

## Technical Information

## VersaFlow Mag 3000 Electromagnetic Flow Sensor Specification 34-VF-03-23, July 2021

**Sanitary and Hygienic Solution**

The VersaFlow Mag 3000 is the electromagnetic flow sensor for the food & beverage and pharmaceutical industry. The 3000 sensor is manufactured in conformance to FDA requirements and has all requested (needed) approvals available.

Together with the converters TWM 9000 or TWM 1000, the meter can be used for mixing and dosing applications. It also offers a special measuring mode for pulsating flow. Even for products with low conductivity e. g. glucose or high concentrated fruit concentrate the VersaFlow Mag 3000 is the first choice.

Since the industrial production of beer, water and milk increases rapidly, the produced volume gets larger and larger pipe sizes are needed. The VersaFlow Mag 3000 is the only hygienic electromagnetic flow meter with a pipe size of DN150 / 6" (where the hygienic standards list such a size).



Figure 1 – VersaFlow Electromagnetic Flow Sensor

**Highlights**

- Developed in cooperation with customers from the food industry
- Stainless steel design for hygienic and aseptic operation
- Unique gasket concept prevents gasket from expanding into measuring tube
- Suitable for all CIP and SIP processes
- All industry-specific connectors and lengths
- High form stability and vacuum resistance

**Industries**

- Food & Beverages
- Pharmaceuticals
- Cosmetics

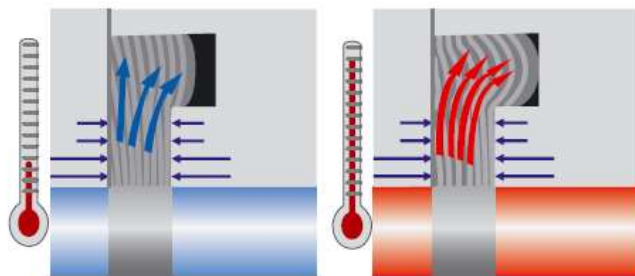
**Applications**

- For aseptic and hygienic applications
- Mixing, dosing and filling
- Beverages, milk and other dairy products
- Drugs, acids and caustic solutions in CIP process.
- For pulsating flow

## Features and Benefits



**Figure 2 – Stainless Steel Mesh**



**Figure 3 – Gasket Adaptor**



**Figure 4 – Stainless Steel Housing**

### Stainless Steel Mesh

The reinforced PFA liner makes sure that the VersaFlow Mag 3000 keep its form stable. Even at high temperatures and very low pressure or vacuum the liner does not collapse and keeps its size. This is one reason why the meter is extremely accurate.

### Unique Gasket Adapter Concept

With support of the TNO, a member of the European EHEDG organization, the sealing concept of the stainless-steel adapters has been redesigned. A novel gasket concept prevents the gasket from expanding into the measuring tube. During the CIP/ SIP cleaning procedure, the gasket expands into the special constructed "expansion chamber" and not into the pipe section. This leads to a sharp sealing at the edge of the pipeline and a perfect transition into the measuring section. Additionally, the gasket experiences less stress which results in a longer lifetime and reduced maintenance.

### Stainless Steel converter housing

A regular cleaning procedure from outside, where aggressive cleaning agents are used, can attack the standard polyurethane coat of the converter. In these cases, the cast stainless steel housing is recommended.

## Technical Data

Nominal diameter													
[inch]	1/10"	1/8"	1/4"	3/8"	1/2"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
[mm]	2.5	4	6	10	15	25	40	50	65	80	100	125	150

## Measuring system

Table 1

Versions													
Compact +TWM 9000 C													
Remote + TWM 9000 F, R, W													
Compact +TWM 1000 C													
Remote + TWM 1000 W													
Inlet	Min. 5DN												
Outlet	Min. 2DN												

## Operating Conditions

Table 2

Ambient temperature	
Separate flow sensor	-40... +65 °C / -40... +150 °F
Compact version	-40... +65 °C / -40... +150 °F
Process temperature	
Separate flow sensor	-40... +140 °C / -40... +355 °F
Compact version	TWM 9000: -40... +140 °C / -40... +285 °F TWM 1000: -40... +120 °C / -40... +250 °F
Vacuum load	
0 mbar / 0 psi absolute	
Conductivity	
Non-water	≥ 5 μS/cm
Water	≥ 20 μ S/cm

## Accuracy

Table 3

Accuracy	
With TWM9000	DN10(3/8") to DN150(6")...0.2% of measured value + 1 mm/s DN2.5(1/10") to DN6(1/4")...0.3% measured value + 2 mm/s
With TWM1000	DN10(3/8") to DN150(6")...0.3% of measured value + 1 mm/s DN2.5(1/10") to DN6(1/4")...0.4% measured value + 1 mm/s
Repeatability	+0.1% of measured value. minimum 1 mm/s
Long term stability	+0.1% of measured value



SMS 1145															
TRI CLOVER															
<b>Note:</b> DN2.5... 6 (1/10...1/4") have DN10 (3/8") connections.															

**Dimensions and Weights**

<b>Nominal diameter</b>													
[inch]	1/10"	1/8"	1/4"	3/8"	1/2"	1"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"
[mm]	2.5	4	6	10	15	25	40	50	65	80	100	125	150

**Approvals**

**Table 3**

Non-Ex													
EEx zone 1/2													
FM – class I div.2													
CSA – GP / class I div.2													
SAA – Aus Ex zone 1/2													
TIIS – zone 1/2													
<b>Protection category</b>													
IP66 / 67 eq. NEMA 4/4X / 6													
IP68 field eq. NEMA 6P													
IP68 factory eq. NEMA 6P													

standard
  optional
  on request

## Dimensions and Weights

DIN 11850 (row 2 or DIN 11866 row A)

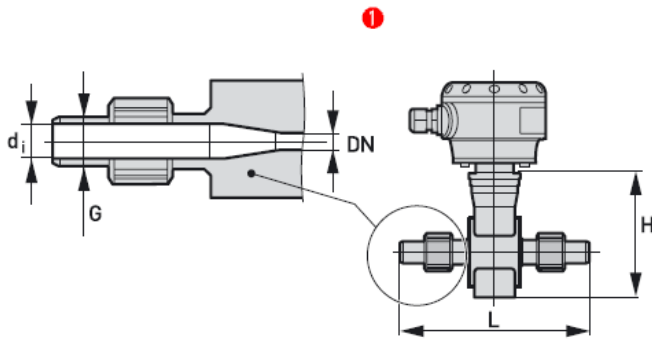


Figure 5

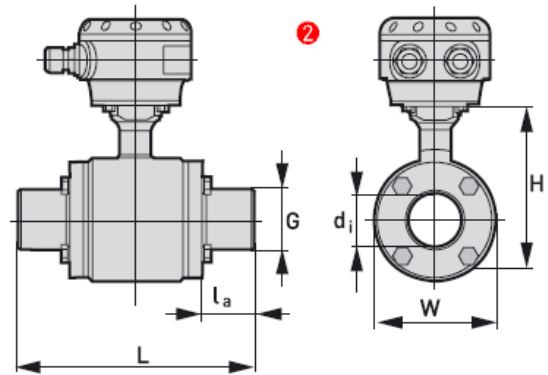


Figure 6

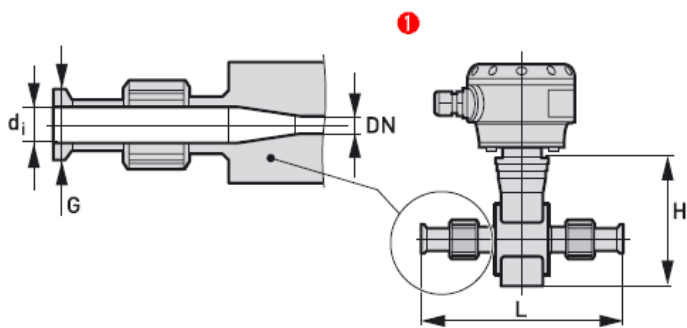
1. DN2.5...10 screwed adapter with DN10 process connections / DN15 screwed adapter
2. DN25...150 bolted adapter

Table 4

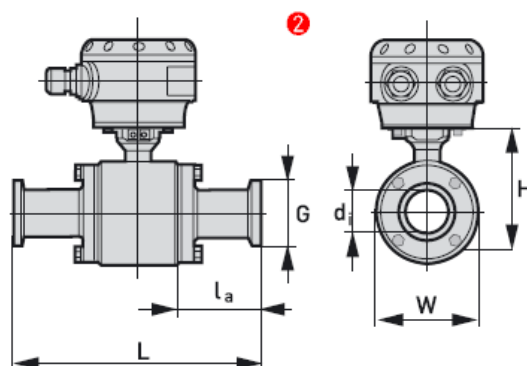
Nominal size		Dimensions [mm]						Approx. weight	
		Adapter		Flowmeter					
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
2.5	40	10	13	32	180	142	44	1.5	3.3
4	40	10	13	32	180	142	44	1.5	3.3
6	40	10	13	32	180	142	44	1.5	3.3
10	40	10	13	32	180	142	44	1.5	3.3
15	40	16	19	32	180	142	44	1.5	3.3
25	40	26	29	20.6	132.6	128	89	3	6.6
40	40	38	41	61.3	220	153	114	5.3	11.7
50	25	50	53	61.3	220	153	114	6.8	15
65	25	66	70	41.8	220	180	414	10.9	24
80	25	81	85	66.8	280	191	152	11.2	24.7
100	16	100	104	59.3	280	242	203	18.4	40.6
125	10	125	129	66.3	319	258	219	29.5	65.0
150	10	150	154	64.3	325	293	254	44.3	97.7

**Dimensions and Weights**

**DIN 11851**



**Figure 7**



**Figure 8**

- 1. DN2.5...10 screwed adapter with DN10 process connections / DN15 screwed adapter
- 2. DN25...150 bolted adapter

**Table 5**

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter		Flowmeter					
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
2.5	40	10	Rd 28 x 1/8"	53.1	214	142	44	1.5	3.3
4	40	10	Rd 28 x 1/8	53.1	214	142	44	1.5	3.3
6	40	10	Rd 28 x 1/8	53.1	214	142	44	1.5	3.3
10	40	10	Rd 28 x 1/8	53.1	214	142	44	1.5	3.3
15	40	16	Rd 34 x 1/8	53.1	214	142	44	1.5	3.3
25	40	26	Rd 52 x 1/6	49.3	190	128	89	3.2	7.1
40	40	38	Rd 65 x 1/6	91.3	280	153	114	5.5	12.1
50	25	50	Rd 78 x 1/6	93.3	284	153	114	5.3	11.7
65	25	66	Rd 95 x 1/6	77.8	292	180	414	10	22.1
80	25	81	Rd 110 x 1/4	107.8	362	191	152	12.5	27.6
100	16	100	Rd 130 x 1/4	109.3	380	242	203	21.8	48.1
125	10	On request							
150	10								

## Dimensions and Weights

### DIN 11864-2A

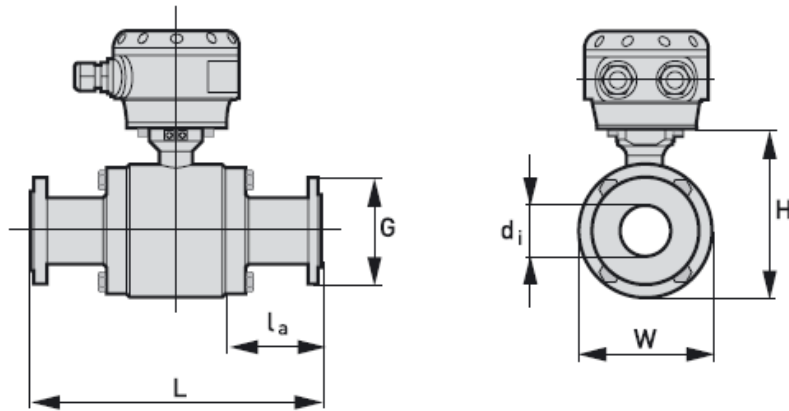


Figure 9

Table 6

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter			Flowmeter				
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
25	40	26	70	45.8	183	128	89	4.4	9.7
40	40	38	82	83.3	264	153	114	7.5	16.5
50	25	50	94	83.3	264	153	114	9	19.8
65	25	66	113	63.8	264	180	141	14.5	32
80	25	81	133	122.8	392	191	152	18.6	41
100	16	100	159	115.3	392	242	203	28.2	62.2
125	10	On request							
150	10								

#### Notes:-

Meter supplied with flange with notch



## Dimensions and Weights

DIN 32676

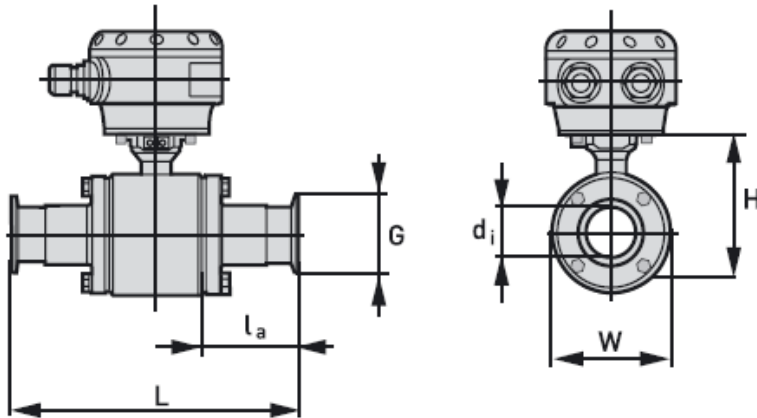


Figure 10

Table 7

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter			Flowmeter				
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
25	16	26	50.5	41.8	190	128	89	3.2	7.1
40	16	38	50.5	80.8	280	153	114	5.5	12.1
50	16	50	64	80.8	284	153	114	5.3	11.7
65	16	66	91	67.8	292	180	141	10	22.1
80	16	81	106	92.8	362	191	152	12.5	27.6
100	16	100	119	85.3	380	242	203	21.8	48.1

## Dimensions and Weights

### ISO 2037

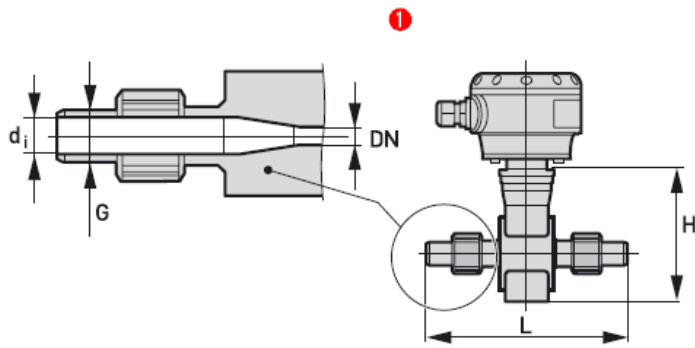


Figure 11

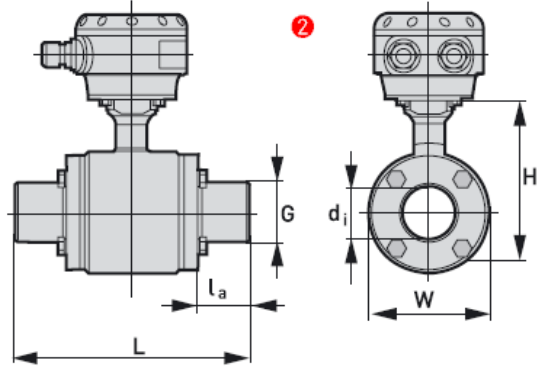


Figure 12

1. DN2.5...10 screwed adapter with DN10 process connections / DN17.2 screwed adapter
2. DN25...150 bolted adapter

Table 8

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter			Flowmeter				
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
2.5	40	10	12	32	180	142	44	1.5	3.3
4	40	10	12	32	180	142	44	1.5	3.3
6	40	10	12	32	180	142	44	1.5	3.3
12	40	10	12	32	180	142	44	1.5	3.3
17.2	40	16	17.2	32	180	142	44	1.5	3.3
25	40	22.6	25	20.6	132.6	128	89	3	6.6
38	40	38	38	61.3	220	153	114	5.3	11.7
51	25	49	51	61.3	220	153	114	5	11
63.5	25	60.3	63.5	41.8	220	180	414	9	19.8
76.1	25	72.9	76.1	66.8	280	191	152	10.8	23.8
101.6	16	97.6	101.6	59.3	280	242	203	18.4	40.6
114.3	10	110.3	114.3	66.3	319	258	219	29.5	65.0
139.3	10	135.7	139.3	64.3	325	293	254	44.3	97.7

## Dimensions and Weights

### ISO 2852

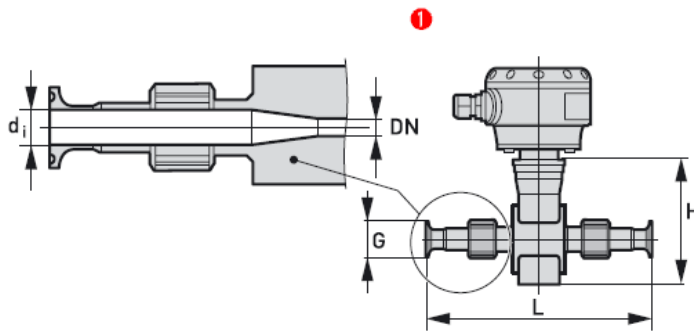


Figure 13

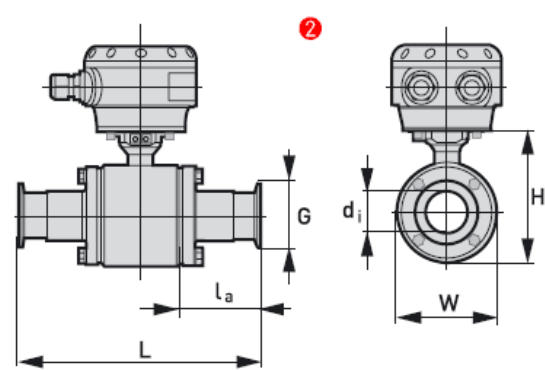


Figure 14

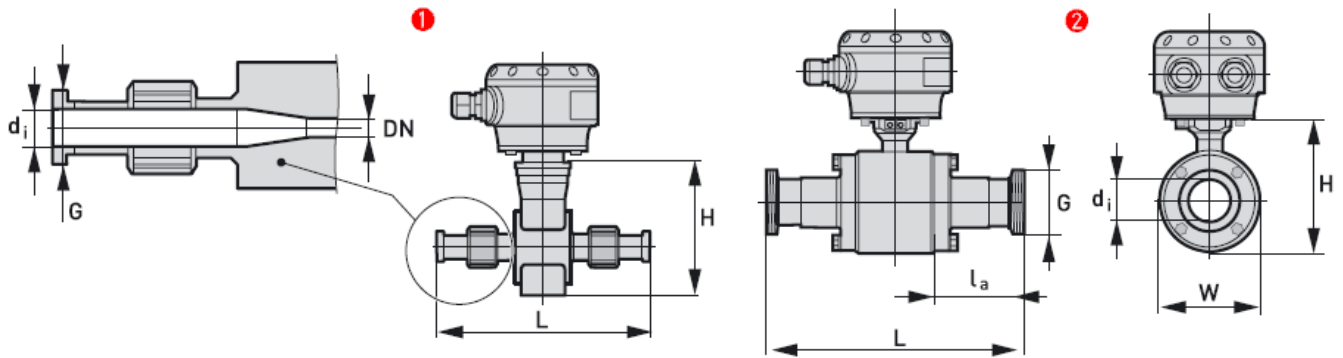
1. DN2.5...10 screwed adapter with DN10 process connections / DN17.2 screwed adapter
2. DN25...150 bolted adapter

Table 9

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter			Flowmeter				
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
2.5	16	10	34	51.6	219	142	44	1.8	4.0
4	16	10	34	51.6	219	142	44	1.8	4.0
6	16	10	34	51.6	219	142	44	1.8	4.0
12	16	10	34	51.6	219	142	44	1.8	4.0
17.2	16	16	34	51.6	219	142	44	1.8	4.0
25	16	22.6	50.5	41.8	175	128	89	3.3	7.3
38	16	35.6	50.5	87.8	273	153	114	5.4	11.9
50	16	48.6	64	87.8	273	153	114	5.2	11.5
63.5	10	60.3	77.5	68.3	273	180	141	9.5	20.9
71.1	10	72.9	91	93.3	333	191	152	11.2	24.7
101.6	8	97.6	119	85.8	333	242	203	19.1	42.1
125	5	On request							

## Dimensions and Weights

### ISO 2853



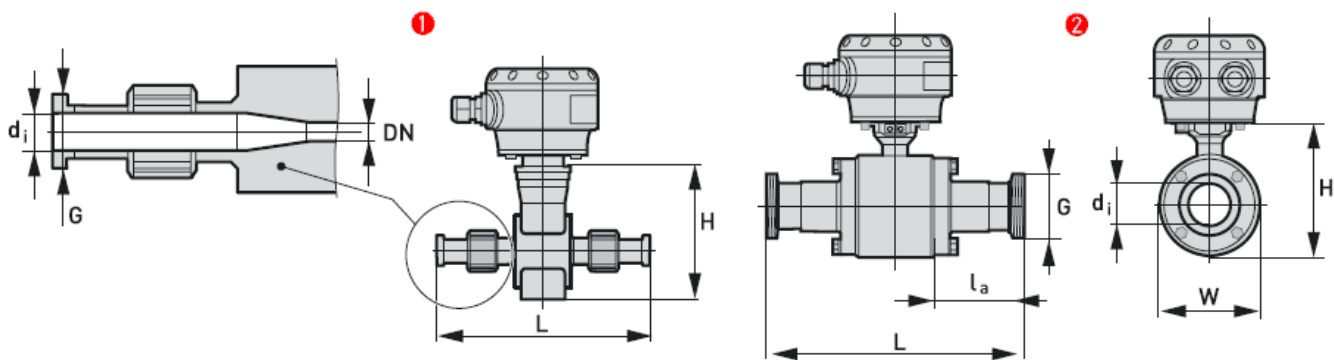
1. DN2.5...10 screwed adapter with DN10 process connections / DN15 screwed adapter
2. DN25...150 bolted adapter

Table 10

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter		Flowmeter					
DN	PN	$d_i$	G	$l_a$	L	H	W	[kg]	(lbs)
2.5	40	10	Rd 22.8 x 1/8"	53	226	142	44	3.1	6.8
4	40	10	Rd 22.8 x 1/8"	53	226	142	44	3.1	6.8
6	40	10	Rd 22.8 x 1/8"	53	226	142	44	3.1	6.8
10	40	10	Rd 22.8 x 1/8"	53	226	142	44	3.1	6.8
15	40	16	Rd 22.8 x 1/8"	53	226	142	44	3.1	6.8
25	40	22.6	Rd 37.1 x 1/8"	45	226	131	80	4.4	9.7
38	40	35.6	Rd 56.6 x 1/8"	49.5	253	149	98	6.1	13.5
51	25	48.6	Rd 64.1 x 1/8"	51.5	263	181	130	7.6	16.8
63.5	25	60.3	Rd 77.6 x 1/8"	50.5	309	206	156	11.7	25.8
76.1	25	72.9	Rd 91.1 x 1/8"	50.5	309	206	156	12	26.5

## Dimensions and Weights

### Tri Cover



- 1. DN 1/2... 3/4" screwed adapter
- 2. DN 1"...4" bolted adapter

Table 11

Nominal size		Dimensions [mm]						Approx. weight	
		Adapter		Flowmeter					
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
1/2"	290	0.37	0.98	1.97	8.5	5.59	1.73	1.5	3.3
3/4"	290	0.62	0.98	1.97	8.5	5.59	1.73	1.5	3.3
1"	290	0.85	1.98	1.02	7.48	5.04	3.5	3.2	7.1
1 1/2"	290	1.35	1.98	3.46	11.02	6.02	4.49	5.5	12.1
2"	290	1.85	2.52	3.46	11.18	6.02	4.49	5.3	11.7
2 1/2"	290	2.35	3.05	2.69	11.5	7.09	5.55	10	22.1
3"	290	2.85	3.54	3.68	14.25	7.52	5.98	12.5	27.6
4"	174	3.83	4.68	3.38	14.96	9.53	7.99	21.8	48.1

## Dimensions and Weights

### SMS 1145 Adapter

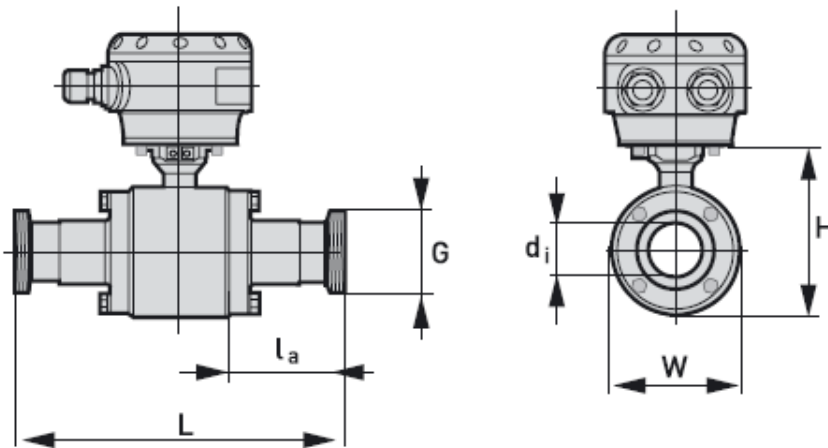


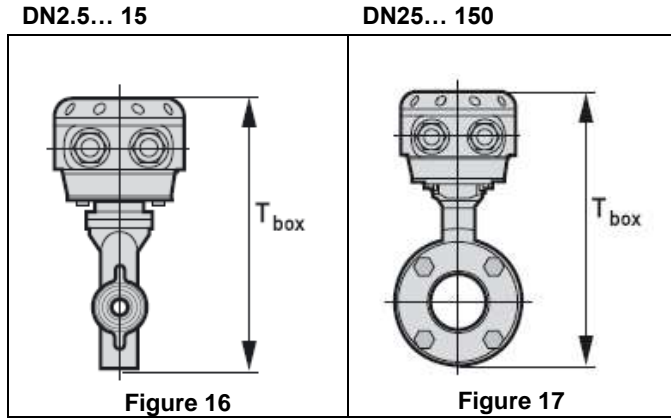
Figure 15

Table 12

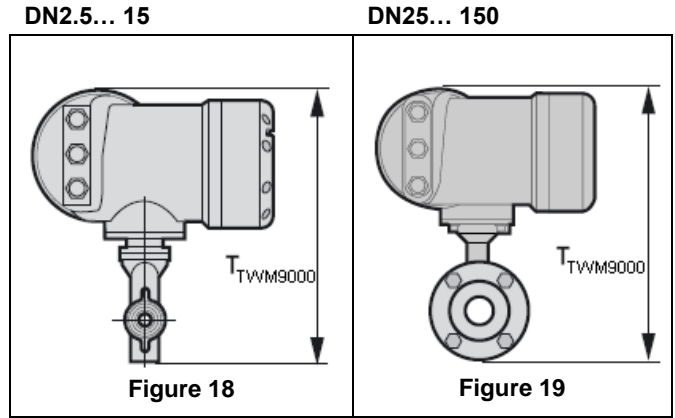
Nominal size		Dimensions [mm]						Approx. weight	
		Adapter		Flowmeter					
DN	PN	di	G	la	L	H	W	[kg]	(lbs)
25	6	22.6	Rd 40-6	28.1	147.6	128	89	3.2	7.1
38	6	35.5	Rd 60-6	54	262	153	114	5.7	12.6
51	6	48.6	Rd 70-6	84.3	266	153	114	5.4	11.9
63.5	6	60.3	Rd 85-6	69.8	276	180	141	9.9	21.8
76	6	72.9	Rd 98-6	99.8	346	191	152	12.1	26.7
100	6	97.6	Rd 132-6	44	336	242	203	21.9	48.3

**Dimensions for different Housing Variations**

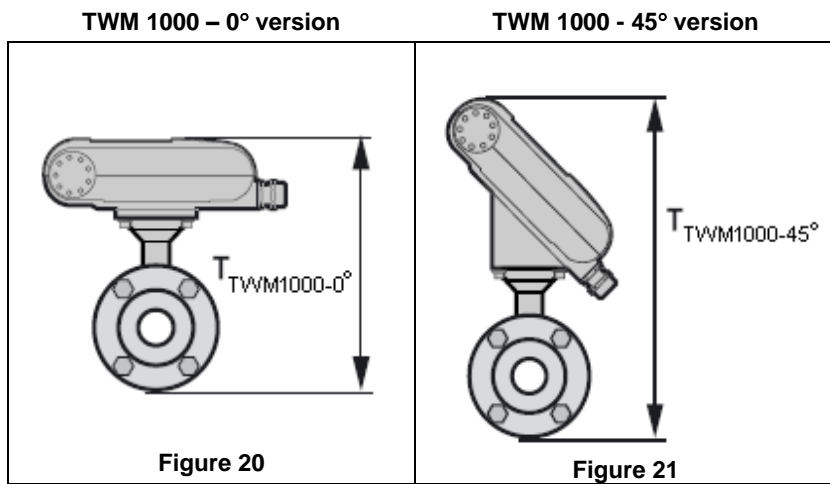
**Remote version connection box**



**Compact version TWM 9000**



**Compact Version TWM 1000**



**Table 13**

Nominal size		Dimensions [mm]				Dimensions [inch]			
DN	PN	T <sub>box</sub>	T <sub>TWM1000-0°</sub>	T <sub>TWM1000-45°</sub>	T <sub>TWM9000</sub>	T <sub>box</sub>	T <sub>TWM1000-0°</sub>	T <sub>TWM1000-45°</sub>	T <sub>TWM9000</sub>
2.5	40	200	205	309	302	7.87	8.07	12.17	10.94
4	40	200	205	309	302	7.87	8.07	12.17	10.94
6	40	200	205	309	302	7.87	8.07	12.17	10.94
10	40	200	205	309	302	7.87	8.07	12.17	10.94
15	40	200	205	309	302	7.87	8.07	12.17	10.94
25	40	205	210	314	283	8.08	8.28	12.36	11.14
40	40	230	235	339	308	9.05	9.25	13.35	12.13
50	25	230	235	339	308	9.05	9.25	13.35	12.13
65	25	257	262	366	335	10.11	10.31	14.41	13.19

Nominal size		Dimensions [mm]				Dimensions [inch]			
DN	PN	T <sub>box</sub>	T <sub>TWM1000-0°</sub>	T <sub>TWM1000-45°</sub>	T <sub>TWM9000</sub>	T <sub>box</sub>	T <sub>TWM1000-0°</sub>	T <sub>TWM1000-45°</sub>	T <sub>TWM9000</sub>
80	25	268	273	377	346	10.55	10.75	14.84	13.62
100	16	319	324	428	397	12.56	12.76	16.85	15.63
125	10	335	340	444	413	13.19	13.39	17.48	16.26
150	10	370	375	479	448	14.56	14.76	18.86	17.64



## Sales and Service

For application assistance, current specifications, ordering, pricing, and name of the nearest Authorized Distributor, contact one of the offices below.

### ASIA PACIFIC

Honeywell Process Solutions,  
Phone: + 800 12026455 or  
+44 (0) 1202645583  
(TAC) [hfs-tac-support@honeywell.com](mailto:hfs-tac-support@honeywell.com)

#### Australia

Honeywell Limited  
Phone: +(61) 7-3846 1255  
FAX: +(61) 7-3840 6481  
Toll Free 1300-36-39-36  
Toll Free Fax:  
1300-36-04-70

#### China – PRC - Shanghai

Honeywell China Inc.  
Phone: (86-21) 5257-4568  
Fax: (86-21) 6237-2826

#### Singapore

Honeywell Pte Ltd.  
Phone: +(65) 6580 3278  
Fax: +(65) 6445-3033

#### South Korea

Honeywell Korea Co Ltd  
Phone: +(822) 799 6114  
Fax: +(822) 792 9015

### EMEA

Honeywell Process Solutions,  
Phone: + 800 12026455 or  
+44 (0) 1202645583

#### Email: (Sales)

[FP-Sales-Apps@Honeywell.com](mailto:FP-Sales-Apps@Honeywell.com)

or

(TAC)

[hfs-tac-support@honeywell.com](mailto:hfs-tac-support@honeywell.com)

#### Web

Knowledge Base search  
engine <http://bit.ly/2N5Vldi>

### AMERICAS

Honeywell Process Solutions,  
Phone: (TAC) (800) 423-9883  
or (215) 641-3610  
(Sales) 1-800-343-0228

#### Email: (Sales)

[FP-Sales-Apps@Honeywell.com](mailto:FP-Sales-Apps@Honeywell.com)

or

(TAC)

[hfs-tac-support@honeywell.com](mailto:hfs-tac-support@honeywell.com)

#### Web

Knowledge Base search  
engine <http://bit.ly/2N5Vldi>

*Specifications are subject to change without notice.*

---

### For more information

To learn more about VersaFlow,  
visit [www.honeywellprocess.com](http://www.honeywellprocess.com)  
Or contact your Honeywell Account Manager

### Process Solutions

Honeywell  
1250 W Sam Houston Pkwy S  
Houston, TX 77042

Honeywell Control Systems Ltd  
Honeywell House, Skimped Hill Lane  
Bracknell, England, RG12 1EB

Shanghai City Centre, 100 Jungi Road  
Shanghai, China 20061

[www.honeywellprocess.com](http://www.honeywellprocess.com)



34-VF-03-23  
July 2021

©2021 Honeywell International Inc.