Overview & Features

Eaton’s WALFormplus® connection system is the most popular and leading cold forming metric tube fitting system in the world. Eaton’s WALFormplus® metric tube fitting connection system offers the advantages of both an elastomeric and metal-on-metal seal. Ease of assembly and re-assembly is guaranteed with the assistance of a final assembly stop. The WALFormplus tube system provides lasting functional reliability even under high, dynamic pressure impulse and vibration loads reliably avoids both insufficient and excessive tightening – the most frequent causes of faults. The fixing of the support ring (patent pending) permits simple and unequivocal assembly control.

Features

- Offers the advantage of both an elastomeric and metal-on-metal seal
- Forming of tube end is provided by a proprietary Eaton forming machine
- Ease of assembly up to the point of resistance
- Over 25% reduction in torque needed to assemble system compared to cutting ring solutions
- Available with tube diameters ranging from 6 up to 42mm in both carbon and stainless steel
- Metal-on-metal version with support ring solution for use with thin walled tubing

Where Used

<table>
<thead>
<tr>
<th>Machine building</th>
<th>Marine</th>
<th>Mining, metals and minerals</th>
<th>Mobile machinery and equipment</th>
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</thead>
<tbody>
<tr>
<td>Platforms:</td>
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<tr>
<td>- CNC Machining</td>
<td></td>
<td>- Ball Mill</td>
<td>- 0-40 hp</td>
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<td>- Metal/Hydro Forming</td>
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<td>- Coal Mill</td>
<td>- 100+ hp</td>
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<td>- Metal Stamping and Shearing</td>
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<td>- Continuous Miner</td>
<td>- 40-100 hp</td>
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<tr>
<td>- Plastics</td>
<td></td>
<td>- Conveyors</td>
<td>- Aerial Work Platforms (Scissor &amp; Boom)</td>
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<tr>
<td>Applications:</td>
<td></td>
<td>- Excavator</td>
<td>- All hp</td>
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<tr>
<td>- Hydraulic Circuits &amp; General Fluid Conveyance</td>
<td>Applications:</td>
<td>- Exploration Drill Rig</td>
<td>- Application Equipment</td>
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<td></td>
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<td>- Foundry Casting</td>
<td>- Backhoe Loader</td>
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<td>- Highway Vocational Truck</td>
<td>- Balers</td>
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<td>- Longwall Mining System</td>
<td>- Biomass Processing</td>
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<td>- Mobile Crusher</td>
<td>- Combines</td>
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<td>- Off-Highway Dump Truck</td>
<td>- Compactor</td>
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<td>- Reclaimer</td>
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<td>- Rope Shovel</td>
<td>- Crane</td>
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<td>- Semi-Continuous Mining System</td>
<td>- Crawler Dozer</td>
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<td>- Shuttle Car</td>
<td>- Cultivation Equipment</td>
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<td>- Stacker</td>
<td>- Defoliating Equipment</td>
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<td>- Stationary Crusher</td>
<td>- Delimers</td>
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<td>- Steel Mill Furnaces</td>
<td>- Excavator</td>
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<td>- Surface Drill Rig</td>
<td>- Feller Bunchers</td>
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<td>- Underground Drill Rig</td>
<td>- Forwarders</td>
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<td>- Wheel Loader</td>
<td>- Irrigation</td>
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<td>- Irrigation Systems</td>
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<td>- Lift Trucks</td>
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<td>- Loaders</td>
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<td>- Mowers</td>
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Value Propositions

= Denotes point of differentiation

Audiences

- Paver
- Row Crop Planters
- Self-Propelled Forage Harvesters
- Self-Propelled Sprayers
- Self-Propelled Windrowers
- Skid Steer Loader
- Skidders
- Specialty Equipment/Debris
- Specialty Harvesting
- Stump Grinders and Wood Chippers
- Telehandler
- Tractors - 2WD:
- Tractors - 4WD:
- Tree Harvesters
- Trimming Equipment
- Utility Vehicles
- Wheeled Loader
- Yarders

Applications:

- Hydraulic Circuits & General Fluid Conveyance

Oil and gas

Platforms:

- Downstream: Petrochemical
- Downstream: Refining (Ethanol/Biodiesel)
- Downstream: Terminal Operations (refined gas and liquids)
- Upstream: Offshore (fixed or floater)
- BOP Control Systems
- Upstream: Offshore (fixed or floater)
- Drill Systems
- Upstream: Offshore (fixed or floater)
- Equipment Handling
- Upstream: Offshore (fixed or floater)
- Hoisting Systems
- Upstream: Offshore (fixed or floater)
- Mooring Systems
- Upstream: Offshore (fixed or floater)
- Motion Compensation
- Upstream: Offshore (fixed or floater)
- Offloading Systems
- Upstream: Offshore (fixed or floater)
- Pedestal Cranes
- Upstream: Offshore (fixed or floater)
- Seismic Vessel Systems
- Upstream: Onshore Blow-out Preventers
- Upstream: Onshore Drilling Operations
- Upstream: Onshore Hoisting Systems
- Upstream: Onshore Pump Jacks
- Upstream: Onshore Seismic Vibrator
- Trucks

Applications:

- Hydraulic Circuits & General Fluid Conveyance

Rail

Applications:

- Hydraulic Circuits & General Fluid Conveyance

Renewables

Platforms:

- Offshore
- Onshore

Applications:

- Hydraulic Circuits & General Fluid Conveyance

Vehicles

Platforms:

- Dump
- Fire and Rescue
- Heavy Duty On-Highway
- Medium Duty On-Highway
- Pick-Up and Delivery (LTL)
- Public Transportation
- Refuse Truck
- Trailers
- Transit Mixer
- Wrecker/Recovery

Applications:

- Hydraulic Circuits & General Fluid Conveyance
<table>
<thead>
<tr>
<th>Value Proposition Statement</th>
<th>OEM</th>
<th>Distributor</th>
<th>End User</th>
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<tbody>
<tr>
<td>The tube fabricator using this system will experience shorter assembly travel and noticeable torque increases during assembly</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Assembly consistency results in less potential quality spills</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>★ Features 25% reduction in torque to assemble compared to cutting ring solutions</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Assembly consistency results in less potential quality spills</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Increases the chance of a properly executed assembly</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>★ Chances of overtightening WALFormplus® fittings is less compared to other systems</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Reduces the need to rework connections</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Available in metallic sealing-only for high corrosion/temperature applications</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Same assembly machine can be used for both standard and high temperature solutions</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Ability to use same body (meeting DIN EN ISO 8434-1 standards) from WALRing and WALPro® systems with WALFormplus® system</td>
<td>☑️</td>
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<td>☐</td>
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<tr>
<td>Decreases inventory costs by 50%</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Eaton offers a rental program for assembly machines</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Increases profitability of project work at end customers</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>★ The WALForm® system (machine, nut, body, and seal) carries many different approvals including (but not limited to) DNV &amp; ABS</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Increases the number of various markets that distributors can sell Eaton metric tube fittings using the same system resulting in less inventory carrying costs</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>The system carries niche application approvals including fire extinguishing systems, use with welded stainless steel tubing, etc.</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Further expansion of markets that distributors can serve with the same system</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>Solution available for thin walled tubes using the support ring solution</td>
<td>☑️</td>
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<tr>
<td>Provides distributors with the need to inventory less connector components by being able to use the same system for a wide variety of tube thicknesses and sizes</td>
<td>☑️</td>
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<tr>
<td>WALFormplus® system is uniquely designed to handle dynamic loads and excessive vibration</td>
<td>☑️</td>
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<td>Provides for longer life of equipment</td>
<td>☑️</td>
<td>☐</td>
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<tr>
<td>★ Assembly machine option available with ATEX certification</td>
<td>☑️</td>
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<td>Allows for fabrication of metric tube connections in mines</td>
<td>☑️</td>
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<tr>
<td>Available in stainless steel</td>
<td>☑️</td>
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<td>☐</td>
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<tr>
<td>Provides for longer life of equipment</td>
<td>☑️</td>
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<tr>
<td>★ WALFormplus® system offers Guardian Seal® plating standard as all Eaton Walterscheid™ metric tube fittings provides corrosion protection up to 360 hrs. to white corrosion / 720 hrs. to red corrosion (per VDMA 24576, K5)</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Results in longer life of equipment</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>★ Over 1000 WALForm® machines sold globally</td>
<td>☑️</td>
<td>☐</td>
<td>☐</td>
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<tr>
<td>Reduces chance of equipment downtime</td>
<td>☑️</td>
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<td>Trolley feature available for ease of movement in the workshop</td>
<td>☑️</td>
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</tbody>
</table>

Tools & Collateral

Brochures
Guardian Seal Brochure E-MEOV-BB001-E (Global)
Walterscheid Trilogy Brochure E-MEFI-MR002-E1 (Global)
Walterscheid Adjustable Male 45 Degree Fitting Brochure E-MEFI-MS004-E (Global)