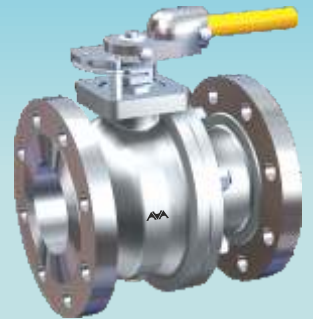




# Floating Ball Valves



**MICROFINISH**



Pumps • Valves • Automation



## THE MICROFINISH WAY

Microfinish Valves Pvt. Ltd. is a privately owned and managed company specializing in industrial valves 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 Valves Pvt.Ltd. was established in 1971 to manufacture ball valves, bellows sealed globe valves, chlorine globe valves, and knife edge gate valves. 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 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.

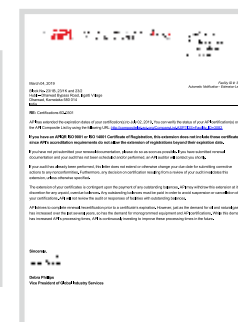
Our new state of art manufacturing facilities is located in Itigatti village 10 kms from Hubballi City



## QUALITY

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

In 1994 our organization was the first in India to receive the prestigious ISO 9001 certificate (1994 edition) from RWTUV in Germany. Microfinish ball valves have also had API-6D certification since February 1999 and CE certification since 2002.



## IN-HOUSE FACILITIES FOR QUALIFICATION TESTS

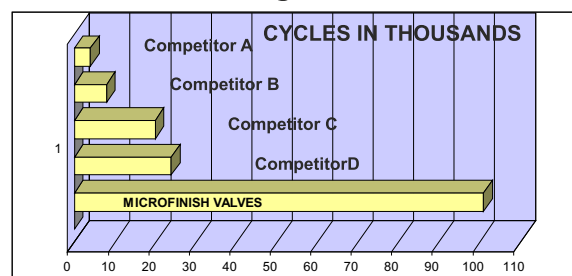
- ◆ Fire safe testing
- ◆ High temperature testing by superheated steam
- ◆ Low temperature testing for cryogenic valves
- ◆ Cycle testing
- ◆ Fugitive-emission

## FLOATING BALL VALVES

MICROFINISH Floating Ball valves with unmatched features:

- ◆ Designed to handle most severe service applications
- ◆ Internally mounted Blow-out proof stem
- ◆ Standard live loaded stem design meets stringent Fugitive norms
- ◆ Fire safe & Antistatic design to meet API-607 standard
- ◆ High cycle life
- ◆ Actuator mounting pad as per ISO-5211
- ◆ Improved seat design for long life & bubble tight shut off having low Torque
- ◆ Choice of Seat material

### Stem Leakage Test Results



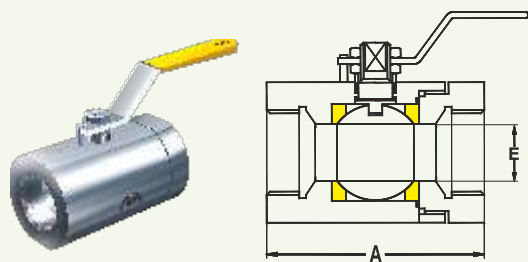
- ◆ MICROFINISH Valve has stem seal integrity without packing adjustment even after 100,000 cycle
- ◆ This is four times more cycles than the best competitive valve could achieve
- ◆ Valve tested with Water at Room temperature at 20 bar pressure. Each valve is fully pressurized while in the closed position & depressurized

# SINGLE TWO PIECE & THREE PIECE BALL VALVES



## SERIES 80BK Pr. Rating #300

Ends : Screwed



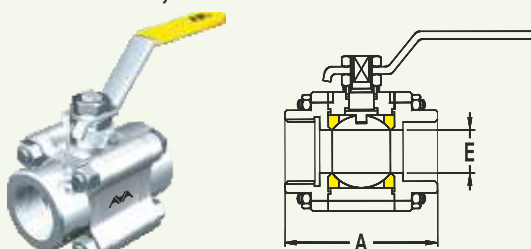
### REDUCED BORE

Dimensions are in mm & Weight (approx) in kgs

SIZE	A	E	WEIGHT	
			RB	FB
8	70	9.5	0.5	0.5
10	70	9.5	0.5	0.5
15	70	9.5	0.5	0.5
20	80	13.0	0.8	0.8
25	90	15.0	1.3	1.3
32	110	19.0	3.0	3.0
40	115	25.0	3.2	3.2
50	125	32.0	3.8	3.8

## SERIES 81R3 / 81F3 Pr. Rating #600 and #800

Ends : Screwed, Socket & Butt Weld



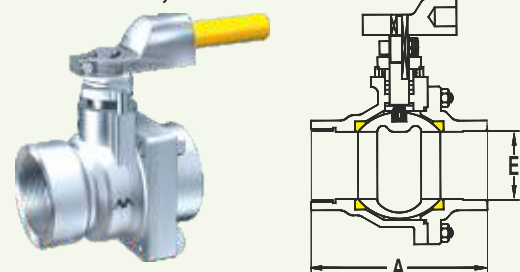
### RB = REDUCED BORE

### FB = FULL BORE

SIZE	A		E		WEIGHT	
	RB	FB	RB	FB	RB	FB
8	64	64	6.0	6.0	0.7	0.7
10	64	64	6.0	9.5	0.7	0.8
15	64	64	9.5	13.0	0.7	0.8
20	70	75	13.0	19.0	0.8	1.3
25	88	88	19.0	25.0	1.5	1.9
32	105	105	25.0	32.0	1.8	3.3
40	114	114	32.0	38.0	3.1	4.1
50	130	130	38.0	50	4.3	6.5

## SERIES 81R2 / 81F2 Pr. Rating #300

Ends : Screwed, Socket & Butt Weld



### RB = REDUCED BORE

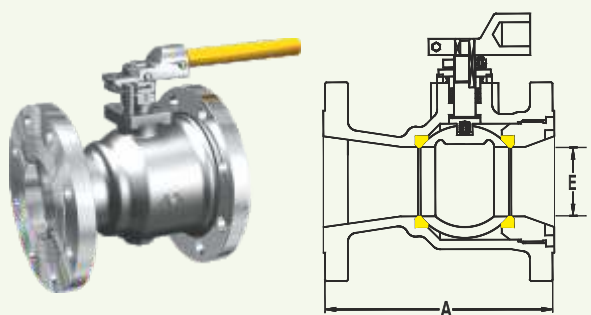
### FB = FULL BORE

SIZE	A		E		WEIGHT	
	RB	FB	RB	FB	RB	FB
50	-	130	-	50	-	6
65	150	170	50	65	10	12
80	170	200	58	76	14	16
100	200	229	76	102	30	35
150	275	315	98	152	52	60

## SERIES 84R1 Pr. Rating #150

85R1 Pr. Rating #300

Ends : Flanged



### RB = REDUCED BORE

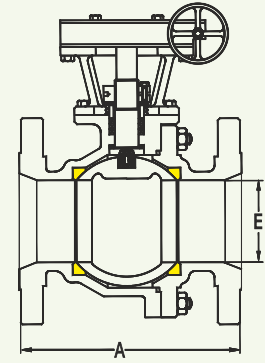
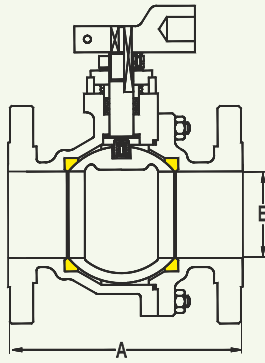
SIZE	A		E	WEIGHT	
	150	300		150	300
15	108	140	9.5	1.6	2.8
20	117	152	13.0	2.0	3.9
25	127	165	19.0	2.9	5.0
32	140	178	25.0	3.5	8.0
40	165	190	32.0	5.0	10.0
50	178	216	38.0	8.5	12.0
65	190	241	50.0	11.0	18.0
80	203	283	58.0	17.0	27.0
100	229	305	76.0	25.0	42.0
150	267	403	102.0	42.0	76.0
200	292	419	144.0	75.0	153.0
250	330	457	187.0	126.0	192.0

# TWO PIECE & JACKETED BALL VALVES



## SERIES

84R2 / 84F2 Pr Class # 150  
 85R2 / 85F2 Pr Class # 300  
 87R2 / 87F2 Pr Class # 600  
 89R2 / 89F2 Pr Class # 900  
 90R2 / 90F2 Pr Class # 1500  
 Ends : Flanged & Butt Weld



**RB = REDUCED BORE**

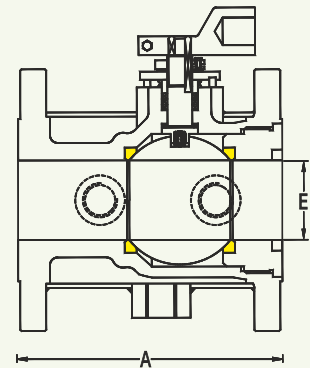
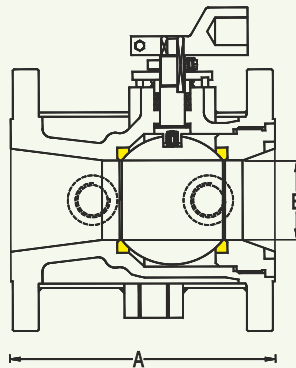
**FB = FULL BORE**

Dimensions are in mm & Weights (approx) in kgs

SIZE	A				E		WEIGHT									
	Class				RB	FB	Class 150		Class 300		Class 600		Class 900		Class 1500	
	150	300	600	900&1500			RB	FB	RB	FB	RB	FB	RB	FB	RB	FB
15	108	140	165	216	9.5	13	1.5	1.5	2.5	2.8	3.2	3.3	4.6	4.9	5.0	6.0
20	117	152	190	229	13	19	1.7	2.5	3.5	4.0	4.8	5.0	6.5	7.1	7.5	9.5
25	127	165	216	254	19	25	2.6	2.8	4.5	5.0	6.5	6.7	8.8	13	10	14
32	140	178	229	280	25	32	3.8	5.4	5.3	7.0	8.4	9.0	12.5	21	13	23
40	165	190	241	305	32	38	5.5	6.5	9.5	10	13	13	20	28	23	29
50	178	216	292	368	38	50	8.3	9.5	12	15	16	21	27	31	31	-
65	190	241	330	419	50	65	11	16	14	22	25	30	40	50	-	-
80	203	283	356		58	76	17	19	25	31	33	38				
100	229	305	432		76	98	25	33	41	52	65	90				
150	267	403	559		98	152	42	60	70	141	85	-				
200	292	419	-		144	203	76	98	157	221	-	-				
250	330	457	-		187	250	129	160	200	280	-	-				
300	356	502	-		228	-	150	-	275	-	-	-				

## SERIES

84R1-J / 84F1-J Pr Class # 150  
 85R1-J / 85F1-J Pr Class # 300  
 Ends : Flanged



**RB = REDUCED BORE**

**FB = FULL BORE**

SIZE	A		E		WEIGHT			
	Class		RB	FB	Class 150		Class 300	
	150	300			RB	FB	RB	FB
15 x 25	108	140	9.5	13	2.5	3.0	3.5	4.0
20 x 32	117	152	13	19	3.0	4.5	4.5	5.0
25 x 40	127	165	19	25	6.0	7.0	7.0	7.5
32 x 50	140	178	25	32	9.0	10.0	10.0	11.0
40 x 65	165	190	32	38	10.0	11.0	11.5	12.0
50 x 80	178	216	38	50	12.0	16.5	18.0	20.0
65 x 100	190	241	50	65	18.0	19.5	26.0	28.0
80 x 150	203	283	58	76	35.0	40.0	42.0	44.0
100 x 150	229	305	76	102	-	60.0	-	80.0
150 x 250	267	403	98	152	-	120.0	-	150.0
200 x 300	292	419	144	203	-	160.0	-	320.0
250 x 350	330	-	187	250	-	376.0	-	-



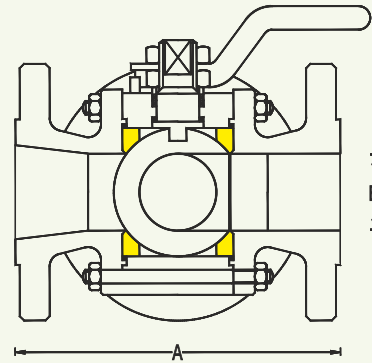
# THREE WAY BALL VALVES



## THREE PIECE DESIGN

Series 71R3 / 71F3 Pr Class # 150  
74R3 / 74F3 Pr Class # 300

Ends : Screwed, Socket, Butt Weld & Flanged



**RB = REDUCED BORE**

**FB = FULL BORE**

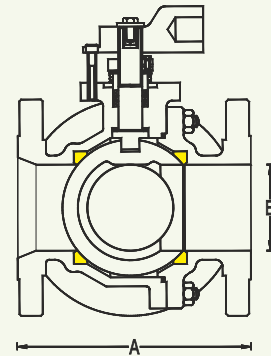
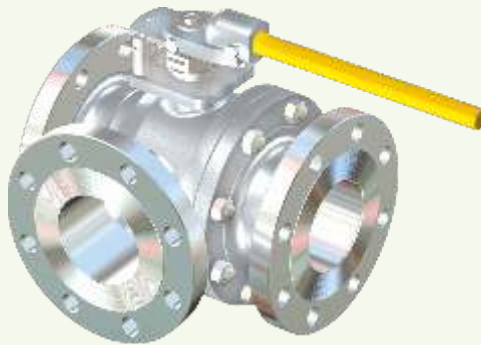
Dimensions are in mm & Weight (approx) in kgs

SIZE	A		E		WEIGHT			
	Class		RB	FB	Class 150		Class 300	
	150	300			RB	FB	RB	FB
15	108	140	9.5	13	1.8	2.0	3.0	3.5
20	117	152	13	19	2.2	3.0	4.0	4.6
25	127	165	19	25	3.2	3.5	5.0	5.8
32	140	178	25	32	4.6	4.8	6.0	7.6
40	165	190	32	38	6.5	7.5	10.0	12.0
50	178	216	38	-	9.6	-	12.0	-

## TWO PIECE DESIGN

Series 71R2 / 71F2 Pr Class # 150  
74R2 / 74F2 Pr Class # 300

Ends : Flanged & Butt Weld

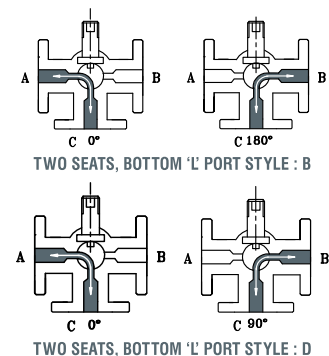
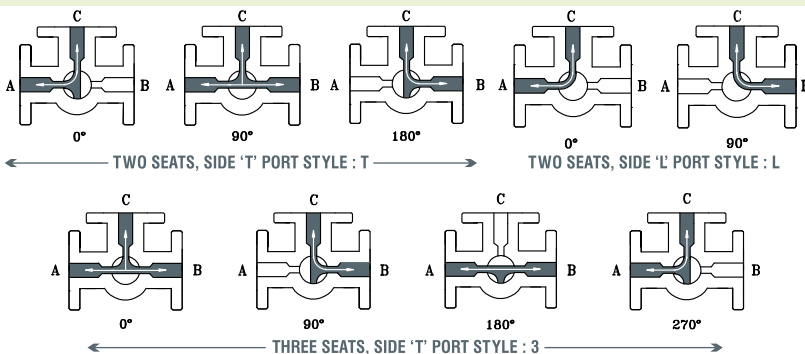


**RB = REDUCED BORE**

**FB = FULL BORE**

SIZE	A			E		WEIGHT			
	Class 150		Class 300 TWO&THREE SEATS	RB	FB	Class 150		Class 300	
	TWO SEATS	THREE SEATS				RB	FB	RB	FB
50	178	203	216	-	50	-	14	-	19
65	190	222	241	50	65	17	24	18	29
80	203	241	283	58	76	26	29	33	40
100	229	305	305	76	98	38	50	53	68
150	267	394	403	102	148	48	90	91	136
200	457	457	502	148	198	100	147	180	190
250	533	533	568	187	248	168	240	270	380
300	610	610	648	228	298	195	300	350	425

## FLOW PATTERNS



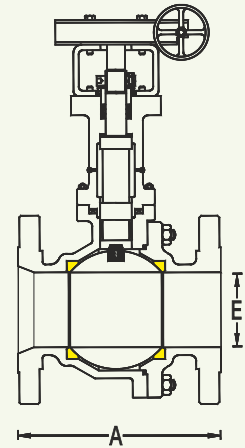
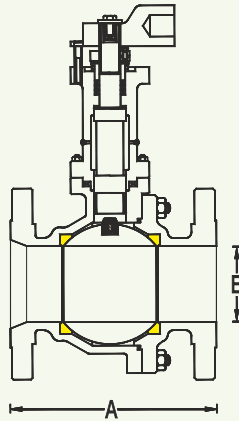
# CRYOGENIC BALL VALVES



## SERIES

84R2 / 84F2 Pr Class #150 Ext'n.  
85R2 / 85F2 Pr Class #300 Ext'n.

Ends : Screwed, Socket, Butt Weld  
& Flanged



**RB = REDUCED BORE**

**FB = FULL BORE**

Dimensions are in mm & Weight (approx) in kgs

SIZE	A		E		WEIGHT			
	Class		RB	FB	Class 150		Class 300	
	150	300			RB	FB	RB	FB
15	108	140	9.5	13	1.8	2.2	3.0	3.5
20	117	152	13	19	2.0	3.3	4.3	4.8
25	127	165	19	25	3.2	3.5	5.6	6.4
32	140	178	25	32	4.7	5.4	6.6	8.5
40	165	190	32	38	6.8	8.5	12.5	14
50	178	216	38	50	10.6	15	15	16
65	190	241	50	65	14	22	17	23
80	203	283	58	76	17	26	32	38
100	229	305	76	98	31	41	52	95
150	267	403	98	152	52	81	118	176
200	292	419	144	203	96	140	196	276
250	330	457	187	250	162	200	250	350
300	356	502	228	-	187	-	340	-

## Applicable Standards

Design Std	ISO-17292, ASME B - 16.34
Testing Std	ISO 5208, API-598
Face to Face Dimension	ASME B 16.5
Socket Weld Ends	ASME B16.11
Buttweld Ends	ASME B 16.25
Flanged Ends	ASME B16.5
Sour Service	NACE MR01 75
Fire Safe Testing	API-607 & API-6FA

## Pressure Testing

Valve Rating	Test Pressure - Bar			
	Class	Shell*	Seat*	Air-seat
# 150	30	22	6	6
# 300	77	57	6	6
# 600	153	113	6	6
# 800	230	169	6	6
# 900	383	281	6	6
# 1500	638	468	6	6

\*Test Pressure for WCB Material

# TECHNICAL INFORMATION



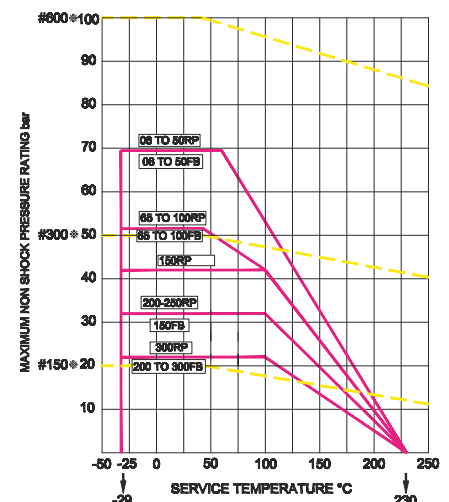
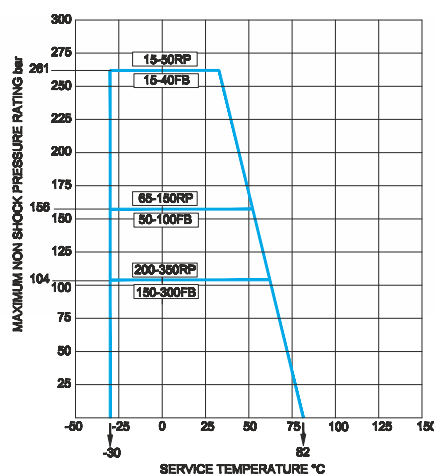
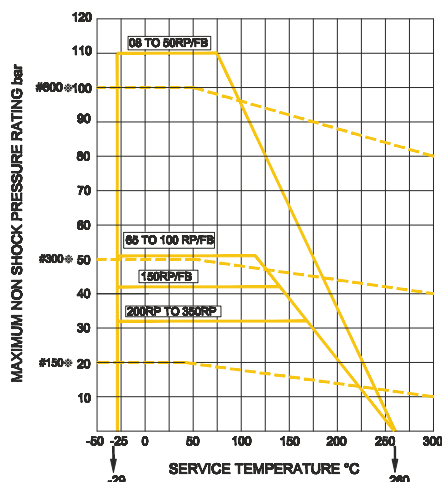
## ● BREAK AWAY TORQUE VALUE- Nm

Δ P BAR	Class 150 and 300						Class 600				Class 800					
	20		40		50		60		100		20		60		80	
SIZE mm	RB	FB	RB	FB	RB	FB	RB	FB	RB	FB	RB	FB	RB	FB	RB	FB
8	-	-	-	-	-	-	-	-	-	-	3	3	10	10	12	12
10	-	-	-	-	-	-	-	-	-	-	3	3	10	10	12	12
15	3.3	3.3	3.7	3.8	4.0	4.0	10	15	12	20	3	3	10	10	12	12
20	3.3	7.0	3.8	7.2	4.0	8.0	10	15	15	21	3	10	10	15	12	18
25	6.5	8.0	7.0	10	8.0	11.5	14	25	18	35	10	14	15	25	18	25
32	12	15	13.5	20	14.5	21	20	35	35	45	14	25	25	35	25	40
40	15	21	15.5	24	16	25	28	43	48	52	25	42	35	55	40	60
50	20	35	23.5	43	24	50	-	-	-	-	42	46	55	80	60	80
65	37	67	52	85	66	96	-	-	-	-	46	80	80	130	80	140
80	50	93	79	106	88	120	-	-	-	-	80	95	130	175	140	185
100	88	155	109	174	120	185	-	-	-	-	95	160	175	325	185	390
150	185	360	201	485	210	545	-	-	-	-	160	460	325	1195	390	1434
200	250	460	468	-	-	-	-	-	-	-	-	-	-	-	-	-
250	865	1200	1195	-	-	-	-	-	-	-	-	-	-	-	-	-
300	1130	2600	-	-	-	-	-	-	-	-	-	-	-	-	-	-

NOTE : ● With PTFE Seats ■ For reinforced PTFE multiply by factor 1.1 ■ For infrequent operation multiply by factor 1.2 ■ For metal seat multiply by factor 2.5

## Materials of Construction

Body and tail piece	Casting : WCB, WCC, LCB, LCC, CF8, CF8M, CF3, CF3M, CD4MCU, CN7M, CD3MN, CN3MN, CW-6M, N-7M Duplex and other exotic alloys. Other materials on request Forging : A105, LF2, F304 and F316
Ball	WCB, LCB with ENP, CA15, CF8, CF8M, CF3, CF3M, CD4MCU, CN7M, CD3MN, CN3MN, CW-6M, N-7M Duplex and other exotic alloys
Stem and gland	410, 304, 316, A20, 31803, Inconel and Nickel alloys
Seat	PTFE, RPTFE, NYLON, DELRIN, PEEK, DEVLON and METAL
Stem washer	RPTFE
Stem seal	Grafoil and PTFE
Body seal	Grafoil and Spiral Wound gasket with filler
Body stud	B7, L7, B8, B8M
Body nut	2H, 2HM, 8, 8M



## SALES OFFICES

BRANCHES	TELEPHONE NO.	E-MAIL ID
AHMEDABAD	09327732402	salesahmedabad@microfinishgroup.com
BARODA	0265 - 2987701 / 9574001348	salesbaroda@microfinishgroup.com
BENGALURU	080 - 29775863 / 23233999	salesbangalore@microfinishgroup.com
CHENNAI	044 - 45576723 / 7871990001	saleschennai@microfinishgroup.com
DELHI	0120 - 2510145 / 4258700 / 7065002286	salesdelhi@microfinishgroup.com
HYDERABAD	040 - 40273832 / 7997102345	saleshyd@microfinishgroup.com
INDORE	09329306090	salesindore@microfinishgroup.com
KANPUR	09305509600	saleskanpur@microfinishgroup.com
KOLKATA	033 - 24292085 / 7890018820	saleskolkata@microfinishgroup.com
MUMBAI	022 - 25008254 / 25006862	salesbom@microfinishgroup.com
PUNE	020 - 25448989 / 25468989	salespune@microfinishgroup.com

## WORKS

Microfinish Valves Pvt.Ltd., 23/1K, 23/2 & 23/1B,  
Hubli Dharwad By-Pass Road, Village Itigatti – 580 114, Taluk & Dist – Dharwad.

**MICROFINISH VALVES PVT. LTD.** 

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E-mail: sales@microfinishgroup.com Website: www.microfinishgroup.com