History

- Located in Novi, Michigan USA, since 1945.
- AV is represented through direct facilities or distribution globally.
- Pneumatic applications include Industrial Automation, Automotive, Process Control, and BWR/CANDU/PWR Power Generation.

Systems

- Automatic Valve quality assurance systems meet requirements of 10CFR50B, ANSI N45.2, and ISO 9001.
- Responsibility for the reportability of defects under 10CFR21 is accepted.

Products

- Commercial products certified to CSA, PTB, and UL standards.
- Safety products qualified for safety related harsh environmental conditions and continuous operation during a LOCA/MSLB/HEL event.
- Safety products environmentally and seismically qualified to IEEE standards 323, 344, and 382 with conduit connections unsealed (per Qual Report 44400R97).

LIFE: 40 YEARS AT 40° C WITH 100% R.H.
10.5 YEARS AT 68° C WITH 100% R.H.
RADIATION: 1.495E8 RADS, GAMMA
CYCLES: 6000
SEISMIC: AGING @ .75g FROM 5-100-5 Hz
OBE @ 3.0g FROM 2-35-2 Hz
SSE @ 6.0g FROM 2-100 Hz
ACCIDENT: 100 DAYS INSIDE CONTAIMENT ACCIDENT PROFILE AT 180° C AND 255° C PEAK, CHEMICAL SPRAY AND 100% R.H. FOR 2 CYCLES.

Reliable Design

- Simplicity of the poppet design ensures reliability and ease of maintenance with no diaphragms.
- Mounting installation may be in any position.
- All safety solenoids are certified class H insulation or better, continuous duty, Nema 4 nominal 18 Watt power consumption with voltage suppression diode.
- All safety elastomers are certified fluorocarbon and independently material verified.
- All safety metallics are certified and independently material verified.
- Large free-flow orifices only require 50 micron filtration or better.
- Qualified mounting brackets available separately.
POWER GENERATION
TYPICAL APPLICATIONS

EQ: IEEE 323, 344, 382
FLOW: Cv 0.1 - 35.7
SIZE: $\frac{1}{4}$ - $1\frac{1}{2}$ NPTF
## Specifications and Model Numbers

<table>
<thead>
<tr>
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<tbody>
<tr>
<td>2-way Normally Closed</td>
<td>3/8</td>
<td>DIRECT</td>
<td>32-150</td>
<td>0-66</td>
<td>35-150</td>
<td>0-861</td>
<td>0.5</td>
<td>NA</td>
<td>U0203JBBR-**</td>
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<td>32-150</td>
<td>0-66</td>
<td>35-150</td>
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<td>DIRECT</td>
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### Electrical Characteristics

<table>
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<tr>
<th>Voltage Code</th>
<th>Nominal</th>
<th>Range</th>
<th>Continuous Duty WAT TAg</th>
<th>Current Amps Holding</th>
<th>Current Amps Inrush</th>
<th>Resistance ohms @ 20°C</th>
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<tbody>
<tr>
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<td>.06</td>
<td>3758</td>
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Applies pressure when energized and blocks pressure when de-energized.

Applies pressure when de-energized and blocks pressure when energized.

May be used for NC or NO operator.
SAFETY SERIES
DIMENSIONAL INFORMATION

AIR PILOT OPERATED - SERIES U06, U14, & U36

SOLENOID OPERATED
SERIES U02

SOLENOID OPERATED - SERIES U06, U14 & U36

DIMENSIONS
MM/INCHES

FLOW DIAGRAMS

3 WAY NORMALLY CLOSED PILOT
3 WAY NORMALLY OPEN PILOT
3 WAY UNIVERSAL DIRECT

DE-ENERGIZED
ENERGIZED
DE-ENERGIZED
ENERGIZED
DE-ENERGIZED
ENERGIZED

EQ: IEEE 323, 344, 382
FLOW: Cv 0.1 - 35.7
SIZE: 1/4 - 1 1/2 NPTF
Features

Tapered Tee Seal....
Eats Dirt

- Bi-Directional tapered Tee Seal lip flexes to clean spool,
  Eliminates Monday morning sticking problems.

- Tested tough and proven reliable according to SAE specifications.
- Rust and water injected every 864,000 cycles for 20 million cycles.
- Available for use in both air and vacuum service.
- 50 Micron filtration is all that is needed..... NO need to buy 2-5 micron filters.
- Molded from superior, tough, Carboxylated Nitrile. Provides five times the abrasion resistance and service life of Buna-n-seals.

Solenoid....
Guaranteed against burnout

- Three-way pilot uses full air line pressure to shift the valve spool.
- Pilot is internally supplied when the pressure at port 1 is 35 to 150 psig (2 to10 bar).
- Coil is hermetically sealed as an integral watertight molded unit.
- Standard temperature ranges equal or exceed competitors "High Temperature" options.
- Intrinsically-safe and explosion-proof versions available.
### Specifications

#### Solenoid
- Standard: -20°F + 150°F (-30°C + 66°C)

#### Air Pilot
- Standard: -20°F + 150°F (-30°C + 66°C)

#### Valve Ports
- Solenoid: 35 - 150 PSIG (2 - 10 BAR)
- Ext Pilot: 29” Hg Vac - 150 PSIG (0 - 10 BAR)
- Air Pilot: 29” Hg Vac - 150 PSIG (0 - 10 BAR)
- Manual: 29” Hg Vac - 150 PSIG (0 - 10 BAR)

### Part Numbers and Electrical Information

#### Valve Less W Coil

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Kg/Lb</th>
<th>L20</th>
<th>L45</th>
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<tr>
<td>L2003AAWR</td>
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<td>L20</td>
<td>L45</td>
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<td>L4505AAWR</td>
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<td>L45</td>
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#### Kits

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<td>.05/1</td>
<td>L20</td>
<td>L45</td>
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<td>A8022-094</td>
<td>.14/3</td>
<td>L20</td>
<td>L45</td>
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<tr>
<td>A8022-635</td>
<td>.05/1</td>
<td>L20</td>
<td>L45</td>
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<tr>
<td>A8022-095</td>
<td>.09/2</td>
<td>L20</td>
<td>L45</td>
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</tbody>
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#### Accessories

<table>
<thead>
<tr>
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<td>W COIL - LEAD WIRE CONNECTION</td>
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<td>W COIL - NEMA 4X/IP65 DIN CONNECTION</td>
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#### Voltage

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Current</th>
<th>Resist.</th>
<th>Power</th>
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<tr>
<td>24/50/60 DA</td>
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<td>31.6</td>
<td>4.8</td>
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<tr>
<td>110/50/60 AA</td>
<td>.04</td>
<td>3400</td>
<td>4.8</td>
</tr>
<tr>
<td>220/60 DB</td>
<td>.20</td>
<td>121</td>
<td>4.8</td>
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</table>

**NOT REQUIRED BUT RECOMMENDED TO MAXIMIZE SERVICE LIFE**

**50 MICRON OR BETTER.**

>咨询工厂，为手动操作员、导管，或其他额外的附件。*出售于多个数量的(5)。
WARRANTY

AUTOMATIC VALVE WARRANTS ITS PRODUCTS TO BE FREE FROM DEFECTS IN MATERIAL OR WORKMANSHIP OVER A PERIOD OF 18 MONTHS FROM THE DATE OF SHIPMENT FROM ITS FACTORY. AUTOMATIC VALVE WILL, AT ITS OPTIONS, EITHER REPAIR OR REPLACE THE ALLEGEDLY NON-CONFORMING PRODUCT AT NO CHARGE, FOB OUR FACTORY, UPON RETURN OF THE PRODUCT WITH TRANSPORTATION PREPAID.

AUTOMATIC VALVE WILL REPLACE STANDARD COMMERCIAL NEMA 4 SOLENOID COILS WHICH FAIL DUE TO BURNOUT WHEN OPERATED WITHIN THEIR RATED CAPACITY OR VOLTAGE.

AUTOMATIC VALVE IS NOT RESPONSIBLE FOR DAMAGE TO ITS PRODUCTS THROUGH IMPROPER INSTALLATION, MAINTENANCE, USE, REPAIRS, OR OPERATING BEYOND RATED CAPACITY OF VOLTAGE, INTENTIONAL OR OTHERWISE. AUTOMATIC VALVE IS NOT LIABLE FOR CLAIMS FOR LABOR, LOSS OF PROFIT OR GOOD WILL, REPAIRS, DELAY DAMAGES, DIRECT OR INDIRECT PENALTIES, OR EXPENSES INCIDENTAL TO REPLACEMENT. THE BUYER, BY ACCEPTANCE OF DELIVERY, ASSUMES ALL LIABILITY FOR THE PRODUCT’S USE OR MISUSE IN THE AS-SHIIPPED CONDITION.

NO OTHER REPRESENTATIONS, WARRANTIES, EXPRESS OR IMPLIED, ARE MADE BY AUTOMATIC VALVE AND THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, WHICH ARE HEREBY EXPRESSLY DISCLAIMED AND WAIVED BY THE BUYER, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSE.

AUTOMATIC VALVE, RECOGNIZING ITS GOAL OF CONTINUOUS IMPROVEMENT, RESERVES THE RIGHT TO DISCONTINUE OR CHANGE SPECIFICATIONS, PRODUCTS, OR PRICES WITHOUT INCURRING OBLIGATION.

PRECAUTIONS

APPLICATION: AUTOMATIC VALVES ARE GENERAL PURPOSE, INDUSTRIAL PNEUMATIC AND VACUUM SERVICE VALVES. THEY ARE NOT THEMSELVES INHERENTLY HARMFUL; HOWEVER, THE CONTROL SYSTEMS IN WHICH THEY OPERATE MUST HAVE NECESSARY SAFEGUARDS TO PREVENT DAMAGE OR INJURY SHOULD FAILURE OF THE SYSTEM COMPONENTS OCCUR.

OSHA REGULATION 1910.217, DATED NOVEMBER 1, 1975, AND ANSI STANDARD B11.1, 1971, REVISION 1982, SPECIFICALLY RECOMMENDED SPECIAL PURPOSE DUAL (DOUBLE) SAFETY CLUTCH AND BRAKE VALVES FOR POWER PRESSES. AUTOMATIC VALVE DOES NOT MANUFACTURE SPECIAL PURPOSE DUAL SAFETY VALVES FOR PRESSES. DO NOT USE AUTOMATIC VALVES FOR POWER PRESSES.

TWO POSITION AUTOMATIC VALVES, WHETHER THEY ARE 2-WAY, 3-WAY, OR 4-WAY, WILL ALWAYS HAVE A FLOW PATH FROM THE VALVE’S INLET PORT OR PORTS TO ONE OF THE OUTLETS, REGARDLESS OF WHICH OF THE TWO POSITIONS IS USED. IF AIR TRAPPED IN OR EXHAUSTED FROM THE PORTS PRESENTS A HAZARD IN OPERATION OR IN SERVICING THE SYSTEM, A SEPARATE METHOD MUST BE PROVIDED TO EXHAUST THIS AIR OR THE VALVE SHOULD NOT BE USED.

THREE POSITION 3-WAY AND 4-WAY AUTOMATIC VALVES, WHETHER SOLENOID OPERATED, AIR PILOTED, OR MANUALLY OPERATED, CAN MOVE TO THE CENTER POSITION IF THE OPERATORS ARE NOT ACTUATED. IF, AIR TRAPPED IN OR EXHAUSTED FROM THE PORTS PRESENTS A HAZARD IN OPERATION OR IN SERVICING THE SYSTEM, A SEPARATE METHOD MUST BE PROVIDED TO EXHAUST THIS AIR OR THE VALVE SHOULD NOT BE USED.

SOME SOLENOID AND AIR PILOTED AUTOMATIC VALVES INCORPORATE MANUAL OVERRIDES. MANUAL OVERRIDES, WHEN ACTUATED, SHIFT THE VALVE AS IF THE SOLENOID OR AIR PILOT WERE ACTUATED. IF ACCIDENTAL OR INTENTIONAL OPERATION OF THE MANUAL OVERRIDE COULD CAUSE A DANGEROUS PROBLEM, VALVES WITHOUT A MANUAL OVERRIDE SHOULD BE USED.

USE AUTOMATIC VALVES ONLY WITHIN SPECIFICATION LIMITS LISTED IN OUR CATALOG.

INSTALLATION: CONSULT THE ENGINEERING AND MAINTENANCE SECTION OF THE AUTOMATIC VALVE CATALOG FOR INSTALLATION INSTRUCTIONS. DO NOT INSTALL AUTOMATIC VALVES WITHOUT FIRST TURNING OFF AIR AND ELECTRICITY. AUTOMATIC VALVES MUST BE INSTALLED BY QUALIFIED AND KNOWLEDGEABLE PERSONNEL WHO UNDERSTAND HOW SPECIFIC VALVES ARE TO BE PIPED AND ELECTRICALLY CONNECTED. DO NOT INSTALL VALVES UNLESS THE VALVE’S FLOW PATH, AS DESCRIBED BY ANSI & ISO SYMBOLS IN OUR CATALOG, CONFORMS TO THE APPLICATION’S DESIGN SPECIFICATIONS.

MAINTENANCE: DISCONNECT AIR AND ELECTRICITY AND BLEED ALL PRESSURIZED CYLINDER LINES BEFORE REMOVING TWO AND THREE POSITION AUTOMATIC VALVES. CONSULT THE ENGINEERING AND MAINTENANCE SECTION OF THE AUTOMATIC VALVE CATALOG FOR MAINTENANCE INSTRUCTIONS. AUTOMATIC VALVES MUST BE SERVICED BY QUALIFIED AND KNOWLEDGEABLE PERSONNEL WHO UNDERSTAND THE FUNCTION AND OPERATION OF SPECIFIC VALVES. CARE MUST BE FOLLOWED TO PREVENT DAMAGE TO VALVES CAUSED BY STEPPING ON THEM, DROPPING THEM, OR HITTING THEM WITH ANY OBJECT. DAMAGED VALVES SHOULD BE RETURNED TO AUTOMATIC VALVE FOR INSPECTION AND REBUILDING.