Wey Knife Gate Valve Model VM

Ductile Iron Full Lug Design
Unique Wey sealing system for high performance duties:
The Wey Knife Gate Valve Model VM is built to high quality manu-
facturing standards and combines rugged construction with time-
tested design refinements found in no other knife gate valve. This
unique design assures long-life reliability and bubble-tight shut-off.

1. Tight shut-off is assured due to the unique sealing combina-
tion of resilient elastomer along the edges (not the face) of
the gate and machined metal gate guides. Fine surface
ground finish of the gate ensures smooth operation and long-
life seal performance. Mechanically retained seal prevents
“pull-out.”

2. Machined gate guides in the valve body guide and
support the gate for the full length of the stroke insuring
against gate “flutter.” These sealing features provide bi-
directional bubble-tight shut-off at full design pressure.

3. During final closing stage, remaining solids are sheared off by
knife-like gate and body cutting edge.

4. Special gate geometry prevents jamming during closure
because deposits are pushed ahead by the gate into
enlarged flushing corners of the body. Contoured body
interior initiates flushing action to prevent build-up and
jamming of deposits in seat area.

5. Unique Wey transverse seal eliminates stuffing box. A
special lip-seal profile insures against leakage to atmosphere.
Compressed sealing compound provides sealing pressure,
compensates for wear and assures outstanding high
performance service life in a wide range of tough applications.

6. Minimized chest area between port and transverse seal
leaves no space for solid build-up or jamming.

7. By tightening packing screws or inserting sealing compound
pellets, repacking under full pressure and without system
shut-down is always possible. Considerable time/cost savings
in maintenance work has persuaded customers for decades
to install Wey Knife Gate Valves.
Additional features

A. Solid steel topwork provides maximum strength, partial disassembly of support for easy access to mechanical parts, and facilitates mounting of:
- mechanical or proximity limit switches
- solenoid valves

B. Non-rising stem design with manual actuation saves space and provides for protected stem and stem nut operation. Rising stem design set as standard from 18" to 24", non-rising stem is optional.

C. The cushioned (shut) pneumatic cylinder prevents pressure shocks and initiates flushing action.

D. As an option, pneumatic cylinders can be supplied with magnetic piston design together with open and closed magnetic proximity switches mounted directly on cylinder.

E. Epoxy powder coating with additional primer for body and topwork with stainless steel screws provide excellent corrosion protection.

F. Full-lug type design provides for ease of installation and permits dead-end service.

G. Full bore opening effects low pressure drop and permits the use of all known pigging devices (e.g. spherical, cylindrical, brush pigs, etc.)
Service

**Municipal**
Raw Sewage, Sewer Sludge, Waste Water with Solids, etc.

**Process**
Viscous Paste, Colloids, Granulates, Chemical Waste, Textile Slurry, Pellets, Powders, Cement

**Power Generation and Mining**
Mill Scale, Coal Dust and Slurry, Mine Slurry, Lime Slurry

Actuator options

- Handwheel
- Chainwheel
- Square drive nut
- Manual bevel gear
- Pneumatic cylinder
- Hydraulic cylinder
- Electric actuator

Materials construction

<table>
<thead>
<tr>
<th>Description</th>
<th>Ductile Iron - Construction Details</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Standard A536 (60-40-18)</td>
<td>Solenoid, Mechanical limit switches, Proximity switches, Wear ring, Pneumatic positioner, Electronic positioner, V-Port insert, Lock-out, Position indication scale, OSHA yoke guard, Scale cutter, Weyotine shear cutter, Powder-Pac option</td>
</tr>
<tr>
<td>Gate</td>
<td>304 SS</td>
<td></td>
</tr>
<tr>
<td>Seal</td>
<td>NBR</td>
<td></td>
</tr>
<tr>
<td>Topwork</td>
<td>Steel</td>
<td></td>
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<tr>
<td>Stem/Piston rod</td>
<td>Cr-Steel AIS1430F</td>
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Other materials upon request

Corrosion protection

**Standard**

<table>
<thead>
<tr>
<th></th>
<th>Coating (Epoxy powder), black RAL 9005</th>
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</thead>
<tbody>
<tr>
<td>Body</td>
<td>Coating (Epoxy powder), red similar RAL 3020</td>
</tr>
<tr>
<td>Topwork</td>
<td>Coating (Epoxy powder), black RAL 9005</td>
</tr>
<tr>
<td>Handwheel</td>
<td>Screws in stainless steel</td>
</tr>
<tr>
<td>Screws</td>
<td></td>
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<tr>
<td>Remark</td>
<td>Stainless steel parts without coating</td>
</tr>
</tbody>
</table>

Temperature

–40°F to 450°F with suitable material and construction selection

Construction details

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>Pressure rating ANSI</th>
<th>Flange drilling</th>
<th>Test acc.</th>
<th>Face-to-Face</th>
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</thead>
<tbody>
<tr>
<td>2”-24”</td>
<td>150 psi</td>
<td>ASME/ANSI</td>
<td>AWWA C520-10</td>
<td>AWWA C520-10</td>
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<td>MSS SP-81</td>
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<td>ASME B16.10</td>
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