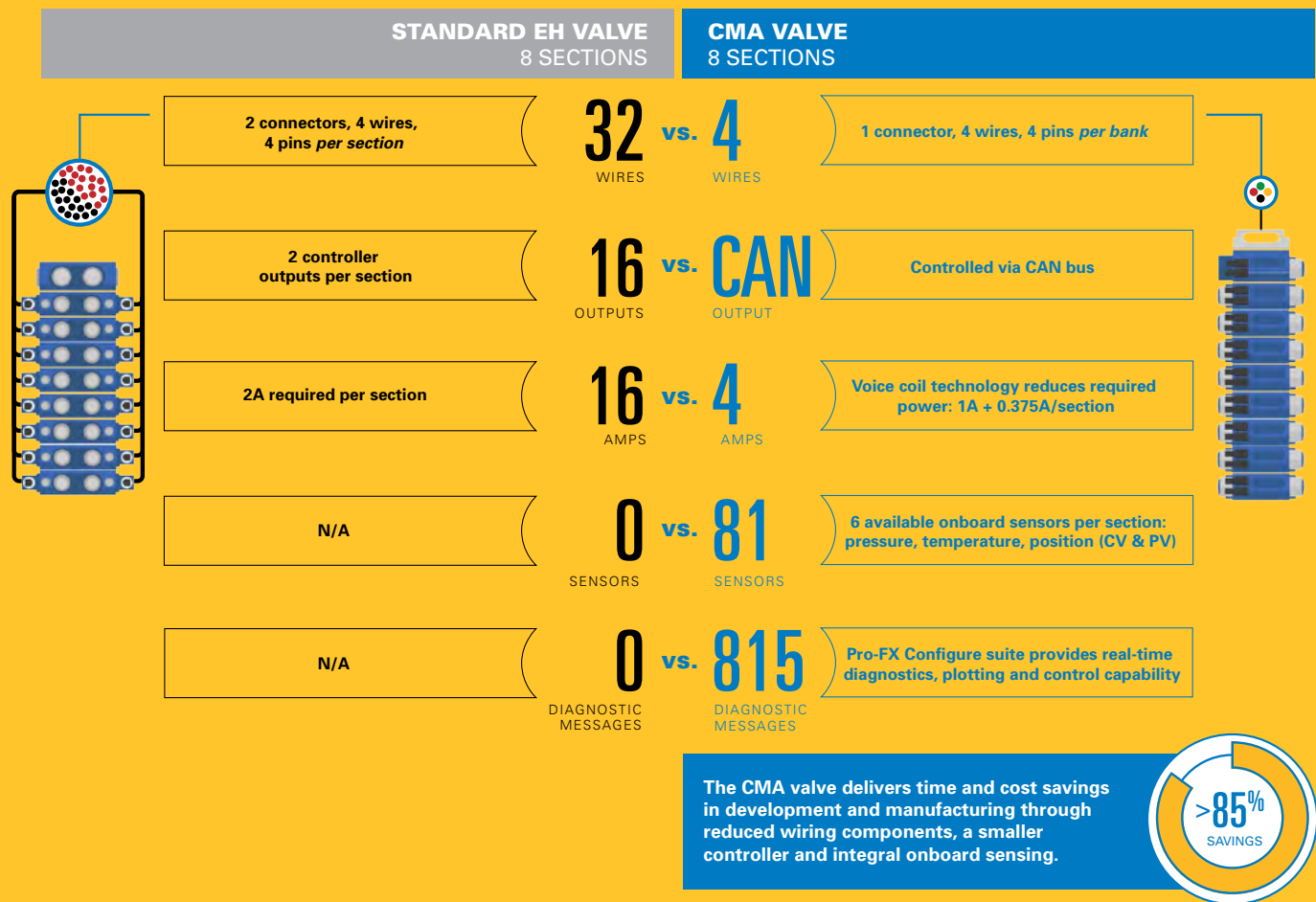
- > Electronic tuning eliminates the need to change spools
- > Real-time valve/system feedback simplifies optimization
- > Controller area network (CAN) eliminates wiring to individual sections, reducing installation time
- > Onboard controller and sensors ease system integration and minimize external components

Valve setup



Platform integration savings

Save time and reduce costs with CAN



Differentiate your new vehicle designs

If you want your platform to offer unrivaled performance, you need the mobile valve without rivals. Only the Eaton CMA advanced mobile valve can offer true pressure control and next-generation stability.

Are you ready to differentiate your machinery? Let's talk.
Visit Eaton.com/CMA or contact your Eaton sales representative.