

# MDFO



## Fixed orifices

Flow measuring orifice

# MDFO

Flow measuring orifice with self-sealed measuring points.

## Key features

- > **Self-sealing measuring points**  
For simple, accurate balancing.
- > **Stainless steel**  
Guarantees a longer lifetime.



## Technical description

### Application:

Heating and cooling systems  
Tapwater systems

### Function:

Measuring

### Dimensions:

DN 20-900

### Pressure class:

PN 16 (DN 20-900)  
PN 25 (DN 20-300)  
PN 40 (DN 65-450)

### Temperature:

Max. working temperature: 120°C  
Min. working temperature: -20°C

### Material:

Fixed orifice: Stainless steel  
X3CrNiMo17-13-3 (No. 1.4436 according  
to EN 10028-7 or EN 10272 (BS 970  
316/S16)  
Measuring points: AMETAL®  
Sealing (measuring points): EPDM

AMETAL® is the dezincification resistant  
alloy of IMI Hydronic Engineering.

### Marking:

TA, MDFO, DN, PN, BS 7350, Charge  
No, flow direction arrow.

## General

Wafer pattern orifice for fixing between  
EN 1092, ISO 7005 (BS 4504) flanges.  
The measuring orifice fulfils the  
requirements of BS 1042: Section  
1.1:1992 (ISO 5167-1:1991).  
The calculation of flow rates are  
according to BS 1042: Section 1.4:1992.

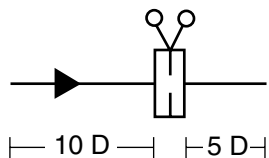
### Measuring points

MDFO (52 176 and 52 276) with  
extended self-sealed measuring points.

## Installation

Before you install the measuring orifice, check that:

- it is clean and undamaged.
- the surfaces that are to seal against are clean and undamaged.
- there is enough straight pipe lengths before and after the measuring orifice.



The measuring orifice should be installed between two counter flanges. Check that these counter flanges are parallel and that the gaskets are according to given standard for flanges. Check also that the measuring orifice and the gaskets are correctly centred before tightening.

Differential pressure measurement should take place with extreme care especially if this concerns hot media.

### Pressure switch and thermostat

In order to guarantee the lowest and highest pressure as well as to ensure that the temperature is not exceeded the system should be fitted with a pressure switch and thermostat.

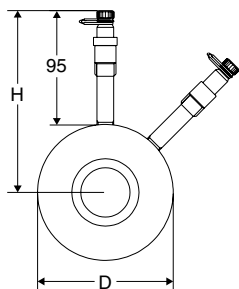
### Commissioning

Test the pressure on the valve using cold water. Tighten the flange joints and check for leakage in connection with commissioning.

### Maintenance

The measuring orifice MDFO are maintenance free under the condition that they are used within their normal application area.

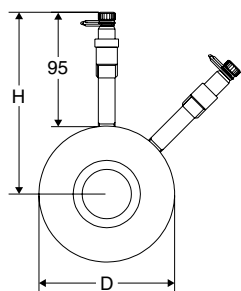
## Articles



### With self-sealed measuring points

#### PN 16

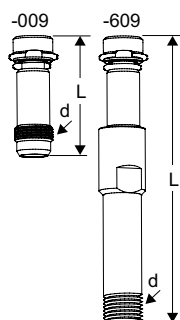
DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg	EAN	Article No
20	63	127	18	6	4,68	0,59	7318792808203	52 176-920
25	73	131	18	11	8,64	0,70	7318792808302	52 176-925
32	84	137	18	23	16,6	0,83	7318792808401	52 176-932
40	94	142	18	35	24,5	0,98	7318792808500	52 176-940
50	109	150	18	72	46,1	1,2	7318792808609	52 176-950
65	127	159	18	154	90	1,5	7318792808708	52 176-965
80	142	166	18	220	120	1,8	7318792808807	52 176-980
100	162	176	18	373	220	2,0	7318792808906	52 176-990
125	192	191	18	570	342	2,5	7318792809002	52 176-991
150	218	204	18	789	468	3,0	7318792809101	52 176-992
200	273	231	18	1383	792	4,3	7318792809200	52 176-993
250	329	260	18	2122	1224	5,7	7318792809309	52 176-994
300	384	287	18	3116	1800	7,0	7318792809408	52 176-995
350	444	317	20	4000	2250	10	7318792809507	52 176-996
400	496	343	23	5300	3000	14	7318792809606	52 176-997
450	556	373	28	6400	3750	22	7318793777904	52 176-999
500	618	404	28	7950	4500	26	7318792809705	52 176-998
600	735	463	29	10700	6500	43	7318793805102	52 276-001
700	805	498	31	15000	9000	44	7318793805201	52 276-002
750	865	528	32	17500	10500	51	7318793966001	52 276-012
800	911	551	32	20300	12000	56	7318793805300	52 276-003
900	1011	601	33	26000	15500	65	7318793805409	52 276-004

**PN 25**

DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg	EAN	Article No
20	63	127	18	6	4,68	0,59	7318794061507	52 176-820
25	73	131	18	11	8,64	0,70	7318794061101	52 176-825
32	84	137	18	23	16,6	0,83	7318794061200	52 176-832
40	94	142	18	35	24,5	0,98	7318794061309	52 176-840
50	109	150	18	72	46,1	1,2	7318794061408	52 176-850
65	127	159	18	154	90	1,5	7318793783103	52 176-865
80	142	166	18	220	120	1,8	7318793783202	52 176-880
100	168	179	18	373	220	2,0	7318793783301	52 176-890
125	194	192	18	570	342	2,5	7318793783400	52 176-891
150	224	207	18	789	468	3,0	7318793783509	52 176-892
200	284	237	18	1383	792	4,3	7318793783608	52 176-893
250	340	265	18	2122	1224	5,7	7318793783707	52 176-894
300	400	295	18	3116	1800	7,0	7318793783806	52 176-895

**PN 40**

DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg	EAN	Article No
65	127	159	18	154	90	1,5	7318793782304	52 176-765
80	142	166	18	220	120	1,8	7318793782403	52 176-780
100	168	179	18	373	220	2,0	7318793782502	52 176-790
125	194	192	18	570	342	2,5	7318793782601	52 176-791
150	224	207	18	789	468	3,0	7318793782700	52 176-792
200	290	240	18	1383	792	4,3	7318793782809	52 176-793
250	352	271	18	2122	1224	5,7	7318793782908	52 176-794
300	417	304	18	3116	1800	7,0	7318793783004	52 176-795
350	474	332	20	4000	2250	15,0	7318793955302	52 176-796
400	546	368	23	5300	3000	23,0	7318793955401	52 176-797
450	571	381	28	6400	3750	26,0	7318793955906	52 176-798

**Accessories****Measuring points**

Max 120°C (intermittent 150°C)

d	L	EAN	Article No
1/4	39	7318792813108	52 179-009
1/4	103	extended 7318792814600	52 179-609

The products, texts, photographs, graphics and diagrams in this document may be subject to alteration by IMI Hydronic Engineering without prior notice or reasons being given. For the most up to date information about our products and specifications, please visit [www.imi-hydronic.com](http://www.imi-hydronic.com).