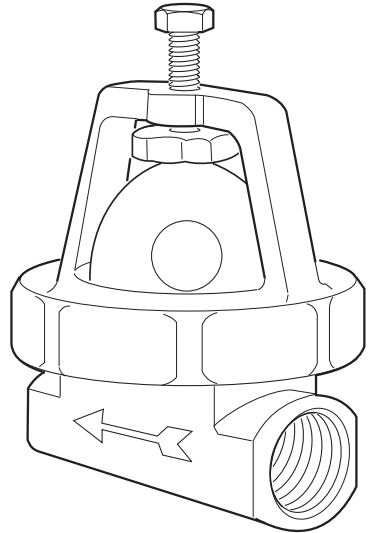
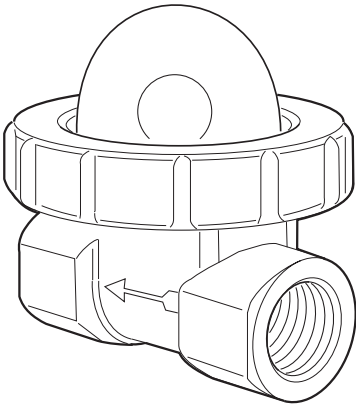




Ball Type Flow Indicators



PRODUCT MANUAL

IMPORTANT

Installer: This Manual is the property of the customer and must be retained with the product for maintenance and operational purposes.

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SAFETY: WARNINGS

The function of the Ball Type Flow Indicator is to provide a visual indication of the flow of either a gas or liquid. This requires that:

1. It is installed, commissioned, operated and maintained in accordance with the recommendations given in this Manual.
2. Periodic attention is given, as necessary, to maintain the product in good functional order. Recommended guidelines are given in section: '**Maintenance**'.
3. Continued use of this product in conditions outside the specification limits given in this Manual can present potential risk to users.

INTRODUCTION

The Rada Ball Type Flow Indicators are specified to meet the highest standards of safety, comfort and economy as demanded by today's users. All Rada products are designed, manufactured and supported in accordance with accredited BS EN ISO 9001:1994 Quality Systems.

This Manual covers all Rada Ball Type Flow Indicators manufactured from August 1996.

DESCRIPTION

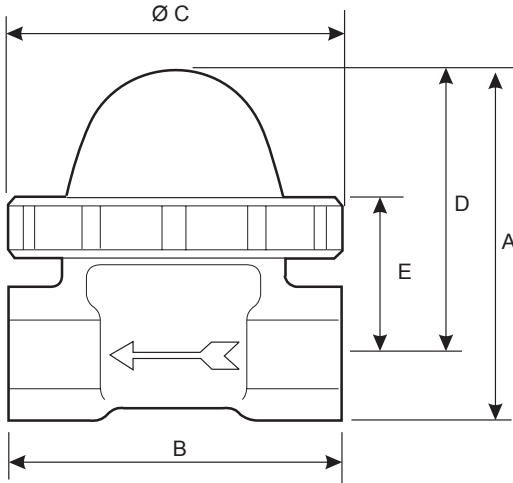
A range of 1/2", 3/4" and 1" Ball type flow indicators suitable for use with gas, air, oil, water, petrol or any other liquid which can be used with either the bronze or stainless steel construction of the unit.

Standard: Made in 1/2", 3/4" and 1" sizes, die cast bronze body and shatter-resistant borosilicate dome. Suitable for temperatures up to 82°C and pressures up to 7 bar (100 psi).

High Temperature: Made in 1/2" size only, either die cast bronze or stainless steel body, high temperature joint rings and polyethersulphone ball. Suitable for temperatures up to 120°C.

High Pressure: Made in 1/2" size only, aluminium bronze body and high pressure cap assembly. Suitable for pressures up to 21 bar (300 psi) and temperatures up to 120°C.

DIMENSIONS



Model			
	1/2"	1/2" HP	3/4" & 1"
A	70	105	93
B	73	73	109
C	70	70	94
D	56	56	73
E	35	35	42

All dimensions in mm

SPECIFICATIONS

Flow Range Starting Flow

Indicator Size	Liquid (l/min)	Gas (m ³ /min)
1/2"	0.44	0.014
3/4"	0.70	0.056
1"	0.77	0.056

Maximum Pressure and Temperature

Model	Pressure	Temperature
Standard (1/2", 3/4" & 1")	7 bar	82°C
High Temperature (1/2")	7 bar	120°C
High Pressure (1/2")	21 bar	120°C

Connections

1/2", 3/4" or 1" BSP female connections, also available in ANPT (1" Version only).

INSTALLATION

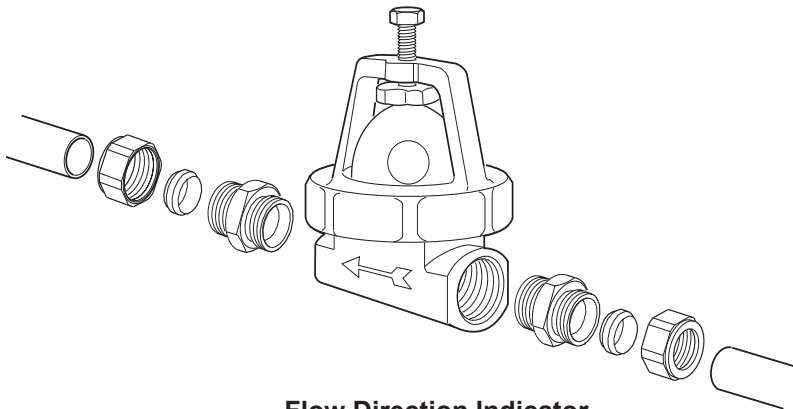
General

Installation must be carried out in accordance with these instructions, and must be conducted by designated, qualified and competent personnel.

1. Before commencing, ensure that the installation conditions comply with the information given in section: '**Specifications**'.
2. Care must be taken during installation to prevent any risk of injury or damage.
3. Conveniently situated isolating valves must be provided for maintenance.
4. Pipework must be rigidly supported.
5. Inlet and outlet threaded joint connections should be made with PTFE tape or liquid sealant. Do not use oil-based, non-setting jointing compounds.
6. To eliminate pipe debris it is essential that supply pipes are thoroughly flushed through before connection to the Ball Type Flow Indicator.

The Ball Flow Indicator must be installed horizontally with the glass dome uppermost to enable the ball to drop from sight when the flow stops. The flow direction must be as indicated by the arrow on the side of the Indicator.

Note! If installed in the opposite direction to the flow the Indicator will obstruct the flow.



Flow Direction Indicator

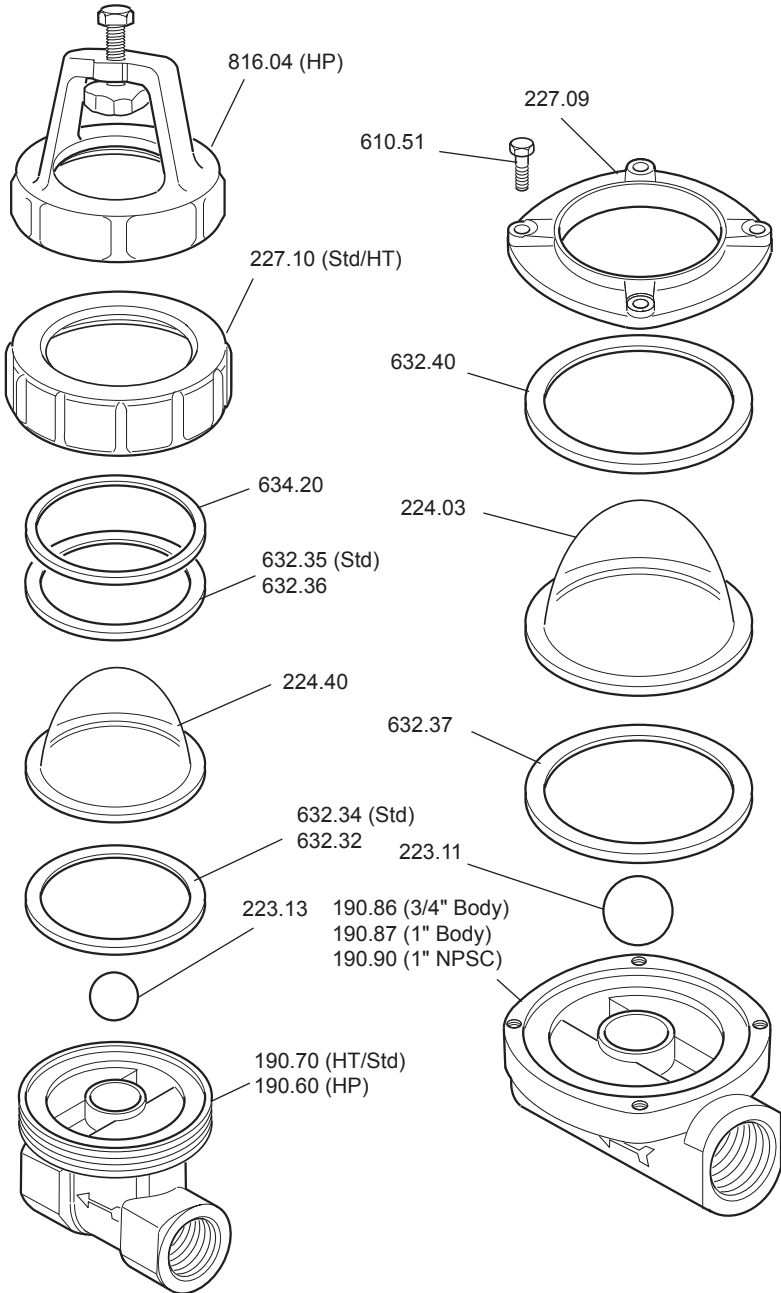
MAINTENANCE

Maintenance is limited to general cleanliness only.

Note! ONLY silicone based lubricants to be used with this product.

SPARE PARTS

190.60	Body, (1/2" HP Model)
190.70	Body, (1/2" Model)
190.86	Body, (3/4" Model)
190.87	Body, (1" Model)
190.90	Body, (1" NSPC)
223.11	Indicator Ball, (3/4" & 1" Models)
223.13	Indicator Ball, (All 1/2" Models)
224.03	Sight Glass, (3/4" & 1" Models)
224.40	Sight Glass, (1/2" Models)
227.09	Clamping Ring, (3/4" & 1" Models)
227.10	Clamping Ring, (1/2" Models)
610.51	Screw, (3/4" & 1" Models), 4 off
632.32	Lower Sealing Washer, (1/2" HT & HP Models)
632.34	Lower Sealing Washer, (1/2" Models)
632.35	Upper Sealing Washer, (1/2" Models)
632.36	Upper Sealing Washer, (1/2" HT & HP Models)
632.37	Lower Sealing Washer, (3/4" & 1" Models)
632.40	Upper Sealing Washer, (3/4" & 1" Models)
634.20	Gasket, (1/2" Models)
816.04	Cap Assembly, (1/2" HP only)



CUSTOMER CARE

Guarantee

Kohler Mira Ltd. guarantee this product against any defects in materials or workmanship for a period of one year from the date of purchase.

To be covered by this guarantee, service work must only be undertaken by Kohler Mira Ltd. or approved agents.

Not covered by this guarantee

Defects or damage arising from incorrect installation, improper use or failure to maintain in accordance with the instructions in the product manual, including the build-up of limescale.

Defects or damage if the product is taken apart, repaired or modified by a person not authorised by Kohler Mira Ltd. or approved agents.

After Sales Service - how we can help you

We have a network of fully trained staff ready to provide assistance, should you experience any difficulty operating your Rada equipment.

Spare Parts

All functional parts of Rada products are kept for up to ten years from the date of final manufacture.

If during that period, our stock of a particular part is exhausted we will, as an alternative, provide an equivalent new product or part at a price equating to the cost of repair to the old, bearing in mind the age of the product.

Customer Care Policy

If within a short time of installation the product does not function correctly, first check with the operation and maintenance advice provided in this Manual to see if the difficulty can be overcome.

Failing this, contact your installer to make sure that the product has been installed and commissioned in full accord with our detailed installation instructions.

If this does not resolve the difficulty, please ring your nearest Rada contact who will give every assistance and, if appropriate, arrange for the local Service Engineer or Agent to call on a mutually agreeable date.

Contact:

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The company reserves the right to alter
product specifications without notice.

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