



METAL SEATED BALL VALVES

ENGINEERED FOR CRITICAL APPLICATIONS



6D0301



INTRODUCTION TO THE COMPANY



THE MICROFINISH WAY

Microfinish group is a privately owned and managed organization specializing in industrial valves and pumps 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

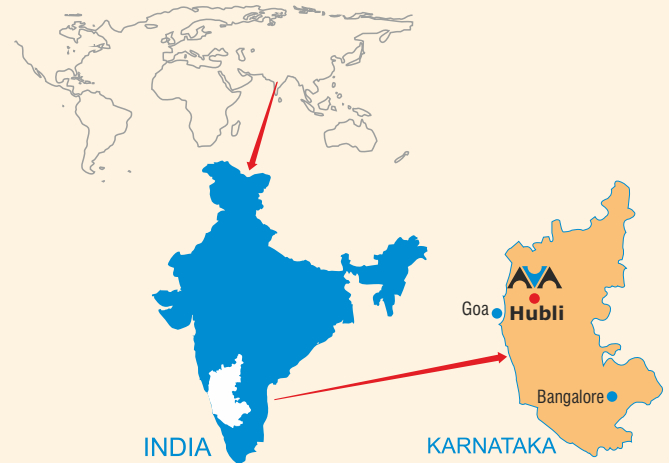
Microfinish group was established in 1971 to manufacture ball valves, bellows sealed globe valves, globe valves for chlorine service, gate, globe check valves, and knife edge gate valves. Other valves and pumps were added to the product range in later years. For the last 35 years we have designed, developed, and supplied our products to:

- Oil and gas facilities, hydrocarbon processing refineries, and petrochemical plants
- Fossil fuel, nuclear, and co-generation 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 and pumps for industry. Our wealth of experience has enabled Microfinish to become a prominent supplier of ball valves throughout the world, and of chemical process pumps in India.

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 Bangalore.



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 bodies, including three way and jacketed configurations, and special versions for cryogenic and high temperature services
- Bellows sealed globe valves
- Globe valves for chlorine service
- Butterfly valves
- Knife edge gate valves
- Gate, globe, and check valves in forged and cast versions
- Chemical process pumps in standard and specialty configurations
- Sanitary and slurry pumps

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

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 also had API 6D certification since February 1999 and PED certification since 2002.

In 1988 the International Labor Organization in Geneva gave Microfinish an award for good working conditions and environment as a result of the hard work of every employee and the commitment of management.

IN-HOUSE FACILITIES FOR QUALIFICATION TESTS

- Fire safe
- High temperature with superheated steam
- Low temperature for cryogenic valves
- Life cycle
- Fugitive emissions
- Pump performance and NPSH
- Noise and vibration

METAL SEATED BALL VALVES



- Floating and trunnion mounted designs
- Reduced bore and full bore configurations

FEATURES

- Finely machined and lapped balls and seats
- ENP or hard coated balls and seats
- Temperature capability to 540°C (1004°F)
- Scraper seat as standard
- Fire-safe design
- Blowout proof stem
- Live loaded molded graphite gland packing

INDUSTRIAL SECTORS

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

APPLICATIONS

- High temperature steam in power plants, refineries, and other plants
- Natural gas production platforms and distribution networks
- Ash handling equipment for boilers
- Digester discharge and black liquor in pulp mills
- Slurries
- Molten sulphur

TECHNOLOGY

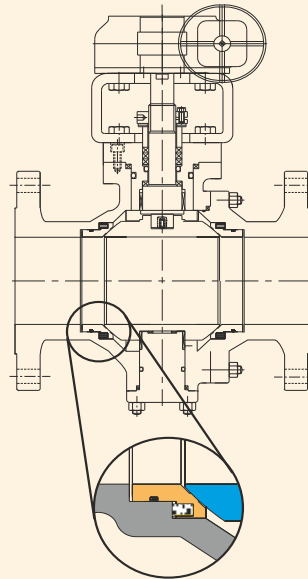
- Microfinish uses advanced software for 2-D and 3-D design



Finite element analysis

BENEFITS

- Bubble tight shut off up to API 598
- Low emissions
- Long maintenance free life



- Simulated pressure - temperature analysis



Microfinish research and development facilities include high temperature test loop to 480 °C (896 °F) at 15 bar pressure

TECHNICAL SPECIFICATIONS



PRODUCT RANGE

SERIES	SIZES- mm	SERIES	SIZES- mm	BORE	PRESSURE CLASS	END CONNECTIONS
TWO PIECE CONSTRUCTION		THREE PIECE CONSTRUCTION				
		M81R3, M81F3	15-50	RB, FB	600, 800	SE, SWE, WE
M84R2, M84F2	15-250			RB, FB	150	FE, WE
M85R2, M85F2	15-250			RB, FB	300	FE, WE
M87R2, M87F2	15-100			RB, FB	600	FE, WE
M89R2, M89F2	15-80	M89R3, M89F3	15-50	RB, FB	900	SE, SWE, WE, FE
M90R2, M90F2	15-50	M90R3, M90F3	15-50	RB, FB	1500	SE, SWE, WE, FE
M91R2, M91F2	15-25	M91R3, M91F3	15-25	RB, FB	2500	SE, SWE, WE, FE
TM84R2, TM84F2	50-900	TM84R3, TM84F3	50-900	RB, FB	150	FE, WE
TM85R2, TM85F2	50-900	TM85R3, TM85F3	50-900	RB, FB	300	FE, WE
TM87R2, TM87F2	50-900	TM87R3, TM87F3	50-900	RB, FB	600	FE, WE
TM89R2, TM89F2	25-600	TM89R3, TM89F3	25-600	RB, FB	900	FE, WE
TM90R2, TM90F2	25-400	TM90R3, TM90F3	25-400	RB, FB	1500	FE, WE
TM91R2, TM91F2	25-300	TM91R3, TM91F3	25-300	RB, FB	2500	FE, WE
RB = Reduced bore. FB = Full bore. SE = Screwed ends. SWE = Socket weld ends. WE = Welding ends. FE = Flanged ends.						

STANDARD SPECIFICATIONS

- Design standard: API 6D, API 608, ASME B 16.34, BS EN ISO 17292
- Testing standard: API 6D, API 598, BS EN 12266, ISO 5208, ASME B 16.34
- Leak tightness: ISO 5208 Rate A, B, C, ANSI/FCI 70-2 Class V, VI
- Fire safe testing: API 6FA
- Temperature range: -196 °C (-321 °F) to + 540 °C (1004°F)
- Material test certificate: EN 10204 3.1
- Materials:
 - Body : A105, LF2, F304, F316, WCB, LCB, CF8, and CF8M
 - Ball : CA15, CF8, CF8M, A105, LF2, F304, and F316
 - Ball coating: ENP
 - Stem: 4140, 410, 17-4PH, and Inconel
 - Seats: heat treated or coated to suit service conditions
 - Springs: Inconel X 750

OPTIONAL SPECIFICATIONS

- Bonnet extension
- High temperature design above 540°C (1004°F)
- Cryogenic designs
- Degreasing
- Ball coatings: Stellite, carbide, or nickel boron
- Special alloys and other materials to suit service conditions
- Special test certificates: EN 10204 3.2

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