

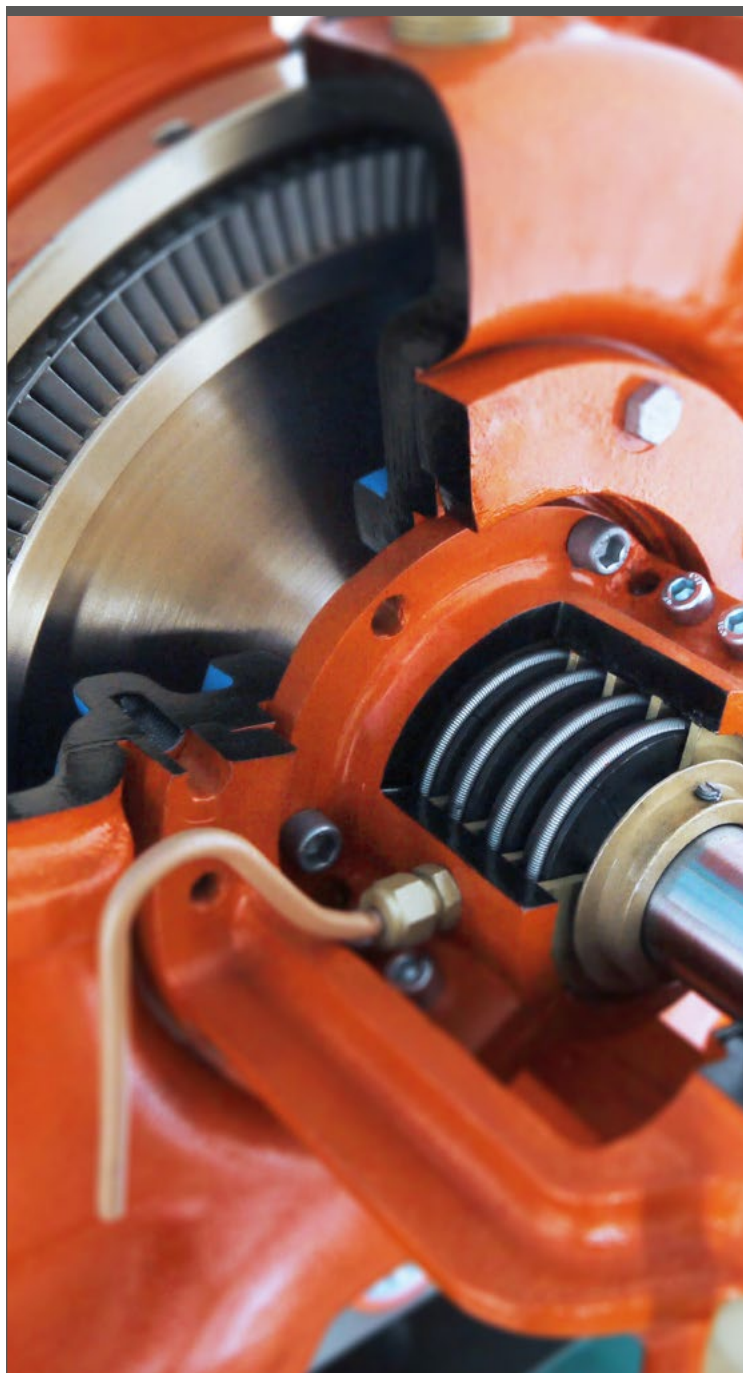
Machine Elements Range Brochure – ME Series

The Armfield Machine Elements product range has been designed to teach hands-on industrial skills, demonstrate the principals and content of machine components and to prepare students for work in real industrial environments.

The range allows students to fully understand the function and main components of universally used machine elements, including the ability to strip and repair real industrial pumps, valves and equipment.

Several static models are also available within this range to show the principle elements of heat exchangers and separation processes.

TEACHING AIDS FOR HANDS OF TRAINING DISSECTIBLE PUMPS AND VALVES



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A range of industrial standard process demonstrators manufactured from precision laser cut clear acrylic, with coloured internal baffles and flanges. The assembly is constructed to replicate a standard industrial design.

Technical specifications	ME301 Fixed Tube Sheet Single Pass Heat Exchanger
<p>Product Title: Fixed Tube Sheet Single Pass Heat Exchanger</p> <p>Code: ME301</p> <p>Description: A Fixed Tube Sheet, Single Pass Acrylic Heat Exchanger Demonstration Unit for studying the internal construction and assembly of an industrial standard AEL heat exchanger.</p>	
Technical specifications	ME302 U Tube Heat Exchanger
<p>Product Title: U Tube Heat Exchanger</p> <p>Code: ME302</p> <p>Description: A U-Tube Heat Exchanger with single pass shell for studying the internal construction and assembly of an industrial standard AEU heat exchanger.</p>	
Technical specifications	ME303 Vertical Thermosyphon Reboiler
<p>Product Title: Vertical Thermosyphon Reboiler</p> <p>Code: ME303</p> <p>Description: A Vertical Acrylic Thermosyphon Reboiler Demonstration Unit for studying the internal construction and assembly of a typical industrial Thermosyphon Reboiler.</p>	
Technical specifications	ME304 Plate Heat Exchanger
<p>Product Title: Plate Heat Exchanger</p> <p>Code: ME304</p> <p>Description: A Plate Heat Exchanger demonstration unit for studying the internal construction and assembly of an industrial standard 13-plate heat exchanger.</p>	

Our cutaway pumps and valves are manufactured using brand new industrial pumps, sectioned and mounted for easy visualisation of the internal pumps components such as impellers, shafts, bearings and flow paths.

As well as our standard product range, we can cut away any industrial pump, valve or other industrial equipment up to several meters in size. We can either source new industrial components or refurbish used and end of life industrial components from your plant, to produce custom cutaway training units.

Technical specifications

Product Title: 2"/DN50 Close-Coupled Centrifugal Pump

Code: ME1

Description: A 2" or DN50 inlet cutaway Close Coupled Centrifugal Pump for studying the internal construction and operation of a close coupled industrial Centrifugal Pump.

ME1 Close-Coupled Centrifugal Pump



Technical specifications

Product Title: 2.5" Long-Coupled Centrifugal Pump

Code: ME2

Description: A 2.5" or DN65 inlet cutaway Long Coupled Centrifugal Pump for studying the internal construction and operation of a Long coupled industrial Centrifugal Pump.

ME2 Long Coupled Centrifugal Pump



Technical specifications

Product Title: 2"/DN50 Internal Gear Pump

Code: ME4

Description: A 2" or DN50 inlet and outlet cutaway Internal Gear Pump without bypass, for studying the internal construction and operation of an industrial Internal Gear Pump.

ME4 Internal Gear Pump



Technical specifications

Product Title: 2"/DN65 Vane Pump


Code: ME6

Description: A 2.5" or DN65 inlet and outlet cutaway Vane Pump for studying the internal construction and operation of an industrial Vane Pump.

ME6 Vane Pump




Cutaway pumps and valves continued:

Technical specifications	ME7 Triple Screw Pump
<p>Product Title: 2"/DN50 Triple Screw Pump</p> <p>Code: ME7</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Triple-Screw Pump for studying the internal construction and operation of an industrial Multi-Screw Pump.</p>	





Additional cutaway pumps available in the range

- ME3:** 2"/DN50 Multi-Stage Centrifugal Pump
- ME5:** 2"/DN50 External Gear Pump
- ME8:** 2"/DN50 Triple Lobe Pump
- ME9:** 2"/DN40 Triple Diaphragm Pump
- ME10:** 3/8"/DN10 Triple Diaphragm Pump


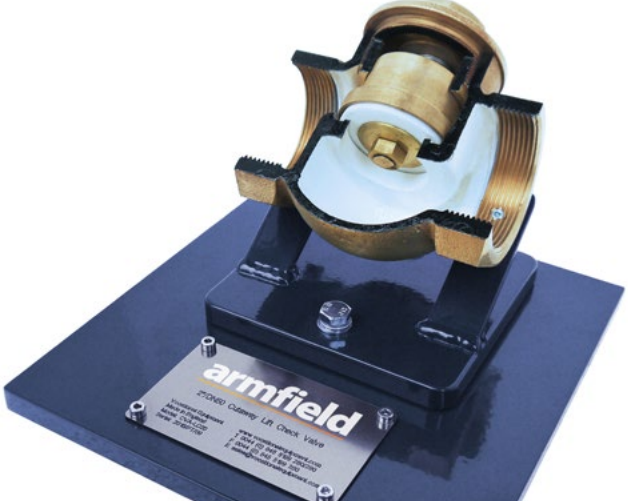

Technical specifications	ME21 Ball Valve
<p>Product Title: 2"/DN50 Ball Valve</p> <p>Code: ME21</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Ball Valve for studying the internal construction and operation of an industrial Ball Valve.</p>	

Technical specifications	ME23 Gate Valve
<p>Product Title: 2"/DN50 Gate Valve</p> <p>Code: ME23</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Gate Valve for studying the internal construction and operation of an industrial Gate Valve.</p>	

Cutaway pumps and valves continued:

Technical specifications	ME24 Globe Valve
<p>Product Title: 2"/DN50 Globe Valve</p> <p>Code: ME24</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Globe Valve for studying the internal construction and operation of an industrial Globe Valve.</p>	
Technical specifications	ME27 Butterfly Valve
<p>Product Title: 2"/DN50 Butterfly Valve</p> <p>Code: ME27</p> <p>Description: A cutaway 2"/DN50 inlet and outlet butterfly valve for studying the internal construction and operation of an industrial Butterfly Valve.</p>	
Technical specifications	ME30 Ball Check Valve
<p>Product Title: 2"/DN50 Ball Check Valve</p> <p>Code: ME30</p> <p>Description: A 2" or DN50 inlet and outlet cutaway unsprung Ball Check Valve for studying the internal construction and operation of an industrial Ball Check Valve.</p>	
Technical specifications	ME31 Swing Check Valve
<p>Product Title: 2"/DN50 Swing Check Valve</p> <p>Code: ME31</p> <p>Description: A cutaway 2"/DN50 inlet and outlet swing check valve for studying the internal construction and operation of an industrial Swing Check Valve.</p>	

Cutaway pumps and valves continued:

Technical specifications	ME32 Disk Check Valve
<p>Product Title: 2"/DN50 Disk Check Valve</p> <p>Code: ME32</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Disc Check Valve for studying the internal construction and operation of an industrial Disc Check Valve.</p>	 <p>A cutaway model of a 2"/DN50 Disk Check Valve. The valve body is orange and mounted on a black base. The internal disk and seat are visible. An Armfield label is attached to the base.</p>
Technical specifications	ME33 Lift Check Valve
<p>Product Title: 2"/DN50 Lift Check Valve</p> <p>Code: ME33</p> <p>Description: A 2" or DN50 inlet and outlet cutaway Lift Check Valve for studying the internal construction and operation of an industrial Lift Check Valve.</p>	 <p>A cutaway model of a 2"/DN50 Lift Check Valve. The valve body is brass and mounted on a black base. The internal lift mechanism is visible. An Armfield label is attached to the base.</p>
Technical specifications	ME40 Spring Safety Relief Valve
<p>Product Title: 2"/DN50 Spring Safety Relief Valve</p> <p>Code: ME40</p> <p>Description: A cutaway 2"/DN50 inlet and outlet spring safety relief valve for studying the internal construction and operation of an industrial Spring Safety Relief Valve.</p>	 <p>A cutaway model of a 2"/DN50 Spring Safety Relief Valve. The valve body is brass and mounted on a black base. The internal spring and piston mechanism are visible. An Armfield label is attached to the base.</p>

Steam turbine & additional pumps cutaway lists:

Additional cutaway pumps available in the range

- ME22:** 2"/DN50 3 – Way Ball Valve
- ME25:** 2"/DN50 Right-Angled Globe Valve
- ME26:** 2"/DN50 Weir Diaphragm Valve
- ME28:** 1"/DN25 Needle Valve
- ME29:** 2"/DN50 2-Port Plug (cock) Valve
- ME34:** 2"/DN50 Electrically Actuated Ball Valve
- ME35:** 2"/DN50 Pneumatically Actuated Ball Valve
- ME36:** 2"/DN50 Control Valve
- ME37:** 2"/DN50 3-Way Control Valve
- ME38:** 2"/DN50 Solenoid Valve
- ME39:** 2"/DN50 Pressure Reducing Valve

Technical specifications

- Product Title:** Steam Turbine without Governor
- Code:** ME51
- Description:** A Cutaway Steam Turbine for studying the internal construction and operation of a single stage ball bearing type steam turbine without a governor.

ME51 Steam Turbine without Governor



Additional cutaway steam turbines available in the range

- ME52:** Cutaway Steam Turbine with Governor



Dissectible Pumps and Valves

Our dissectible maintenance training kits use new industrial pumps and valves that are commonly used in industrial plants.

Trainees learn about pump/ valve operation, disassembly, refurbishment and re-assembly of a wide range of industrial devices.

The kits are supplied in a toughened case with a full toolkit appropriate for maintenance operations.

Every dissectible maintenance training kit is supplied with an equipment manual and laminated job worksheets with clear instructions on the dis-assembly, checking and re-assembly of the equipment.

Technical specifications

Product Title: 2"/DN50 Single-Stage Centrifugal Pump

Code: ME61

Description: A Brand New Single Stage Centrifugal Pump with DN50 inlet & DN32 outlet for maintenance and repair training.

The set includes a complete toolkit for pump maintenance operations and laminated job worksheets for disassembly, checking, repair and reassembly of a single stage centrifugal pump.

All components are supplied in a foam lined rugged industrial case for easy storage and handling.

ME61 Single-Stage Centrifugal Pump



Additional dissectible pumps and valves available in the range

ME62: 2"/DN50 Long Coupled Single- Stage Centrifugal Pump

ME63: 2"/DN50 4 Stage Centrifugal Pump

ME64: 2"/DN50 Internal Gear Pump

ME65: 2"/DN50 External Gear Pump

ME66: 1.5"/DN40 Vane Pump

ME67: 2"/DN50 Multi-Screw Pump

ME68: 2"/DN50 Lobe Pump

ME69: 2"/DN50 Diaphragm Pump

ME81: 2"/DN50 Ball Valve

ME82: 2"/DN50 3-Way Ball Valve

ME83: 2"/DN50 Gate Valve

ME84: 2"/DN50 Globe Valve

ME85: 2"/DN50 Right-Angled Globe Valve

ME86: 2"/DN50 Diaphragm Valve

ME87: 2"/DN50 Butterfly Valve

ME88: 1"/DN25 Needle Valve

ME89: 2"/DN50 2-Port Plug (Cock) Valve

ME90: 2"/DN50 Ball Check Valve

ME91: 2"/DN50 Swing Check Valve

ME92: 2"/DN50 Disc Check Valve

ME93: 2"/DN50 Lift Check Valve

ME94: 2"/DN50 Electrically Actuated Ball Valve

ME95: 2"/DN50 Pneumatically Actuated Ball Valve

ME96: 2"/DN50 Control Valve without Positioner

ME97: 2"/DN50 Control Valve With Smart Positioner

ME98: 2"/DN50 Dissectible 3-Way Control Valve

ME99: 2"/DN50 Solenoid Valve

ME100: 2"/DN50 Pressure Reducing Valve

ME101: 2"/DN50 Spring Safety Relief Valve

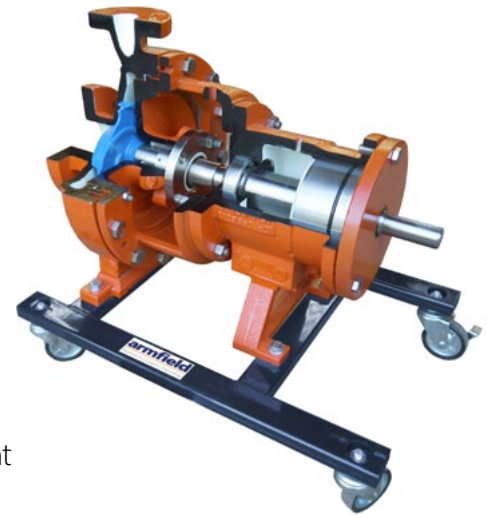
Warranty

Two year extended warranty on this product

Our Commitment to you

Armfield recognises that it is not enough to just supply quality engineering equipment, but that it must also ensure a complete range of services both pre and post-sale:

- ▶ Supplied equipment meets global curriculum requirements
- ▶ Expert consultation in laboratory design and layout
- ▶ Professional installation and commissioning service
- ▶ Comprehensive training for all products in house or on site
- ▶ Detailed learning outcomes and experiments supplied with all equipment
- ▶ In house trials (industrial and research)
- ▶ Two year warranty on all products
- ▶ Dedicated aftersales service



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