

### 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.

MDFO (52 576) with extended double action PT 100 measuring points.

### Technical description

#### Application:

Heating and cooling systems  
Tapwater systems

#### Function:

Measuring

#### Pressure class:

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

#### 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<sup>®</sup>

Sealing (measuring points): EPDM

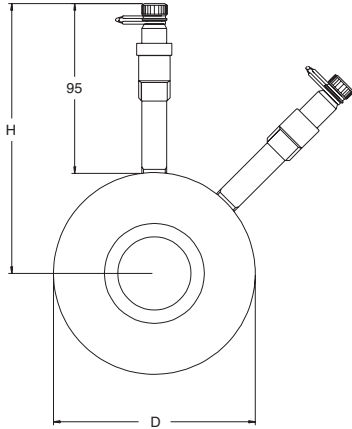
AMETAL<sup>®</sup> is the dezinification resistant alloy of TA.

#### Marking:

TA, MDFO, DN, PN, Charge No, flow direction arrow.  
DN 20-150 (PN 16): BS 7350.

## MDFO - Flow measuring orifice

With self-sealed measuring points



### PN 16

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

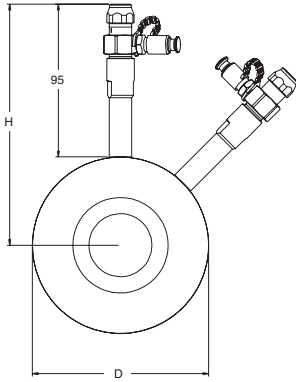
### PN 25

TA No	DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg
52 176-865	65	127	159	18	154	90	1,5
52 176-880	80	142	166	18	220	120	1,8
52 176-890	100	168	179	18	373	220	2,0
52 176-891	125	194	192	18	570	342	2,5
52 176-892	150	224	207	18	789	468	3,0
52 176-893	200	284	237	18	1383	792	4,3
52 176-894	250	340	265	18	2122	1224	5,7
52 176-895	300	400	295	18	3116	1800	7,0

### PN 40

TA No	DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg
52 176-765	65	127	159	18	154	90	1,5
52 176-780	80	142	166	18	220	120	1,8
52 176-790	100	168	179	18	373	220	2,0
52 176-791	125	194	192	18	570	342	2,5
52 176-792	150	224	207	18	789	468	3,0
52 176-793	200	290	240	18	1383	792	4,3
52 176-794	250	352	271	18	2122	1224	5,7
52 176-795	300	417	304	18	3116	1800	7,0

**With double action PT 100 measuring points**



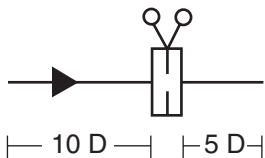
**PN 16**

TA No	DN	D	H	Flange thickness	Kv <sub>max</sub>	Kv <sub>signal</sub>	Kg
52 576-920	20	63	127	18	6	4,68	0,68
52 576-925	25	73	131	18	11	8,64	0,80
52 576-932	32	84	137	18	23	16,6	0,94
52 576-940	40	94	142	18	35	24,5	1,1
52 576-950	50	109	150	18	72	46,1	1,3
52 576-965	65	127	159	18	154	90	1,6
52 576-980	80	142	166	18	220	120	1,9
52 576-990	100	162	176	18	373	220	2,1
52 576-991	125	192	191	18	570	342	2,7
52 576-992	150	218	204	18	789	468	3,2
52 576-993	200	273	231	18	1383	792	4,4
52 576-994	250	329	260	18	2122	1224	5,8
52 576-995	300	384	287	18	3116	1800	7,2
52 576-996	350	444	317	20	4000	2250	10
52 576-997	400	496	343	23	5300	3000	14
52 576-998	500	618	404	28	7950	4500	26

**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.

