



# PROFILE OF MICROFINISH VALVES

FLUID MOTION TECHNOLOGY



6D 0301



0045



SIL 3 IEC 61508



ATEX 94/9/EC

**MICROFINISH VALVES, INC.** 

a wholly owned subsidiary of

**MICROFINISH VALVES PVT. LTD.** 



## THE MICROFINISH WAY

Microfinish group is a privately owned and managed organization specializing in industrial valves and automation for energy, process, and natural resource industries. The guiding principles of Microfinish are:

- Personal commitment to our customers
- Top quality in everything we do
- Best available technology for all our products and services

## INTRODUCTION

Microfinish group was established in 1971 to manufacture ball valves, bellows sealed globe valves, globe valves for chlorine service, gate globe check valves, and knife edge gate valves. Other valves were added to the product range in later years. For the last 40 years we have designed, developed, and supplied our products to:

- Oil and gas facilities, hydrocarbon processing, refineries, and petrochemical plants
- Fossil fuel, nuclear, and combined cycle power plants
- Fertilizer, chemical, and pharmaceutical industries
- Food and beverage plants
- Mining, minerals processing, and steel sectors
- Pulp and paper mills

We are recognized as a quality manufacturer of reliable valves for industry. Our wealth of experience has enabled Microfinish to become a prominent supplier of ball valves throughout the world.

Industrial technology is progressing at a remarkable rate, so we have established a research and development department equipped with modern test facilities.

Our manufacturing facilities are located in separate and well laid-out buildings with ample scope for future expansion. The industrial estate in Hubli is one of the biggest and fastest developing manufacturing zones in the state of Karnataka. The city of Hubli is well served by air, rail, and road connections; it is situated on the national highway NH 4 between Mumbai and Bengaluru.

In 1994 our organization was the first in India to receive the prestigious ISO 9001 certificate (1994 edition) from RWTÜV in Germany. Microfinish ball valves have had: API 6D certification since February 1999; PED certification since 2002; SIL 3 certification since 2009; ATEX, GOST, and TA-Luft certification since 2010.

## MICROFINISH VALVES, INC.

We launched Microfinish Valves, Inc. in Houston, Texas in July 2010 to bring our portfolio of specialized industrial valves to the key region of the Americas. We provide sales, technical support and a full array of inventory to our core regional markets. In a time when outsourcing of manufacturing and design control has become common, we believe our business model of quality assurance through design ownership and in-house manufacturing control in India will be a winning combination with end users who want to know the company behind the product, as well as behind the sale.

## PRODUCTS

We manufacture the following products in various materials including carbon steel, stainless steel, duplex, and high nickel alloys:

- Ball valves in floating and trunnion mounted designs, with cast and forged construction, including three way and jacketed configurations, and special versions for cryogenic and high temperature services
- Bellows sealed globe valves
- Globe valves for chlorine service
- Knife edge gate valves
- Forged gate, globe, and check valves

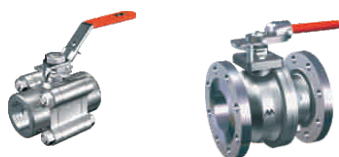
Microfinish is committed to total quality. Stringent and efficient quality assurance and control systems have been implemented in accordance with ISO 9001: 2000.

## VALVE AUTOMATION

Microfinish has expertise in valve automation technology and can offer complete systems. Our wide range of actuators, controls and accessories enables Microfinish to be a single source for integrated automated valve systems. Microfinish valves are available in a variety of automation packages that include:

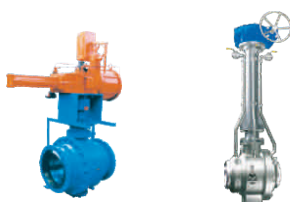
- Pneumatic, electric, hydraulic, and electro hydraulic actuated valves and systems
- Gas, and gas over oil automation systems
- On-off remotely operated valves with automation systems
- Emergency shutdown(ESD) valves with automation systems
- Vertical actuators for special applications
- Flame proof enclosures for actuators and accessories

## FLOATING BALL VALVES



Nominal Diameter(in)	Pressure Class	Ends Configurations
½ to 2	600, 800, 900 1500, 2500	SE, SWE, WE
2½ to 6	300	SE, SWE, WE
½ to 10	150, 300	FE, WE
½ to 4	600	FE, WE
½ to 3	900	FE, WE
½ to 2	1500	FE, WE
½ to 1	2500	FE, WE

## TRUNNION MOUNTED BALL VALVES



Nominal Diameter(in)	Pressure Class	Ends Configurations
2 to 36	150, 300, 600	FE, WE
1 to 24	900, 1500	FE, WE
1 to 12	2500	FE, WE

## BELLOWS SEALED GLOBE VALVES



Nominal Diameter(in)	Pressure Class	Ends Configurations
½ to 8	600, 800, 900, 1500, 2500	SE, SWE, WE
½ to 12	150, 300	FE, WE

## GLOBE VALVES FOR CHLORINE SERVICE



Nominal Diameter(in)	Pressure Class	Ends Configurations
½ to 12	300	FE, WE

## KNIFE EDGE GATE VALVES



Nominal Diameter(in)	Pressure Class	Ends Configurations
2 to 30	125 , 150	Wafer
	125 , 150	Wafer flange

\* SE: Screwed ends \* SWE: Socket weld ends \* WE: Welding ends \* FE: Flanged ends

**BALL VALVE RANGE ALSO INCLUDES:** Cryogenic, jacketed, three way, metal seated, and high temperature versions. Valves can be supplied with gear, pneumatic, gas over oil, or electric actuators.

**MATERIAL OF CONSTRUCTION:** Castings from ISO 9001 certified foundries in WCB, LCB, CF8, CF8M, CN7M, duplex, and nickel alloys. Forgings in A105, LF2, and F316.

**OTHER IN-HOUSE CAPABILITIES:** Stellite overlay by TIG, pup welding by TIG and SMAW, and grinding of balls and seats.



OFFICE BUILDING

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TOTAL SURFACE AREA	: 57880 square feet
OFFICE AREA	: 10000 square feet
FACTORY AREA	: 60050 square feet
PLANT CAPACITY	: 110000 valves per year
TOTAL EMPLOYEES	: 220 people

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MACHINE SHOP - CELL I



MACHINE SHOP - CELL II



CNC MILLING MACHINE

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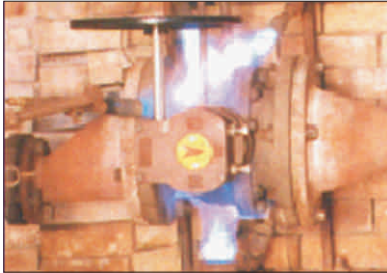
## PRINCIPAL MACHINES

- 9 CNC LATHES
  - 6 CNC MACHINING CENTERS
  - 4 CNC VTL MACHINES
  - 1 BORING MACHINE
  - 20 CENTER LATHES
  - 7 MILLING MACHINES
  - 12 DRILLING MACHINES
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CAD CENTER



FIRE SAFE TEST FACILITY



HIGH TEMPERATURE TEST FACILITY



CALIBRATION ROOM



HELIUM LEAK DETECTOR

- Our Research and Development Center has designed and developed a complete range of floating and trunnion mounted ball valves
- Our well qualified and experienced engineers are specially trained in valve design
- All product designs are validated using IDEAS - 10 Software
- Design facilities include drafting, 3-D modelling, finite element analysis, and simulated pressure-temperature stress analysis
- Our well stocked technical library includes all relevant international standards

Dedicated engineers implement Microfinish's quality and quality control policies. The QA department is equipped with all required facilities including :

- CALIBRATION ROOM
- RADIOGRAPHY
- DYE PENETRANT TEST SET
- ULTRASONIC TESTING
- HARDNESS TESTER
- HYDRAULIC AND PNEUMATIC TESTING
- TORQUE WRENCHES
- VACUUM TESTING EQUIPMENT
- HELIUM TESTING
- FUGITIVE EMISSION TESTING

Tests for POSITIVE MATERIAL IDENTIFICATION, CHEMICAL COMPOSITION and other MECHANICAL PROPERTIES are outsourced.

## QUALITY ASSURANCE ACTIVITIES

- DOCUMENTED QUALITY SYSTEMS
- APPROVAL AND MONITORING OF SUPPLIERS
- CORRECTIVE AND PREVENTATIVE ACTIONS
- STAGewise DESIGN REVIEW AND VERIFICATIONS
- QUALIFICATION AND VALIDATION
- CALIBRATION AND EQUIPMENT CONTROL
- MAINTENANCE AND CAPABILITY STUDIES
- TRAINING

## QUALITY CONTROL ACTIVITIES

- ▶ Raw material, semi finished, and bought out component inspection
- ▶ In process inspection of components
- ▶ Final product inspection and performance testing

## PRODUCT PERFORMANCE TESTING

- A. Routine product testing
  - ▶ Hydrostatic shell test
  - ▶ Hydrostatic seat test
  - ▶ Pneumatic seat test
  - ▶ Operating and torque test
- B. Destructive testing
  - ▶ Fire safe testing
  - ▶ Seat life testing
  - ▶ High temperature testing

## PRODUCT VALIDATION AND PROTOTYPE TEST FACILITIES

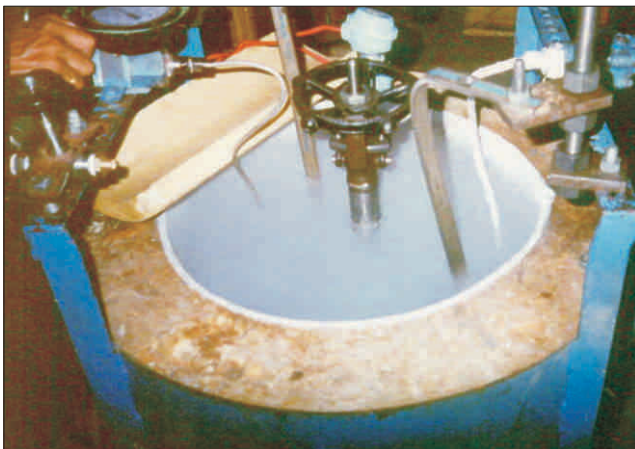
- ▶ FIRE SAFE TEST: All soft seated valves are prototype tested to comply with the requirement of API-607 or API-6FA standard
- ▶ HIGH TEMPERATURE TEST: Valves used for high temperature services are prototype tested using a steam generator upto 218 psi pressure from 392° F to 896° F
- ▶ LOW TEMPERATURE CRYOGENIC TEST: Valves used in cryogenic services are prototype tested at -49°F to -321°F as per BS 6364.
- ▶ CYCLE TEST: Prototype valves are cycle tested for seat and seal lives
- ▶ TORQUE TEST: Valve torque valves are verified with torque wrenches for compliance with specifications
- ▶ FUGITIVE EMISSION TEST: Leakage between joints and stem seals is measured for compliance with specifications
- ▶ NOISE AND VIBRATION TEST



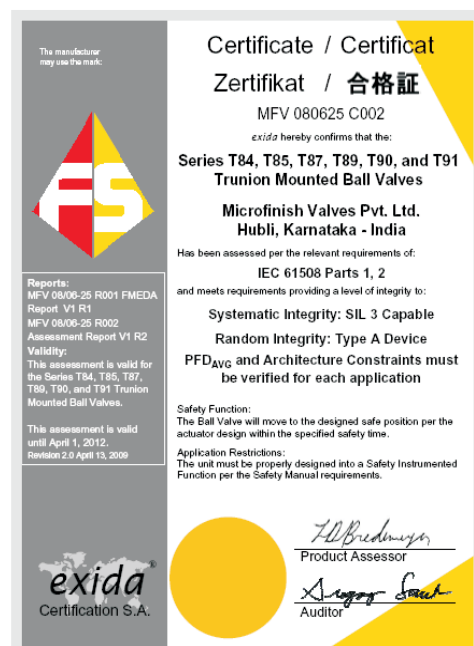
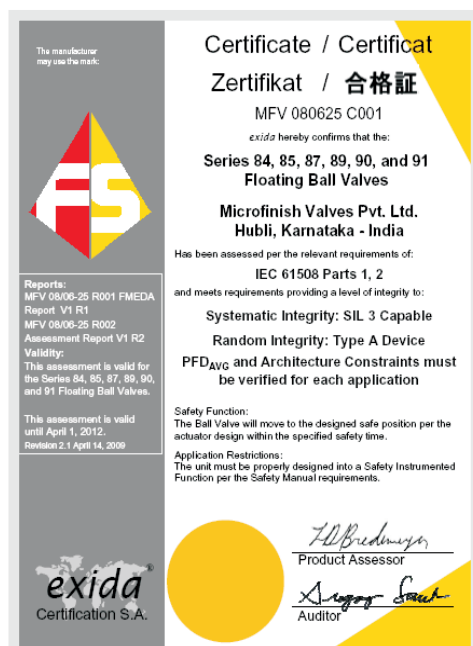
ULTRASONIC TESTING



RADIOGRAPHIC EXAMINATION



CRYOGENIC TESTING





# GLOBAL SALES OFFICES

**HEADQUARTERS AND 12 SALES OFFICES IN INDIA**  
**Authorized representatives in Australia, Malaysia and Singapore**

## THE AMERICAS

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**[gmiller@microfinishgroup.com](mailto:gmiller@microfinishgroup.com)**

**Sales of specialized industrial valves, technical support,  
and a full array of inventory**



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PMV 02: Feb. 2011