Micro Pneumatics Pvt. Ltd.
A member of KITZ Group

Reliability • Efficiency • Quality
Company Profile

Micro Pneumatics Private Limited founded in 1986 with clear vision of excellent quality, reliability and customer satisfaction. The Directors of the company have served various Mechanical, Pharmaceutical and Instrumentation firms in the country, involving themselves with Design, Development and Production of Valves and Valve Automation Systems. The engineers meticulously trained under them, are well versed with the National, International standards, specifications, codes and process systems.

Micro is a professionally managed organization having certified ISO 9001:2000 by Bureau Veritas Quality International with UKAS accreditation and API Spec Q1 by American Petroleum Institute.

Micro products are designed, developed and manufactured as per detailed drawings and specified dimensions with tolerance. The organization has built up a system and procedure, set for selection and procurement of raw material, suppliers, written documentation, incoming outgoing inspection, testing and norms of acceptance. The traceability of valve components beginning from procurement stages are generated and maintained.

The infrastructure, technical support, continuous innovations and close customer interaction have enabled Micro, to consolidate its position at the leading edge of Valve and Valve Automation Systems among all kind of organizations in India.

Micro Pneumatics Private Limited is a one stop solution for Valve and Valve Automation System under one roof branded as MICRO.

All our valued customers are assured of MICRO’s Quality.
Flush Bottom Ball Valve with Actuator

The valve is compact segmented ball type designed to open directly in the Tank, Reactor for 100% flushing or discharging of material. The cavity in-between Ball and Body filled with PTFE or application suitable cavity filler to prevent fluids entrapment leading to contamination and production loss.

Designs: • Single Piece  • 3 Piece

Single Piece Design: The specified size consists of one higher size flange for the tank mounting and the valve is bolted to the tank bottom with gasket for ball opening into the tank.

3 Piece Design: The valve flange becomes the bottom pads of the tank and additional pad is not required. The valve flange is directly welded to the tank bottom, valve body and discharge side flange bolted to the welded pad.

Both designs featured with inclined bonnet which allows the automation or manual operation to be free from fouling with the reactor disc end.

<table>
<thead>
<tr>
<th>Mounting Interface</th>
<th>MOC of the Body</th>
<th>Trim</th>
<th>Seat / Cavity Filler</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 5211</td>
<td>CF8, CF8M, CF3, CF3M, Hastelloy (special on request)</td>
<td>CF8, CF8M, CF3, CF3M Hastelloy (Special on request)</td>
<td>PTFE, RPTFE (Special on request)</td>
<td>1&quot; to 10&quot;</td>
</tr>
</tbody>
</table>

Tri-Port Control Ball Valve

The Port Configuration: • One Inlet and two outlets  or Two Inlets and one outlet

Features: • Diverting or Control Diverting • Control and Mixing

The control diverting enables equal percentage flow characteristics to process with inbuilt corresponding equal percentage by-pass without any development of back pressure or pressure drop. Ideally suited for viscous and slurry flows protecting the pumps.

The control diverting is also featured for achieving Coarse and Fine application with by-pass (recirculation) normal open.

The three ports configured open, one at bottom and other two at the right and left side of the Valve respectively.

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<td>PTFE, RPTFE (Special on request)</td>
<td>½&quot; to 8&quot;</td>
</tr>
</tbody>
</table>
Three-Way Shut-off Ball Valve with Actuator

The Three Way Ball Valve is configured with Shut-off. The three ports are configured as one at bottom and one each on the right and left of the valves. With this, three way shut-off ball valve, the two different medias can flow separately from either of the two sides of the valve to the bottom side of the valve and can be stopped.

Alternately the three-way shut-off ball valve is featured for diverting a single media from the bottom port of the valve is either side, with shutting off of the media.

With a single three way ball valve shut-off is also achieved.

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<td>PTFE, RPTFE (Special on request)</td>
<td>1/2&quot; to 8&quot;</td>
</tr>
</tbody>
</table>

3 Way T-Port Pigging Ball Valve with Actuator

The 3 Way Ball Valve is featured with a through T-Port for pigging application. The steady state non-restricted reliable transfer of pig is achieved by the featured zero cavity T-Port internal through path.

The 3 ports are configured on a horizontal plane for transfer of pig through a straight path and the angular transfer of media.

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<td>CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>PTFE, RPTFE (Special on request)</td>
<td>1/2&quot; to 4&quot;</td>
</tr>
</tbody>
</table>
Screwed End Ball Valve with Actuator

Designed and Manufactured as per BS EN ISO 17292.
End Connection: ANSI/ASME B 1.20.1:1993
- Double Gasket Body Sealing ensures positive body joint sealing against pipe line stresses.
- Multi sealed stem prevents atmospheric leakage.
- Antistatic and Blow-out Stem.

The stem assembly consists of Belleville Washer set over the gland and tightened by gland nut assured zero gland leakage, due to live loading of gland.

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<td>PTFE, RPTFE (Special on request)</td>
<td>1/2&quot; to 2&quot;</td>
</tr>
</tbody>
</table>

Socket Weld Ball Valve with Actuator

Designed and Manufactured as per BS EN ISO 17292
End Connection: ASME B16.11
- Double Gasket Body Sealing ensures positive body joint sealing against pipe line stresses.
- Multi sealed stem prevents atmospheric leakage.
- Antistatic and Blow-out Stem.

The stem assembly consists of Belleville Washer set over the gland and tightened by gland nut assured zero gland leakage, due to live loading of gland.

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<td>PTFE, RPTFE (Special on request)</td>
<td>1/2&quot; to 2&quot;</td>
</tr>
</tbody>
</table>
3 Way 120° Ball Valve with Actuator

The 3 Way 120° Angle L-Port Ball Valve is designed for zero cavity, used for diverting heavy or highly viscous or slurry media.

The obtuse 3 way angle path allows a free flow diversion, even material such as powder and dough conveyed through vacuum, ideally suited for vacuum conveyors. The three ports are configured on a horizontal plane for any desired valve orientation.

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<td>PTFE, RPTFE (Special on request)</td>
<td>1/2&quot; to 4&quot;</td>
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</table>

Metal Seated Ball Valve with Actuator and Position Indicator

- Designed and Manufactured as per BS EN ISO 17292.
- Pressure Testing API 6D, API 598, BS 6755.
- Fire Test API 6FA, BS 6755 Part II

Metal Seated Ball Valve is well suited for variety of demanding services where high temperature and abrasive solids are present. The design provides freedom for thermal expansion of the Ball without jamming even at extreme temperature.

Application: Hot Gases, Liquids, Solids and Slurries.

Tightness Rates: Allowable leakage rate at full P ASME/FCI 70-2 Class V with special lapping.

<table>
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<tr>
<th>Mounting Interface</th>
<th>MOC of the Body</th>
<th>Trim</th>
<th>Seat</th>
<th>Backup Seal</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 5211</td>
<td>WC8, CF8, CF8M (Special on request)</td>
<td>SS 316 Hard faced with Stellite (Special on request)</td>
<td>SS 316 Hard faced with Stellite (Special on request)</td>
<td>Graphite</td>
<td>1/2&quot; to 8&quot;</td>
</tr>
</tbody>
</table>
Buttweld Ball Valve with Actuator

Designed and Manufactured as per BS EN ISO 17292.

End Connection ASME B16.25

- Double Gasket Body Sealing ensures positive body joint sealing against pipe line stresses.
- Multi sealed stem prevents atmospheric leakage.
- Antistatic and Blow-out Stem.

The stem assembly consists of Belleville Washer set over the gland and tightened by gland nut assured zero gland leakage, due to live loading of gland.

### Specifications

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<td>CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>PTFE, RPTFE (Special on request)</td>
<td>½&quot; to 8&quot;</td>
</tr>
</tbody>
</table>

Orbital Weld Ball Valve with Actuator

Designed and Manufactured as per BS EN ISO 17292.

End Connection: ASME B 16.25

- Double Gasket Body Sealing ensures positive body joint sealing against pipe line stresses.
- Multi sealed stem prevents atmospheric leakage.
- Antistatic and Blow-out Stem.

The stem assembly consists of Belleville Washer set over the gland and tightened by gland nut assured zero gland leakage, due to live loading of gland.

### Specifications

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<td>CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>PTFE, RPTFE (Special on request)</td>
<td>½&quot; to 4&quot;</td>
</tr>
</tbody>
</table>
Lined Ball Valve with Actuator and Solenoid Valve

2 Piece Designed Ball Valve Body with minimum 3.5mm thermoplastic lining of PFA, FEP and PVDF, one-piece Ball and Stem with minimum lining of 3mm of PFA, FEP and PVDF universally used for highly corrosive and chemical application.

Full lining thickness in the sealing zone however provides security against permeating media. Life-loaded PTFE seat rings, a permanent tightness is ensured for pressure, temperature and vacuum. Blow-out proof stem with multi seals prevents atmospheric leakage.

Lined Butterfly Valve with Actuator

2 Piece Designed Valve Body with easily replaceable PTFE Sleeve with PFA, FEP and PVDF lined Flap.

This design allows easy and quick in-line maintenance.
TC End Ball Valve with Actuator (Valve without Cavity Filler)

Designed and Manufactured as per GMP Norms and ISO 2852.
Mainly used in Pharmaceuticals, Food and Beverage Industries. Ease to separate from pipe line to flush out periodically.
Valve surface roughness achieved with electro polish and a series of grit polish.

<table>
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<tr>
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<th>Seat</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 5211</td>
<td>CF8, CF8M, CF3M (Electro Polished)</td>
<td>CF8, CF8M, CF3M (Mirror Finished)</td>
<td>PTFE</td>
<td>½&quot; to 4&quot;</td>
</tr>
</tbody>
</table>

TC End Cavity Filled Ball Valve with Actuator

High Purity Ball Valve : Designed and Manufactured as per GMP Norms, ISO 2852 and ASME/BPE1997.
Typically used in Bio-Pharma, Pharmaceuticals, Food and Beverage Industry.
A series of grit polishes is applied in a successively finer sequence until the desired finish or surface roughness achieved on the internal surface of the valve and components.
The integrated seat with cavity filler prevents fluids entrapment leading to contamination and cavity fillers ensures clean internals.

<table>
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<td>PTFE</td>
<td>½&quot; to 4&quot;</td>
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TC End Butterfly Valve with Actuator

Designed and Manufactured as per GMP Norms for Hygienic applications with PTFE Seat. Mainly used in Pharmaceuticals and Food Industry. Ease to separate from pipe line to flush out periodically.

<table>
<thead>
<tr>
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<th>Flap</th>
<th>Seat</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 5211</td>
<td>CF8, CF8M, CF3M (Special on Request)</td>
<td>SS 304, SS 316, SS 316L, Hastalloy, Titanium (Special on request)</td>
<td>PTFE, Food Grade Silicon</td>
<td>1½” to 8”</td>
</tr>
</tbody>
</table>

Metal Housed Teflon Butterfly Valve with Actuator

Valve Body with PTFE Sleeve, without Lined Flap butterfly Valve is widely used for Corrosive and Powder application.

In this design the media comes into contact with PTFE Sleeve and Valve Flap, and not with the Valve Body.

This design allows easy and quick in-line maintenance.

<table>
<thead>
<tr>
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<th>MOC of the Body</th>
<th>Flap</th>
<th>Seat</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO 5211</td>
<td>Ductile Iron, WCB, CF8, CF8M with PTFE Sleeve</td>
<td>CF8, CF8M, CF3, CF3M, Hastalloy Titanium (Special on request)</td>
<td>PTFE</td>
<td>2” to 24”</td>
</tr>
</tbody>
</table>
2 Piece Designed Ball Valve with Complete Automation System

The complete Electro Pneumatic system consists of Ball Valve, Declutchable Gear Box, Pneumatic Rotary Actuator, Position Indicator and Solenoid Valve. The Valve can be operated by Declutchable Gear Box fitted on the Valve, even when the Electrical Power or Air Pressure fails.

Size ½" to 16”

Metal Seated Butterfly Valve with Actuator and Stay Put System

• Valve designed and manufactured as per API 609, BS EN 593:1998, MSS SP 68-1997.
• Pressure Testing API 609, API 598-2004, BS 6755.

Off Centered Disc ensures a progressive smooth and low friction seat-disc closing.

Hardened sealing surface to provide high level of tightness and long life time.

The unique sealing system combined with the eccentric disc rotation and the patented flexible metallic seat provides an exceptional sealing even with high temperature fluctuations.

Stayput Systems: The Stay-Put system is a device with Double Coil Solenoid Valve Manifold with NAMUR Interface Mounting.

The Double Coil is individually used for isolated signals for opening and closing of the Valve. In event of Power/Air failure or both the Valve Stays put in prior prevailing condition.

<table>
<thead>
<tr>
<th>MOC of the Body</th>
<th>Disc</th>
<th>Seat</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>WCB, CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>CF8M Hardfaced with stellite</td>
<td>SS 316</td>
<td>2” to 24”</td>
</tr>
</tbody>
</table>
Wafer Type PTFE Seated Butterfly Valve with SS Actuator

Valves and Actuators are designed and manufactured as per GMP Norms.
Complete SS constructed Valves, Actuators and Position Indicators are featured for highly corrosive atmospheric conditions, with ease and quick replaceable seat.

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<td>ISO 5211</td>
<td>CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>CF8, CF8M, CF3, CF3M (Special on request)</td>
<td>PTFE, Food Grade Silicon</td>
<td>2&quot; to 12&quot;</td>
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Pneumatic Rotary Actuators

Actuators are pneumatically operated quarter turn rotary, dual Rack and Pinion Design manufactured under a robust quality assurance system complying ISO 9001:2000.

These actuators are available in spring return and double acting models with output torque ranging from 3Nm to 4000Nm for 0-90° and upto 180° operating for range of pressure upto 8 bar.

- Compact Design in Hard Anodized Extruded Aluminum and Investment Cast SS Body.
- Namur for Solenoid Valves.
- VDI/ VDE 3845 for Actuator and Auxiliary accessories.
- External arrangements to adjust the stroke at minimum ±5° in both open and close positions.
- Blow - out proof pinion.
- Least pressure operation.
- No metal to metal contact.
- Quick Response.
2 Piece Designed Ball Valve with 3 Position System Flame Proof

- Valve designed and manufactured as per BS EN ISO 17292.
- Pressure Testing API 6D, API 598, BS 6755.
- Fire Test API 6FA, BS 6755 Part II.

3 Position System: Micro 3 Position accuracy Proven System is compact and simple, used for Weighing / Filling, Loading, Batch Processing with Coarse and Fine Filling adjustment.

This system could be on:
- ½“ to 8” Ball Valves / ½“ to 6” Plug Valves / 1½“ to 12” Butterfly Valves.

Eccentric Designed Butterfly Valve with 3 Position System Weather Proof

- Valve designed and Manufactured as per BS EN 593:1998, MSS SP 68-1997.
- Pressure Testing API 609, API 598-2004, BS 6755.

3 Position System: Micro 3 Position accuracy Proven System is compact and simple, used for Weighing / Filling, Loading, Batch Processing with Coarse and Fine Filling adjustment.

This system could be on:
- ½“ to 8” Ball Valve
- ½“ to 6” Plug Valves
- 1½“ to 12” Butterfly Valves
2 Piece Designed
Soft Seated Ball Valve

- Designed and Manufactured as per BS EN ISO 17292
- Pressure Testing API 6D, API 598, BS 6755.
- Fire Test API 6FA, BS 6755 Part II.

Designs • Floating Ball Valve • Trunnion Mounted Ball Valve.

Floating Design: Independent Ball and Stem to minimize the effect of the side thrust generated by the pressure acting on the Ball. Two independent Floating Seat Rings assure Bi-directional zero leakage at maximum rated pressure.

Trunnion Mounted Ball Design: The Ball is fixed and the Seat Rings are floating free to move along the Valve Axis. At low pressure the Seat Sealing action is achieved by the thrust of the spring’s actions on the Seat Rings. As the pressure increases the seat rings are pushed against the Ball.

Mounting Interface
ISO 5211

MOC of the Body
WCB, CF8, CF8M, CF3, CF3M
(Special on request)

Trim
CF8, CF8M, CF3, CF3M
(Special on request)

Seat
PTFE, RPTFE
(Special on request)

Size
1/2" to 16"

Eccentric Designed
Butterfly Valve

- Pressure Testing API 609, API 598-2004, BS 6755.

Off Centered Disc ensures a progressive smooth and low friction operating, enables economic Actuator Selection.

Unique sealing system combined with Eccentric Disc provides an exceptional tight shut-off and vacuum sealing.

This design eases and reduces down time serviceable by just removing the retainer.

Mounting Interface
ISO 5211

End Connection
Universal Wafer

MOC of the Body
WCB, CF8, CF8M, CF3, CF3M
(Special on request)

Disc
CF8, CF8M, CF3, CF3M (Special on request)

Seat
PTFE, RPTFE (Special on request)

Size
1/2" to 24"